# Midwives' Collective Attitude towards Labour Pain: Mixed Methods Research

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## ABSTRACT

Background: The majority of women in Jordan give birth in public hospitals where midwives are the main birth attendants. Although most women have trust in their midwives, studies have reported women's dissatisfaction with childbirth, fears of painful labour, and experiences of ineffective pain management during childbirth. Studies that have explored midwives' collective attitude towards labour pain are lacking. Aim: To explore midwives' collective attitude towards labour pain by measuring/interpreting midwives' knowledge and individual attitudes towards labour pain and women's expectations and perceptions surrounding their midwives' attitudes towards labour pain. Setting: The research was conducted at the labour and postnatal wards in the largest public hospital in Jordan (18000 normal vaginal deliveries/ year). Design: Convergent parallel mixed methods research design. Methods: A validated Survey Questionnaire for Midwives (SQM), a validated Survey Questionnaire for Women (SQW), audiotaped individual interviews with five midwives, and one focus group with six women who recently had giving birth. The doctoral candidate and supervisors developed the SQM and the SQW in 2012 and validated them in 2013. The SQM and SQW were developed based on Leap & Anderson's Working with Pain Model and Kennedy's Exemplary Model of Midwifery Practice. The sample consisted of 61 midwives and 384 women who had recently delivered at the hospital. In all 60/61 midwives completed the SQM and 360/384 women completed the SQW. Analysis: Quantitative data were analysed using parametric statistical tests and qualitative data were analysed using a life world hermeneutic approach. Findings: The midwives had a high knowledge about labour pain (SQM, Mean=3.82, SD=0.53) and a neutral collective attitude (neither positive nor negative) towards labour pain (SQM, Mean=3.41, SD=0.51). The women in turn had very high expectation of their midwives' collective attitude towards labour pain (SQW, Mean=4.52, SD=0.45) and neutral perception of their midwives' collective attitude towards labour pain (SQW, Mean=3.43, SD= 1.13). The women expected their midwives to be patient (n=316, 87.8%), reassuring and soothing (n= 291, 80.8%) and, understanding (n=273, 75.8%) in their collective attitude towards labour

pain. The relationship between SQW and SQM was statistically significant ($p<0.05$) and moderately positive ($p<0.001$, $r = 0.53$). Four themes emerged from the analysis of the midwives' interviews: (1) midwives see labour pain as suffering when women experience negative emotions, (2) working with women's pain in labour is based on an individual perspective which demands time, (3) working with women in pain by using midwives' own strategies and influence the women's way of thinking, and (4) the institution makes inability to work on women's pain without being given a chance to prove it. The main interpretation that concludes the four themes was the dominance of the with institution ideology despite the intentions to demonstrate the with women ideology. Four themes emerged from the analysis of the focus group interview with women: (1) caring calms the women and relieves labour pain, (2) empowerment enables women to tolerate and cope with labour pain, (3) uncaring attitudes of midwives create negative emotions and fear on the part of the women, and (4) making women feel discouraged about coping with labour pain may lead to feelings of worthlessness. The main interpretation that concludes the four themes was a predominantly uncaring and discouraging approach even where a caring attitude and feeling of empowerment had been reported during the first stage of labour. Conclusion: Midwives had a neutral collective attitude towards labour pain as they mostly adopted the with institution ideology and uncaring attitude in their collective attitude towards labour pain. The midwives' neutral collective attitude towards labour pain had a negative influence on women. Women reported fear, suffering, dissatisfaction, sense of worthlessness, sense of disempowerment, and inability to tolerate and handle labour pain due to this attitude. Women described that the midwives were more attentive to the needs, the standards, and the guidelines of the hospital than the needs of the women i.e. they seemed to have adopted the with institution ideology. Midwives' collective attitude towards labour pain should be considered when educating and training midwives in Jordan. There is a need to explore midwives' collective attitude in other settings and contexts. Further exploration of other types of collective attitude towards labour pain i.e. very positive, positive, negative and very negative is required. Future research should utilize explanatory sequential mixed methods research to explain collective neutral attitude. Future aptitude-response-based research in different settings is also important.

**Keywords:** childbirth, collective attitude, expectations, Jordan, knowledge, labour pain, midwives, mixed methods, perceptions, women.

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# Content

# List of abbreviations

| | |
|---|---|
| **ASPMN** | American Society for Pain Management Nursing |
| **CIA** | Central Intelligence Agency |
| **CIP** | Civil Insurance Programme |
| **CSE** | Combined Spinal Epidural |
| **EA** | Epidural Analgesia |
| **ECE** | Expectations of Childbirth Experience |
| **ENSDLB** | Expectations of Nursing Support During Labour and Birth |
| **FA** | Fear Avoidance model |
| **HHC** | High Health Council |
| **IASP** | International Association for the Study of Pain |
| **ICEA** | International Childbirth Education Association |
| **ICSI** | Institute for Clinical System Improvement |
| **JHSS II** | Jordan Health Systems Strengthening II |
| **JNC** | Jordanian Nursing Council |
| **MOH** | Ministry of Health |
| **NHS** | National Health Services |
| **NRS** | Numerical Rating Scale |
| **OQI** | Office of Quality Improvement |
| **SQM** | Survey Questionnaire for Midwives |
| **SQW** | Survey Questionnaire for Women |
| **UN** | United Nations |
| **USAID** | United States Agency for International Development |
| **VAS** | Visual Analogue Scale |
| **WHO** | World Health Organization |
| **WMA** | World Medical Association |

# 1. Introduction

### The Hashemite Kingdom of Jordan

Jordan is a small country located in the Middle East. Jordan is bordered to the north by Syria, while Saudi Arabia borders it to the south and east. In addition, Iraq borders the east side of Jordan, whereas Israel and the West Bank border the west side. The Gulf of Aqaba is widely known to be Jordan's only outlet to the sea and it is located in the south of the country. Jordan has an area of nearly 89,342 square kilometres, including the Dead Sea. Amman is the capital city and is considered one of the MENA's (Middle East and North Africa) best Arabic cities according to economic, employment, environmental, and socio-cultural factors. Some of the other major cities in Jordan are Zarqa, Irbid, Russiefe and Aqaba (CIA 2017a). In 2015, the literacy rate for the total population was 95.4% (females: 92.9%; males: 97.7%) (CIA 2017b). Jordan has the highest female literacy rate amongst all Arab countries (Shoup 2007; CIA 2017b; United Nations 2013). Moreover, Jordan has many women's organisations, such as the Jordanian National Committee for Women, the Federation of Jordanian Women, and the Jordanian River Foundation, amongst others (Shoup 2007; Sonbol 2003). According to the CIA (2017b), the population of Jordan was 8,185,384. Amman is a major urban area containing 1.155 million Jordanians. According to the estimation in 2016, the male to female ratio in the total population is 1.06 males/females. The population distributed by age is 35.04% in the range of 0–14 years of age, 20.12% in the 15–24 age range, 36.44% in the range of 25–54, 4.46% from 55–64 and 3.94% for those aged 65 and over. The World Bank classified Jordan as a country of upper middle income. According to UN data (2013), zero percent of the general population lived below the international poverty line of USD $1.25 per day in 2006–2011. Jordan has not released new poverty estimates since 2010 due to data quality issues and need to develop surveys to include both Jordanian population and non-Jordanian population i.e. Syrian, Egyptians, Palestinians, Iraqi nationals, Yemenis, Libyans and European nationalities residing in Jordan (World Bank 2018).The gross national income per capita in 2011 was USD 4,597.00 (UN 2013). Jordanian individuals live on $4.08 to $12.61 USD per day (CIA 2013).

### Culture

Jordanian culture is based on Arabic and Islamic values with significant western influence of both British and Americans on Jordanian living standards and socio-cultural life (Alabbadi 2015). For example, Jordanian interaction with British and other western influenced the tradition of music, movies, sports, fashion and food in a way that takes a European style. However, there are many Jordanian cultural values still predominant,

such as: family unity, childcare, elderly care, women's role in caring for children and elderly parents, being educated, having a professional presence and sharing decisions related to family situations with men in their families. Jordanian men should obey the cultural norms by being the main financial providers, being responsible, being respectful, and strongly supportive of their families (Shoup 2007). Jordanian women enjoy socio-cultural freedom compared to women in other Arab countries e.g. freedom of movement and travel, rights to education, health care, political participation and employment (Husseini 2010)

### Health care system

Jordan has an advanced health care system compared with other Middle Eastern countries to guarantee quality health care services for citizens of Jordan and for people from other countries. The healthcare system is divided between public and private institutions. The Ministry of Health (MOH) is responsible for public services that consist of 1,245 primary health centres, 31 public hospitals, 12 hospitals for Jordanian Royal Medical Services, and two university teaching hospitals (Jordan University Hospital and King Abdullah University Hospital). The private sector operates 61 hospitals (Khammash 2012). The majority of Jordanians have medical health insurance with MOH, Jordanian Royal Medical Services, UNRWA, through private sectors or with dual insurance. The Civil Insurance Programme (CIP) offers health insurance to all Jordanian citizens and uninsured residents, including the employees and their dependants, the poor, the disabled and children less than six years of age. Any individual can use the health care services and pay 15 to 20% of the costs (World Health Organization (WHO 2010). The health insurance coverage is 69.6% and more than one health insurance providers insures 8.2% of Jordanian population (Khammash 2012). The vision of MOH and government is to reach 100% insurance coverage in the next few years (Khammash 2012; WHO 2010).

### The midwifery program

The focus of midwifery program in Jordan is on direct-entry midwives educated in the discipline of midwifery and provision of women-centred care without becoming nurses first. The midwifery program is either a three- year college-based diploma, a two-year completion program after college diploma and a Bachelor of Midwifery degree (Abushaikha 2006). Abushaikha highlighted clearly that the health education system in Jordan does not have exclusive clinical training sites for midwives, and since they share clinical training sites with medical students and nurses, they lack clinical learning opportunities, which thereby negatively influences the student midwives' clinical experiences and attainment of skills. Abushaikha also explained that the context of hospital training for midwives is complex due to professional power struggles, lack of interdisciplinary collaboration and student-client ratio. The power of obstetricians and nurses in Jordan is forcing midwives to improve their educational and professional status in order to compete. Some midwives can rise to this challenge. The power struggle, however, has deleterious effects on the self-esteem and

professionalism of other midwifery staff. She also stated that obstetricians consider midwifery to be a competitive profession that threatens their field and they are trying to decrease midwives' professional power. In fact, inter-professional education enhances interaction among team members, sharing responsibility, improving mutual listening, exchanging suggestions and empowering positive attitudes (Muller-Juge et al. 2014). In Jordan, both obstetricians and nurses are reluctant to accept, respect and collaborate with midwifery students and their educators at training sites, midwives are usually trained in clinical settings that are crowded with medical and nursing students i.e. 10 students for every labouring women competing for a learning opportunity in maternal clinical settings (Abushaikha 2006). In response to the fact that the number of women of childbearing age in Jordan is increasing alongside a shortage of qualified midwives (MOH 2011), Abushaikha (2006) emphasized the importance of offering direct entry midwifery programs and developing new midwifery educational strategies in Jordan i.e. designing simulation midwifery units in universities and colleges and ensure available practice setting for midwives. Both Simulation midwifery based learning and practical training in health care settings enhance midwives educational and clinical skills , prepare competent midwives for labour market, and improves the provision of quality care by midwives (Cooper et al. 2012).

The quality of midwifery education ensures that midwives acquire necessary practical skills by linking theory to practice in order to deliver quality care for childbearing women (WHO 2017). Jordan is lacking academic midwifery staff, graduate midwifery programs and practical setting (Alhusaini, Sun & Larson 2016.). There is only one available Bachelor of Midwifery program offered for direct-entry midwives in Jordan at Jordan University of Science and Technology. Labour pain is an important aspect of midwifery care. The only theoretical course that prepares midwifery students to have knowledge and understanding of labour pain is called Midwifery 2 (focussing on the childbirth process; Hawamdeh 2010).The course now in its fourteenth year. Hawamdeh's course syllabus for the Midwifery 2 covers theoretical aspects with focus on : the physiology and psychology of labour pain; normality of labour pain, labour pain assessment and management, latest evidence based knowledge on both pharmacological and non-pharmacological pain relief methods; factors influencing women's perception and experience of labour pain; midwives responsibilities towards women's' labour pain. Midwifery 2 is based on the unique normality of childbirth and insights about Leap and Anderson's (2004) models of attitudes towards labour pain, which are the Working with Pain and the Pain Relief models.

The Pain Relief Model relies on a set of principles that comprise the belief that labour pain is unnecessary and should be avoided. Based on this model, a menu of pharmacological pain relief methods is offered to women, including the benefits and risks of administering each method. The language used in communicating with the women suggests the necessity to relieve

pain to enable them to get through labour. Leap and Anderson (2004) highlighted that this model is promoted in order to control the noise and behaviour of women during labour. They also mentioned that the Pain Relief Model is noticeable in clinical settings where factors, such as a lack of continuity of care, not knowing women, staff shortages, hierarchical structure and medical dominance, represent a major impact on staff. The main role of the midwives in this model is offering Pain relief to women based on the women's choice. In order to give women an informed choice; the midwives provide them with a menu of pain relief methods, and explain the pros and cons of each method. The rationale for following the Pain Relief Model is to allay the feelings of guilt towards birthing women and reduce noise on labour wards.

The Working with Pain Model in labour promotes normal birth and the belief in its long-term benefits. It relies on the perspective that pain is a crucial element of the physiology of normal labour. This model further presupposes that, if an expectant woman is given maximum support and encouragement, she can cope with varying levels of pain in normal labour through the creation of an environment that increases the production of her endorphins. Endorphins are natural pain-relieving opiates generated by the body as a natural reaction to pain and other stressors. It is from this perspective that midwives play a crucial role in reducing the stimuli for pain in women and help the release of endorphins (Leap & Anderson 2004). From this perspective, medical pain relief is not the first choice, but instead used when the women need it.

### Role of midwives in Jordan

Midwives are mainly responsible for providing high quality care for childbearing women, and ensuring safe normal or uncomplicated deliveries in public hospitals where most women give birth (Jordanian Nursing Council (JNC) 2006). The role of midwives in labour includes supporting women, helping women cope with labour pain or relieving women's labour pain, monitoring progress of labour, ensuring safe labour, coordinating care for women, collaborating with other health care providers, attending normal deliveries, and assisting in complicated or risky deliveries. Midwives should be competent and have knowledge and understanding of comfort measures in first and second stages of labour (e.g., family presence/assistance, positioning for labour and birth, hydration, emotional support), non-pharmacological and pharmacological pain relief methods including risks, disadvantages, safety of specific methods of pain relief and their effect on the normal physiology of labour (JNC 2016).

### How the research questions arose

As a midwifery lecturer in Jordan, I have had the opportunity to train both midwifery teacher assistants and midwifery students and to work with women, their babies and families. I trained midwifery students in labour, postnatal and maternity wards at public hospitals in different Jordanian cities such as Irbid, Mafraq, and Jerash. It has been valuable to cooperate with teams of midwives and obstetricians, and to meet pregnant women and their families. However, teaching midwives in Jordanian

public hospitals has been a challenging task, as the hospital midwives, in my experience, have different approaches to labour pain when offering care for women in labour. I have seen midwives who constantly advocated the women's rights to have pain relief, and birth services with minimal medical interventions, though obstetricians interfered with their awareness of latest evidence based knowledge of labour pain management. Obstetricians and Midwives' in charge often recommend midwives to activate labour (using oxytocin) and to use Pethidine in order to ease birth and ensure that there are available beds at the labour ward for other women admitted to hospital in active labour. However, this contradicts my aim to teach midwifery students what they can do to maximize women's opportunities to have a healthy childbirth with minimal exposure to unnecessary interventions, and have positive childbirth stories to share with other pregnant women. These experiences have given rise to the following challenging questions: What is the hospital midwives' collective attitude towards labour pain? How are midwives helping women at times of labour pain, and to what extent are the midwives able to support women and offer comfort measures for women in a 'medical birth environment'?

Collective attitude towards labour pain means the common attitude midwives have in their individual attitudes towards labour pain. Kissane & Volacu 2015 provided a definition of collective attitude i.e. "we-attitude" as a type of attitude that is rooted in individual attitudes, based on a relationship between individual attitudes, and difficult to measure. Collective attitude directs individuals to participate in collective action with joint commitment to this action and to have collective obligation and responsibility towards the action (Searle 2002; Tuomela 2004). To clarify, when midwives have (X) collective attitude towards labour pain, they jointly commit each other, express their sense of commitment to perform their collective action towards labour pain, have collective obligation and responsibility towards their collective action, and they create common knowledge to each midwife. The question is how if we can explore midwives' collective attitude towards labour pain in Jordan. Collective attitude may enable Jordan advance scope of midwifery practice expand beyond the normality of childbirth to include collective attitude towards labour pain in education, practice and multidisciplinary approach, and risk management plans to remain responsive to changing health care needs and needs of childbearing women in a complex medicalized health care institutions and to achieve optimum care.

Through my teaching experience, i have noticed that women coped well with labour pain when midwives and/or obstetricians: worked as partners with women, supported women, and did not interfere with their normal progress of labour by using medical interventions e.g. augmentation of labour, induction of labour, amniotomy, pharmacological pain relief options. Women, who trusted their bodies to handle labour pain, coped well with labour pain, gave birth spontaneously, appreciated the assistance of their midwives during labour, and perceived labour pain as tolerable given that [they] will be able to see, cuddle and kiss

[their] baby. Whereas, women who less trusted their bodies to cope with labour pain, and had strong believe in efficacy of opioids and epidural to relieve pain had painful labour, difficult labour and/or prolonged labour, and gave assisted birth or complicated spontaneous vaginal delivery. Examples include primiparas, adolescents, women lacking antenatal education and women lacking support from midwives in the absence of a family companion. Brainstorming approach helped in questioning whether midwives work as partners with women, whether they advocate women's needs for pain relief, whether they respect women's dignity and rights, and whether they practice within cultural sensitivity. What do women expect from midwives? How can midwives support women during labour in a medicalized birth environment? How can midwives apply their clinical knowledge of labour pain management? How women perceive the midwifery care provided for them in labour, and how women perceive their midwives' attitudes towards labour pain? In what way midwives can promote care - especially care aspects related to labour pain- provided for women.

Leap and Anderson's (2004) models on attitude to labour pain increased my interest in exploring the midwives' collective attitude towards labour pain in Jordan, from both the midwives and women's perspectives. To add more, when I worked as a clinical instructor, I noticed that there is a growing belief among Jordanians that giving birth is hard and less joyful without pain relief. There is another belief that having pain relievers in labour is more prestigious or a source of pride than giving birth without medicines. I also witnessed traumatic or dramatic births where women had a long and painful labour and when women felt powerless and unsupported during labour. Because of unsympathetic birth carers (obstetricians, midwives, and nurse assistants), women who had a past traumatic birth were not able to cope with labour pain, feared of baby's health during labour as pain relief caused more harm than good for them and their babies.

In the Exemplary Model of Midwifery Practice, it is required that professionals take action to help mothers based on three dimensions that include therapeutic, caring, and exemplary professionalism to deal with their pain by reducing or managing it (Kennedy 2000). Thus, if we examine the hospital midwives' attitude towards labour pain from a different perspective i.e. Working with Pain Model instead of the common one i.e. Pain Relief Model, we could possibly learn something new and explore the hospital midwives' attitude towards labour pain in a medicalized birth context. After all, exploring the midwives' attitude towards labour pain is not only important to Jordan but also to other parts of the world, taking into consideration the fact that 75% of hospital births in Europe (Francis 2011) and 7.8% hospital births in the United States of America (Martin et al. 2015) are attended by skilled midwives.
The estimated birth rate worldwide in 2016 is 18.5 births/1000 populations, 256 worldwide births per minute or 4.3 births every second (Central Intelligence Agency (CIA) 2017). This means that the world should be on track to achieve the 17 Sustainable Development Goals (2030) set up by United

Nations (UN), which are to improve maternal care and recognizing the fact that women's experience of labour pain is a primary step in improving maternal care (UN 2015). Positive birth experiences leave enjoyable and pleasant memories (Leeman et al. 2003). Many studies have reported mothers' dissatisfaction with their childbirth experiences (Srivastava et al. 2015; Jepsen & Keller 2014; Mohammad et al. 2014; Naghizadeh et al. 2013; Hatamleh et al. 2012; Khresheh and Barclay 2010; Abdel Ghani & Berggren. 2011; Oweis 2009; Nilsson & Lundgren. 2009; Christiaens & Bracke. 2007; Rudman, El-Khouri & Waldenström, 2007; Harriot et al. 2005; Hodnett. 2002). The studies indicate that there are many reasons for dissatisfaction i.e. painful childbirth, lack of control during childbirth, lack of involvement in making decisions, neglect, medical complications and fatigue. In all the studies, the dominant reason for dissatisfaction was the experience of painful labour accompanied by feelings of anxiety and fear.

In Jordan, women in common perceive their childbirth experience as painful and difficult; thus they are not satisfied with it, have little control during childbirth, and have great fear from previous childbirths that often included medical interventions, e.g., episiotomy and induction of labour (Abushaikha 2007; Hatamleh et al. 2012; Oweis 2009; Oweis & Abushaikha 2004; Oweis & Abushaikha 2005). Oweis (2009) who focused on women's perception of their childbirth experience in maternity care settings found that the majority of women perceived their childbirth as painful and difficult with lack of control. Women who were satisfied with childbirth reported that their childbirth was attended by a midwife or both a midwife and obstetrician. Oweis does not explore this reported aspect in depth or emphasise its importance, rather it is women's perceptions and expectations of midwives that should be explored. Oweis argued that reviewing hospital policies and planning strategies is helpful for reducing dissatisfaction with childbirth. Typically, reviewing policies and procedures is considered a political-level phenomenon. Instead, we need to question the midwives' collective attitude towards labour pain and their role in the Jordanian birth context. It is expected that midwives provide necessary pain management services for the women and care for women's perceptions of their labour pain experience. However, women are still reporting dissatisfaction with childbirth, and still expecting a painful labour although they are taking pain relievers, and their childbirth is attended as they prefer by midwives. However, nothing is known about the midwives' collective attitude towards labour pain and whether collective attitude is considered a major issue beyond women's negative perception and expectations of childbirth in a Jordanian medicalized birth context. Nor did the available evidence take into account the midwives' collective attitude to labour pain and its relationship to women's expectations and perceptions of pain. Therefore, the focus of this thesis is midwives' collective attitude towards labour pain from two perspectives: midwives' perspective and women's perspective. This research explores the midwives' collective attitude towards labour pain via measuring, combining and

theoretically interpreting: the midwives' knowledge and attitudes towards labour pain and the women's' expectations and perceptions of their midwives' attitude to labour pain. The type of attitude I explored in this research is collective attitude to labour pain. The perspective on midwives' collective attitude towards labour pain was based on two models: the Working with Pain Model (Leap & Anderson 2004; Walsh 2007) and the Exemplary Model of Midwifery Practice (Kennedy 2000).

### Research settings

This research was conducted in the labour and postpartum units at the Department of Obstetrics and Gynaecology at a major public hospital in Amman, Jordan. The hospital is Jordan's largest teaching hospital and plays a significant role in shaping midwifery practices in the country. The total number of beds in the department is 193, whereas there are 40 in gynaecology units and 153 in the labour and postpartum units. More than 18000 normal deliveries/ year, more than 4000 caesarean sections/ year and no performed instrumental deliveries take place at the hospital in which 72 registered midwives, 27 registered nurses, 21 nurse assistants, and 6 practical nurses are employed. 5 midwives with 1 to 2 nurse assistants, and junior, mid and senior doctors are available on each shift to offer care for 20 to 30 women. While the overall number of women looks large, women occupy labour unit at different times. i.e. midwives may start the shift offering care for 10 women and after short time (1-4) hours beds are available for new women. In general, one midwife takes care of five women every shift. Precipitate labour i.e. Delivery within less than 3 hours of regular uterine contraction and emergency delivery is the responsibility of midwives' working at admission department where women give birth at specially designed labour room inside the admission department. Women that require critical observation and have prolonged labour are usually admitted to special rooms at postnatal ward under the care of midwives working there. Head of midwives rotates midwives between wards to minimize the work overload and midwives' burn out particularly that midwives are lacking the chance to be off duty and take their annul leaves and sick leaves (Alslemaat 2012).

### An outline of the thesis

The thesis is organized into an eight-chapter format including introduction (Chapter One); background; theoretical and conceptual framework; methodology; quantitative findings; qualitative findings; discussion. Each chapter is organized to include different contents involved in this thesis. Chapter One, Introduction, is the first part of this thesis, as presented earlier. It introduced the research topic and the research problem. The other seven chapters of the thesis are as follows:

> Chapter Two presents and discusses different perspectives on pain and labour pain including: perspectives on pain and labour pain; assessment of pain and labour pain; antenatal preparation for pain management in labour; Management of labour pain; Women's experiences of labour pain; Women's management of labour pain. The last

part of the chapter entails the significance, the purpose of the research and the research questions.

> Chapter Three outlines the theoretical and conceptual framework of the research where the philosophical foundation of this mixed methods research Pragmatism is described. A detailed reflection on the choice of Pragmatism as a philosophical foundation for this research is presented in Chapter Eight.

> Chapter Four describes the methodological choice, design of mixed methods research, convergent parallel mixed methods research procedure, instrument development, pilot testing and validation, and ethical considerations.

> Chapter Five presents the Quantitative findings. The findings are organized into two sections: findings of the 'Survey Questionnaire for Midwives' (SQM) and findings of the 'Survey Questionnaire for Women' (SQW). The section describing the findings of the SQM and the findings of the Survey Questionnaire for Women' (SQW). Both the SQM and the SQW consist of 5-point Likert scales in which the midwives/ women strongly agree- agree- neutral- disagree- strongly disagree on predefined statements. SQM entails detailed findings about the characteristics of the midwife respondents and their knowledge of and attitudes towards labour pain. The section describing the findings of the SQW presents the findings on the traits that the women expected their midwives to possess, the women's expectations and perceptions of the midwives' attitudes towards pain. To ensure that the presentation of these findings is detailed and comprehensive, the quantitative findings were provided in the form of tables and figures.

> Chapter Six entails the qualitative findings of this research presenting the emerged themes and the main interpretations of themes in relation to the SQM. These findings are divided into two parts: 1) The midwives' knowledge and attitude towards labour pain, and 2) the expectations and perceptions that women have of their midwives' attitudes towards labour pain. The knowledge and attitudes held by midwives regarding labour pain were described in terms of four themes and are interpreted on the basis of Hunter's model of the interrelationships between practice context, occupational ideology and emotion work (2004). The emerged themes, which described the expectations and perceptions that women had of their midwives' attitudes towards labour pain, are interpreted on the basis of caring and uncaring encounters in nursing and health care theory (Halldorsdottir 1996).

> Chapter Seven presents the research findings of the SQM and the SQW i.e. combined perspectives of the midwives and the women on the midwives' collective attitude to labour pain.

> Chapter Eight discusses and evaluates the research findings. The chapter provides an evaluation of the findings against the aims/questions of the research with clear integration of evidence from recent studies to support assertions and statements. It also provides a reflection on Pragmatism and on the research process including strengths and limitations.

# 2. Background

## Perspectives on pain and labour pain

### Physiological perspectives - pain

The International Association for the Study of Pain (IASP) defines pain as an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described with such damage, and pain is always subjective (IASP 2011). IASP links pain to psychological reasons when no obvious pathological reasons existed. Pain is not restricted to pathological conditions or physiological reactions to injury or stimuli, but encompasses a subjective experience that can only observed by one's behaviour to pain (Shankland & Wesley 2011). Substantial literature suggests that a combination of cognitive, physiological, emotional, social, and environmental factors influences the individuals' experience of pain (Jimenez et al. 2011).

Pain results from bodily sensory response to harmful stimuli; thus, there are two categories of pain including nociceptive and neuropathic (Macintyre & Schug 2007). The first category of pain is nociceptive pain – a common category reported in clinical settings. This type of pain occurs due to trauma, tissue damage or inflammation that stimulates sensory nerve endings called nociceptors. There are two types of nociceptive pain: somatic and visceral pain. Somatic pain may be experienced as sharp, hot or stinging pain that is localized to the area of injury. Visceral pain is dull, cramping or colicky pain that is poorly localized. Visceral pain can also refer to other areas, with associated symptoms, such as nausea and vomiting. The second category is neuropathic pain. It results from serious injury such as in childbirth as stated by Wong et al. (2003) or disease that affects the peripheral or central nervous system (Macintyre & Schug 2007). Injury leads to developing central sensitization and hyper excitability of damaged peripheral nerves. Therefore, the patient may experience sensory loss, motor weakness, bowel or bladder sphincter abnormalities, reflex change, pain in the area of sensory loss, alteration in skin colour, temperature and texture, and sweating. The resulting pain often responds poorly to pharmacological treatment (opioids). Neuropathic pain can be a part of acute pain following surgery or serious trauma. The neuropathic pain, as noted above, is because of injury or disease of nerves (Macintyre & Schug 2007). During childbirth, neurologic injury can occur; however, its severity and permanency is rare (Wong et al. 2003). Nulliparous women who experience a prolonged second stage of labour are more likely to have postpartum nerve injury (Wong et al. 2003).

### Physiological perspectives - labour pain

Fremando & Price 2011; Wong 2009 and Gupta Gupta, Kumar & Singhal 2006 highlighted that labour pain is made up of two components, which are visceral and somatic pain as follows:

The visceral pain results from distension of the cervix and the lower uterine segment during the first stage of labour. The women usually feels this pain if the intrauterine pressure exceeds 25 mmHg. If the intrauterine pressure is below 25mmHg, the women experience and experiences minimal physical discomfort during labour. Myometrial and cervical ischemia during uterine contractions also cause additional pain via other nerve afferents in uterine muscle fibres. Visceral pain is transmitted by A delta and C fibres which run together with sympathetic fibres eventually passing through various nerve plexuses (eg. cervical, hypogastric) into the main sympathetic chain which lies parallel to and either side of the vertebral bodies. From the sympathetic chain, the pain fibres enter the white rami communicants associated with T10-T12 and L1 spinal nerves and pass via their posterior nerve roots to synapse in the dorsal horn of the spinal cord. In the latent phase of first stage of labour, women feel pain in the lower abdomen, groin and back. This pain referred to T11-T12 dermatomes (skin area that is innervated by a single spinal nerve). It is dull in quality, predominantly C-fibre transmitted and responsive to opioid drugs. In the active phase of labour (3-4cm dilated cervix), uterine contractions become regular and labour pain becomes sharper and spreads to T10 and LI. In this stage of labour with sharp pain, women's body is resistant to opioids. The somatic pain results from stretching and distension of the pelvic floor, perineum and vagina during the active and transitional phases of first stage of labour and during the second stage of labour. It is transmitted via the pudendal nerve (S2-4). This pain is also opioid resistant. The physiology of labour pain reveals the complexity of labour pain and it makes it clear how labour pain is challenging without regional analgesia; Epidural Analgesia (EA) and Combined Spinal Epidural (CSE).

Even though labour pain results from physiological interactions as mentioned above, it is unclear how it differs from other types of pain. For instance, Whitburn 2013 states that labour pain is not a pathological pain indicating a bodily disorder; instead, it is generated women's brain and realized through women's conscious mind. Charlton (2005) agree with Whitburn 2013 that labour pain is not pathological and highlighted that labour pain is a significant physiological sign of labour because it shows that contractions are occurring and sudden pain are felt by women which indicates the onset of giving birth, and that sever labour pain can indicate problems such as uterine rupture. Dixon, Skinner & Foureur 2013 also views labour pain as a natural pain the women feel, experience and perceive during labour and that labour pain occurs due to: frequency, duration and intensity of uterine contractions, ischemia of the myometrium, and discomfort due to foetal pressure on pelvic parts. The uterine contractions makes the foetus descends down the birth canal and pressurise the cervix, which causes the cervix to dilate

and stimulate the myometrium to contract regularly. Intensity of labour pain increases due to ischemia of the myometrium with the accumulation of lactate during contraction of uterus and stretching of the cervix during dilation. The foetal pressure on bowels and pelvic body parts also leads to labour pain. The muscles in these regions contract, placing pressure on the cervix – this is translated into pain by the nervous system. The movements generate mechanical and chemical stimuli that are perceived by the women as labour pain through the central nervous system.

A medical perspective on labour pain can be related to the Pain Relief' Model (Leap, Dodwell & Newburn 2010), which is founded on the belief that women should not suffer labour pain, meaning that pharmacological pain relief methods should be used to alleviate it. This model focuses the importance of offering women a 'pain relief menu' that ensures that they can make informed decisions on the best pain method and intervention. The model highlights that midwives and obstetricians belief that women cannot tolerate labour pain and give birth without pain relief. The model also views that care providers are tempted to offer pain relief once they see and hear the noise and agony of parents experiencing painful labour. While Pain relief Model emphases the necessity offering women a menu of pain relief methods, the WHO recommends offering parenteral opioids to women requesting pain relief in labour depending on women's preferences (WHO 2018).

Literature shows that awareness, opinions, expectations, and usage of pain relief methods are concerns among antenatal women (James, Prakash & Ponniah 2012; To 2007; Mugambe et al. 2007). A descriptive study conducted in an Indian private hospital (n=100) showed that : 65% of antenatal women expected a painful labour, more than half of the women (51%) supported the use of pain relievers, 24% felt that there is no need for pain relief, while the remaining 25% had no opinion on the matter (James, Prakash & Ponniah, 2012). The study highlighted that women who opted to use pain relief gave reasons such as having a comfortable delivery, relieving stress, and gaining confidence but women who opted not to use pain relief gave reasons such as that experiencing labour pain is normal, no pain no gain, and others feared that the child might be affected. Another survey research conducted in eight hospital obstetrics units (n=2109) in Hong Kong revealed that: 47% of the women had been properly informed of EA and only 13% chose to use it. Eighty-five percent of the women who used EA considered it favourable compared to 25% of women who experienced labour pain without analgesia. In addition, the study revealed that most women were not aware of the role EA in managing labour pain (To 2007). Mugambe et al. (2007) conducted a descriptive study in South Africa (n=151). They found that 56.3% of the women had knowledge about pain relievers, 51.7% expected mild pain during delivery, 55.7% had severe pain during their previous delivery, 83.4% of women had expressed little or no confidence in the pain relievers, and 99.3% were of the opinion that the hospital staff play an important role in relieving labour pain. Evidence suggests that positive

attitudes of women and care providers in labour influences women's perception of labour pain in a positive way e.g. Peaceful as opposed to negative attitudes (Whitburn et al. 2014). This requires sharing positive pain-free stories, which encourages women (especially primigravida) to prefer vaginal birth (Beigi et al. 2010).

### Psychological perspectives - pain

Pain is a subjective experience that is individually unique even though it is a natural bodily experience (Tan & Cyna 2013). Thus, pain has been conceptualized as a psychological phenomenon and that means patients give their interpretations or meanings to the bodily pain signals, which represents their psychology of pain (Hansen & Streltzer 2005). Understanding psychological issues such as attention to pain, emotions, fear, and expectations can help health care providers in dealing with patient's pain. Attention to pain is a psychological issue that influences the patients' reaction to pain and their perception of pain. Patients focusing attention to the noxious stimulus or being over vigilant to bodily sensation perceive pain as sharp, intense, painful or unusual. Such perceptions form due to cognitive processes, beliefs and attitudes, expectations and emotions. The cognitive processes, negative thinking, and role of mind e.g. tendency to catestrophize pain are important in how patients perceive a small stimulus such as light pressure or severe pain as little or no pain. Negative expectations, negative believes about pain emotions, anger, fear, depression and frustration affect level of pain, how patients feels pain and how it affects them during and after pain and contribute to patients suffering from imbalance in psychological responses to pain (Linton and Shaw 2011; Hansen & Streltzer 2005).

There are psychological models of pain that describe the psychological events happening after perceiving acute pain as threatening or suffering. These models guide pain management based on the psychology of pain, which are the Fear-Avoidance model (FA), and the acceptance and commitment model. In the FA, pain is seen to develop from cognitive interpretations of pain as a negative or threatening occurrence, and this triggers avoidance behaviours. In this model, the fear of pain is often perceived as being more severe or disabling compared to the pain itself. In the acceptance and commitment model, patients are urged to avoid activities that control or avoid pain, and instead focus on activities that add value to their lives. In essence, patients are encouraged to accept pain, and this will lead to reduced emotional distress and better physical performance (Linton & Shaw 2011; Vlaeyen et al. 2016).

### Psychological perspectives – labour pain

Labour pain is characterized by psychological changes that present a psychological challenge for midwives, care professionals and women. Painful labour may lead to an exhausted, frightened, emotionally traumatized, suffering from hysterical pain i.e. pain with no physical explanation and incapability of decision-making (Simkin & Bolding 2004). This reinforces the fact that labour pain is psychological, and this is the reason women in labour feel better when

they are well taken care of by the professionals. A Swedish study reported that when professionals responded to labour pain in an understanding and professional way, the women's sense of control and empowerment women increased (Bergh et al. 2015). According to Ampofoa & Caineb (2015) women viewed labour as a painful period that needed to be endured. They found that emotional support is necessary reinforces the point that women need to feel cared for psychologically. This means women were psychologically prepared to face the pain and end suffering. Therefore, it is logical to conclude that labour pain has psychological aspects, and this need to be addressed in order to alleviate pain.

Whitburn et al. (2014) examined the role of the mind in psychological dealing with labour pain. They found that a woman's mental state is important to the process, as it sets the pace for cognitive and evaluative processes that add meaning to the pain experience. The women had neither a state of mind that was focused and accepting nor a state of mind that was distracted and with thoughts of negativity and self-judgment. It was also noted that women could shift between these two states of mind and that the state of mind exhibited by the women controlled their experience of labour pain. Briefly, the psychological state of mind gives meaning to labour pain. This indicates that pain has psychological perspectives that can determine its meaning and severity. Furthermore, Jones et al. (2015) noted that women requested labour pain assessment models that have an expanding scale to accommodate progressive changes in their perception of extreme labour pain. This finding indicates that, as women's psychological state changes, so does their perception of pain. This shows that there is a direct link between the state of psychology and the pain perceived. In conclusion, based on the models discussed above and the review of articles, labour pain has psychological perspectives. The state of mind determines how birthing women perceive the meaning and extent of pain. A simple shift in the state of mind can change how women view labour pain.

Moreover, attitude perspectives are critical in the field of labour pain – they can affect how labour pain is perceived. On one hand, the Working with Pain Model is founded on the belief that there are substantial long-term benefits to normal childbirth in terms of women's lives and experiences (Leap et al. 2010). The model asserts that pain plays an important role in the entire process, allowing the woman to remain alert and realize that they are about to give birth. The labour pain does not mean that something is wrong, but that the process of labour is proceeding (Flink et al. 2009). The labour pain also motivates the woman to prepare for the experience and neurohormones are also triggered by the pain (Leap et al. 2010). It is also worth considering that the labour pain transitions the expectant mother into motherhood as the psychological, chemical, and biological processes take place (Hughes et al. 2009).

### Midwifery perspective

Lundgren and Dahlberg (2002) elaborated on the experience of midwives when they support women and how they perceive the women's labour pain. Their study

concluded that midwives should work towards being an 'anchored companion'. As an anchored companion, midwives provide emotional, psychological and physical support as well as establish relationships with the women based on confidence and mutual trust. It also means that midwives should be available to the women, follow their thought patterns, and be a listening and caring partner during labour. The essence of their finding was that midwives should constantly observe the women in labour and give the women sufficiently help to cope with their pain when necessary (Lundgren & Dahlberg 2002).

Kirkham and Stapleton (2000) indicated that the experiences of midwives are considerably influenced, often negatively, by the current midwifery practice in the health system in England. It is observed that the health system promotes Woman-centred care while the needs of the midwives are not addressed. Hunter (2001) noted that balancing contradicting emotions, e.g. joy versus negative stress is often tiresome and eventually emotional for midwives. Midwives are constantly with women in pain and their strategy to cope with it is to share their feelings with other midwives. This often can be a source of discomfort for the midwives.

Waldenström (1998) studied midwives' attitudes towards methods of obstetric analgesia and to the general use of anaesthesia in obstetrics in Sweden. The findings of this study revealed that 62 percent (n=114) of the midwives ranked the pharmacological pain relief methods as more common compared to non-pharmacological methods. The EA was ranked as the most effective form of analgesia; moreover, midwives thought that epidurals increase the rate of vacuum extraction, and that Pethidine shorten the length of labour. The results also indicated that the midwives in general believed in psychological methods to reduce labour pain with the main concern being the provision of professional support. Waldenström (1998) used a questionnaire about midwives' attitudes towards the analgesic effect of entonox, Pethidine, EA, paracervical block and pudendal block. For this questionnaire, a seven-level scoring system was employed ranging from 'very effective' to 'very ineffective' with 'neutral' at the middle of scale.

Three categories of approach by midwives to labour pain relief emerged (McCrea et al. 1998). The first category was the 'Cold professional'. Midwives in this category showed a provision of information about labour pain relief methods, their benefits and risks, responded to women's needs for labour pain relief they did not involve themselves in decision making, and worked 'for' the woman instead of working 'with' the woman. In addition, the women's social class influenced the cold professional midwife. The second category was 'Disorganized care'. In this category, midwives provided the woman information based on her needs; they did not listen actively to the woman and showed a lack of continual care and presence with the woman giving birth. Midwives giving 'Disorganized care' seemed to be influenced by their own personal opinions and experiences. The third category was the 'Warm professional' midwife. These midwives gave adequate information to the woman, encouraged her

when her labour pain intensified, listened attentively to her, provided her emotional support and involved the woman as a partner in decision-making. The result enhanced understanding of midwives' approaches to labour pain relief.

Mander (2010) highlighted that labour pain is the most challenging issue in midwifery due to the emergence of its complexity. Midwives, hospitals and the women have to be ready to approach and face this challenging issue. Women in labour cope with their labour pain via knowledge about the role of mind and body during uterine contractions and labour pain. This knowledge eases labour pain, reduces fear and facilitates birth. Therefore, hospitals should educate and train midwives and other health care providers about women's coping strategies with labour pain and labour pain management. In Jordan, midwives are mainly responsible for the care of women with an expected normal delivery in public hospitals, where most of these women choose. However, research from Jordan shows that the majority of women have strong fears, which result from negative childbirth experiences that included medical interventions, such as episiotomy and induction of labour (Abushaikha 2007; Hatamleh et al. 2012; Oweis 2009; Oweis & Abushaikha 2004; Oweis & Abushaikha 2005). In one study, Oweis (2009) found that 91 percent (n=177) of women from three Jordanian primary health centres, had normal deliveries, 36.7 percent of the deliveries were attended by obstetricians and the remaining percentage by midwives. Moreover, more than half of the women (55.4%) were given some pain relief (the types of pain relievers were not mentioned). Only 16.4 percent of the women perceived the labour pain relief as very effective, and 31 percent perceived the labour pain relief as, somewhat effective.

The Working with Pain Model guides midwives in helping birthing women cope with their discomfort with the labour pain (Leap & Anderson 2008). This model also requires midwives to be aware of their own approach to labour pain. Therefore, there seems to be a connection with the midwifery model where midwives are required to work for the physical, psychological and social needs of the woman. The model requires that women are given sufficient education and insight in all areas of the childbearing process, e.g., education in parental care, counselling and assistance during normal labour and delivery.

Karlsdottir, Halldorsdottir and Lundgren (2013) describe their model in labour pain management. They refer to this model as 'the childbearing women's paradigm.' The woman in this model is viewed as being in charge of the childbirth process, where the midwife and other health care professionals are seen as having a supportive role during the challenging journey of no return through labour pain. Having a 'good midwife' (p.7) who creates a warm, secure and conducive atmosphere makes women feel safe and enables them to manage labour pain. According to the women, the presence of a supportive partner who understands their needs and provided encouragement was crucial in managing labour pain. Karlsdottir et al. (2013) suggest further research to illuminate the importance of the childbearing women's paradigm.

## Assessment of pain and labour pain

Pain assessment is the first step towards proper pain management (Glowacki 2015). By definition, pain assessment is gathering information about the nature and the level of pain by consideration of health indicators and information provided by the patient (Glowacki 2015). Clinical status, self-reports, age, pain history, weight and medication are considerable factors in pain assessment (Glowacki 2015). The patient's verbal report (self-report) is considered the most reliable indicator of the level of pain (Mårtensson & Bergh 2011). Acute pain i.e. labour pain can be assessed using a Visual Analogue Scale (VAS) or a Numerical Rating Scale (NRS) (Huskisson 1974; Breivik et al. 2008). VAS consists of a 10cm line with two endpoints representing 'no pain' and 'worst pain imaginable'. Women in labour are asked to rate their labour pain by placing a mark on the line corresponding to their current level of pain. Then, the distance along the line from the 'no pain' marker is measured with a ruler giving a pain score out of 10. In NRS, women rate their labour pain intensity from 0 'no pain' to 10 'worst possible pain'. Breivik et al. (2008) reported that acute pain can be assessed both at rest and during movement, the VAS and the NRS are equally sensitive and superior to a four-point verbal categorical rating scale, and NRS is more practical, short and easy to administer a than other pain scales and can determine the intensity of pain accurately.

Wei et al. (2010) examined the use of a VAS in assessing women's labour pain and concluded that, nevertheless, the VAS has not been widely used in assessing labour pain. They found that the use of the VAS can have a ceiling effect, and may produce inconsistent results. The ceiling effect is experienced when the method reaches its maximum level of measurement such that no more pain is measured or perceived. At this point, the results of this method are not consistent. They therefore stated that there is no gold standard to measure labour pain. Mårtensson and Bergh (2011) also found that the VAS as the commonly used tool to assess labour pain and confirmed that it is equally reliable as the verbal reports from women in labour. A more recent study by Guglielminotti et al. (2013) reported that pupillometry is an effective pain assessment tool for non-communicative women in labour. The changes observed in the diameter of the pupil because of the contraction of the uterus indicate the level of labour pain.

Woman's labour pain should be both at rest and during physical activity because it strongly indicates the analgesic efficacy. They should also assess the pain intensity during the period of pain treatment. Frequency of assessment depends of the chosen pain relief method and the woman's' response. Poorly controlled pain indicates more frequent pain assessment and close observation (Macintyre & Schug 2007; Institute for Clinical System Improvement (ICSI) 2008). However, assessment of Labour pain is one of the most debatable issues of our time. There are a conflicting views among researchers on whether to assess labour pain based on its physiological essence by collecting objective data i.e. pain onset, intensity, frequency and duration or to describe labour pain based on its psychological essence by collecting subjective

data i.e. women's experience of labour pain. Mander and Simkin (2000) pointed out that some studies describe the physiological and psychological essence of labour pain despite there being limited yet contrasting proof to show that labour pain is different from other severe pain conditions. For instance, Vivilaki and Antonious (2009) emphasizes that it is vital to deal with labour pain because of its documented intensity, despite women in labour considering the pain experience to be important as it marks the onset of their motherhood. Whereas Whitburn (2013) disproves the measurement of labour pain based on pain intensity and underlined that labour pain is a subjective experience with different qualities and occurrences, and states that, "there is no precise way of measuring how much something hurts; only the person experiencing it knows how it feels" (p.140). Lundgren and Dahlberg (1998) show that labour pain is entirely a subjective experience communicated by women's own words and how the nature of labour pain was described differently among women who participated in their study. In their study, women expressed their labour pain as: 'terrible', 'hard', 'go to pieces', 'explode', 'tears at your whole body', 'happy pain', 'power', 'energy' (Lundgren and Dahlberg 1998, p.107). Faisal et al. (2014) also support the subjective nature of labour pain and that women communicate negative thoughts about labour pain due to fear of labour pain. In their study, the women described labour pain as 'it is horrible', 'it is so difficult' and 'it is frightening' (p.229). The debate surrounding whether to use pain assessment tools to assess labour pain or whether to trust only women's subjective interpretations of labour pain allow uncertainty among health care providers to ascertain the effectiveness of pain interventions.

## Antenatal preparation for pain management in labour

Antenatal preparation for managing labour pain is developed to psychologically prepare pregnant women for labour pain, fears and stressors associated with this childbirth, with aim of improving physical and emotional outcomes related to labour pain experience and childbirth process (International Childbirth Education Association (ICEA) 2014). Where labour pain is manifested psychologically, the ICEA 2014 evaluates the psychological pain associated with labour and observes psychological pain that is brought about by a lack of preparation and knowledge of the childbirth process, concurring with Firouzbakht et al. (2014), who stated that increased skills and knowledge of childbirth prepares women for labour and labour pain management. Charlton (2005) offers evidence of the same, observing that about 90 percent of women experience severe labour pain, hence the need for sufficient antenatal preparation. Furthermore, Charlton (2005) is of the view that women in labour need both antenatal preparation and psychological support through provision of relaxing environments, psychological pain relief or sympathetic partners to counteract the degree of labour pain. However, neither antenatal psychology nor the contribution of psychologists had ever been considered crucial in the domain of antenatal education when it evolved (Mander 2000; Simkin

2000). Therefore, the midwifery field has failed to take advantage of crucial developments in comprehending how the psychological aspects impact the two important aspects related to birth experiences, fear and pain (Firouzbakht et al. 2014).

Antenatal preparation has to focus on preparation for childbirth and psychological factors influencing the women's experiences of labour pain (Escott, Slade & Spiby 2009). Escott et al. (2009) identified six psychological aspects that could help women prepare for painful childbirth and cope with labour pain. The aspects identified are increasing the range of coping strategies during antenatal preparation to include cognitive strategies, such as imagery, self-statements or distraction, and helping women to identify and understand their coping styles. These aspects also relates to the Working with Pain Model (Leap & Anderson 2004). Leap and Anderson (2004) highlighted that planning strategies for supporting women, fostering the belief in women's ability to cope with labour pain, being aware of women's birth plans and developing labour preparation sessions are necessary to help women have a positive experience of labour pain. Helping women develop their unique coping strategies reinforces a positive attitude towards labour pain. The coping strategies are based on previous coping experiences or preferences discussed in antenatal class, strengthening feelings of coping self-efficacy by practice in antenatal class and reinforcement by a birth educator, developing implementation intentions to focus on when, how and why to perform a given strategy and supporting the usage of identified coping strategies by birth partner NHS (2011).

Schwartz et al. (2015) highlighted that childbirth efficacy, which is confidence in labour and giving birth is an important aspect in childbearing as it indicates women's coping abilities in labour. Their research indicated a correlation between high childbirth efficacy and positive birth experience, and on the other hand factors such as a fear of pain that leads to low confidence in childbirth has resulted in negative outcomes such as caesarean sections being performed on women with low childbirth self-efficacy. Martin et al. (2014), in a comparison of standard care and next birth after caesarean, discovered that women who were well equipped with knowledge and information on options of giving birth had high confidence in childbirth but that this had no direct relationship to the number of birth modes. On the contrary, a study conducted by Salomonsson et al. (2013), focused on the relationship between self-belief and fear among the nulliparous women found no relationship between fear of labour pain and the delivery outcome. In a closely related study focused on the relationship between decision on self-efficacy and personal knowledge conducted by Scaffidi et al. (2014) concurred with Salomonsson et al. (2013) that factors such as fear of labour pain had no significance impact on the overall outcome of giving birth. A Cochrane systematic review of preparation and education and outcome of birth, reported that childbirth education and its best approaches remain unclear. However, women can access antenatal education to understand aspects such as parenting, pain relief, infant and postnatal care (Gagnon & Sandall 2007).

## Management of labour pain

Labour pain is often described as intense pain experience women may go through in labour and its intensity increase with the progress of labour (Peret 2013). Once pain is assessed and its intensity and nature are established, pharmacological and/or non-pharmacological approaches can be used to reduce pain, a process known as pain management (Callister 2003). Both pharmacological and non-pharmacological techniques for labour pain management are important (Adams et al. 2015). This section provides a review on pharmacological and non-pharmacological approaches of labour pain management, the role of midwives in managing women's labour pain and barriers to successful labour pain management.

### Non-pharmacological approaches to labour pain management

The non-pharmacological methods can relieve labour pain. Maternal movement and positioning touch and massage, warm baths, and continuous support can help women manage their labour pain (Leeman et al. 2003). It is also possible to apply acupuncture and self-help techniques such as visualization, relaxation and breathing techniques to alleviate labour pain (Peart 2008).

The quality of relationship with birth attendants and the involvement of women in making decisions regarding pain relief approaches play a major role in women's satisfaction (Nigel 2013). A meta-analysis by Chaillet et al. (2014) reported that non-pharmacological approaches increase women's satisfaction, help women cope with labour pain, contribute to a reduction in medical interventions and benefit women and infants without causing harm. Water immersion, massage, ambulation, positions and acupressure, acupuncture, and electrical stimulation and water injections are as effective non-pharmacological pain relief methods and they are associated with a reduction in EA, a reduction in intensity of labour pain and increasing maternal satisfaction (Demir 2012). On the other hand, education, attention deviation, and support are associated with increased EA, instrumental delivery, use of oxytocin, duration of labour and neonatal resuscitation; less satisfaction with childbirth; continuous support is the most effective non-pharmacological pain relief methods because it reduces obstetric interventions (Chaillet et al. 2014). In a critical review of qualitative research, effective continuous support was a valued aspect of intra- partum care provided for women in labour because it enhanced their coping abilities and helped them avoid feelings of loneliness and fear (Van der Gucht & Lewis 2015). A Cochrane review also reported the positive effects of continuous support on women's experience of labour pain and reduced use of pain medications (Bohren et al. 2017).

### Pharmacological approaches to labour pain management

Childbirth is supposed to be a normal process, but from a medical perspective, the pain associated with it can be intense and therefore require pharmacological pain relief as presented below.

### Epidural Analgesia (EA) and Combined Spinal Epidural (CSE)

EA has been defined as a "central nerve block technique achieved by injection of a local anaesthetic close to the nerves that transmit pain" (Hitzeman & Chin 2012, p. 242). CSE consists of injection of a low dose of anaesthesia and opioid into the subarachnoid space followed by epidural top-up. EA is the most effective form of pharmacological pain relief methods, but its effect on the progress of labour and obstetric outcome remain debatable (Nafisi 2006; Bhattacharya, Wang & Knox 2006; Anu et al. 2011). Anu et al. (2011) found that despite EA are effective; women who use it are at high risk of having an instrumental birth. These results align with the earlier mentioned Cochrane review (Jones et al. 2012). The review revealed that EA, CSE, and Entonox (oxygen and nitrous oxide) are effective and potent labour pain relievers. Despite their analgesic effect, EA and CSE are associated with numerous adverse effects including increased duration of second stage of labour, increased risk of instrumental delivery, and increased need for augmentation of labour, reduction in maternal blood pressure and fever, headache, transient backache, and urinary retention. EA and Entonox relieve labour pain effectively compared to placebo, while CSE relieves labour pain more quickly as compared to traditional methods of pain relief or low- dose epidural. The review further reported that women who used EA had more deliveries that are instrumental and more caesarean sections than women who used placebos or opioids (Jones et al. 2012). Lumber epidural analgesia had a minimal effect on spontaneous delivery as it does not prolong the duration of labour, it does not increase oxytocin augmentation, it does not increase the rates of vacuum-assisted or caesarean sections, and it does not affect the neonatal APGAR (Activity, Pulse, Grimace, Appearance, and Respiration) scores at 1, 5 and 10 minutes after birth (Cambic & Wong 2010).

### Opioids

Parenteral opioids are intramuscular and intravenous drugs such as Pethidine, Tramadol, Meptazinol, Diamorphine, Pentazocine, Nalbuphine, Butorphanol, Morphine and Fentanyl used to relieve women' pain in labour but no recommended opioid (Bricker & Lavender 2002). A Cochrane review provided evidence that though opioids appear to provide women with pain relief, opioids efficacy in relieving labour pain remains unclear and there is no evidence on whether opioids affect newborns' safety, alertness at birth and early feeding (Smith, Burns & Cuthbert 2018). Ullman et al. (2010), in reviewing randomized controlled trials on parenteral opioids as pain relief in labour, revealed that they provided pain relief, although a proportion of women experienced moderate pain and moderate satisfaction of analgesia, while others experienced severe pain even after its use. As in the Cochrane review mentioned above, Ullman et al. also reported that opioid drugs have various side effects on mothers, notably vomiting, nausea, and drowsiness and that there is no clear evidence of the drug having adverse effects on the newborns. Whereas, Anu et al. (2011) found that the maternal side effects of opioids, such as nausea, vomiting, drowsiness and hypotension are low;

neonatal respiratory depression is not significantly reported, but there is a significant prolongation in the second stage of labour in the epidural tramadol group compared to the intravenous group.

### Inhaled analgesia

Inhaled analgesia is a non-invasive method of labour pain management in which women self-administer inhalation of sub-anaesthetic concentrations of agents such as Nitrous oxide and Flurane derivatives while they remain awake during labour. Inhaled analgesia is easy to administer, its efficacy can be started in less than a minute and become effective within a minute (Leeman etal. 2003). Evidence on effectiveness of inhaled analgesia in managing labour pain is limited. A Cochrane review on inhaled analgesia reported that inhaled analgesia reduces the intensity of labour pain and relieves labour pain without adverse increase in operative delivery rates (forceps or vacuum extraction, caesarean section) or effect on neonatal wellbeing. Flurane derivatives are slightly more effective than nitrous oxide in relieving labour pain but it results in more drowsiness when compared with nitrous oxide. Nitrous oxide results in more nausea than Flurane derivatives (Klomp etal. 2012).

### Barriers to successful labour pain management

Researchers have identified three main barriers to successful labour pain management (Soyannwo 2010; Mander 2010; Fergusson, Smythe & Mcara-Couper 2010). The barriers are as follows. Firstly, it is important to observe that there can be difficulties for medical staff in dealing with women in pain, but this again depends on the care structure, training, experience and staff attitudes. Midwives' intolerance of noisy birth environments aggravates the difficulties they may encounter in dealing with women's pain during labour. Health care providers recognize that labour and its related pain is a universal experience for all expectant mothers (Leeman et al. 2003). Mander (2010) stated that most midwives tolerate and cope with women and the reaction of women who are in labour. Midwives therefore should differentiate between physiological labour pain that requires their presence and pathological labour pain that requires pharmacological treatment to prevent unwanted complications. Secondly, the midwives' knowledge and understanding of the meaning of labour pain is important. If midwives were able to interpret labour pain, this would facilitate supportive care and women's long-term satisfaction. What is supportive and effective for some women may be insufficient and frustrating for other women. Thirdly, there is the lack of unobserved and unrecorded aspects of midwifery practices, particularly pain, as it is the most manageable intervention in labour. Midwifery interventions have to be observed with evidence-based practices being adopted as the best practice for providing midwifery care - and educational interventions are required (Soyannwo 2010; Mander 2010; Fergusson, Smythe & McAra-Couper 2010; Shaban et al. 2011; The Royal College of Midwives 2012) as it is evident that unrelieved labour pain also affects both the woman and her foetus (Wong 2009). Wong (2009) explained that

labour pain is a powerful respiratory stimulus, activating the sympathetic nervous system and the cardio-respiratory system, reducing utero placental perfusion, interfering with maternal neonatal bonding and contributing to postpartum depression and rarely to posttraumatic stress disorder. A healthy parturient and foetus readily tolerate some of these changes without adverse outcomes. In respiratory changes, such as hypoventilation, which may cause transient maternal and foetal hypoxemia, systematic analgesic opioids may result in respiratory depression. There is a general fear that having underlying diseases that are undiagnosed or exposed to health care providers can introduce complications in this process. Often, this means that women will not tolerate these changes without complications (Wong 2009).

### Role of midwives in labour pain management

The American Society for Pain Management Nursing (ASPMN) (2012) describes a strategic goal that calls for 'continuous improvement in the knowledge base of current and future health care providers' as a clinical education that guarantees effective pain management. The management of labour pain is important in the maternity context of birth, as labour pain is complicated and requires assessment, reassessment, and constant observation by midwives. This means that midwives have a major role to play, especially in relation to labour pain management.

Klomp et al. (2014) emphasized that midwives role in labour pain management is to utilize the knowledge about a three labour pain management approaches mostly taken by women in labour, apply this knowledge into practice, and identify appropriate use of resources for management of labour pain. The three-management approaches are the pragmatic natural, the deliberately uninformed, and the planned pain relief approaches. Women who are confident in their ability to handle labour pain without the need for pain relief if labour is progressing normally use the pragmatic natural approach, but at the same time, they value pharmacological pain relief when required. Women who want to receive information in moderation and prefer to observe how things turn out employ the deliberately uninformed approach. Women who definitely need to have pain relief at the beginning of childbirth use the planned pain relief approach.

## Women's experiences of labour pain

Understanding women's experiences of labour pain e.g. unpleasant and negative emotions is crucial for better management of labour pain and suffering particularly that suffering cannot be explicitly communicated using women's own language (Noelia Bueno-Gómez 2017; Simkin & Hull 2011). Suffering is an unpleasant embodied experience, which severely affects a person at psychophysical and physiological levels and it depends on person's attitude and resources for pain management (Noelia Bueno-Gómez 2017). Labour pain does not necessarily entail suffering but it can cause suffering when labour pain is accompanied traumatic childbirth, negative emotions (e.g. fear and anxiety), dissatisfaction with the attitudes of midwifery and medical staff

at birth and social problems (Simkin & Hull 2011). This predicts childbirth-related post-traumatic stress disorder in mothers (Çapik & Durmaz 2018). Posttraumatic stress disorder is an anxiety disorder that it is characterised by persistent replay of the traumatic event, persistent avoidance of stimuli associated with the event and symptoms of increased arousal (American Psychiatric Association (APA) 2000). Midwives should adopt a humanistic "feeling with women" approach and realize that, if a woman has any option of pain relief, she still needs professional support that enhances positive experience of labour pain and makes women feel safe during labour (Simkin & Hull 2011; Lally et al. 2014). Simkin and Hull (2011) further advised midwives to listen to women's concerns, prepare them for labour and minimise the likelihood of loneliness, disrespect and intolerable pain. However, unlike labour pain that can be managed using pharmacological and non-pharmacological pain relief approaches, management of suffering is inadequately examined in literature.

A 2012 Cochrane review reported the positive impact of continuous support on women's experience of childbirth and on labour pain. Women who received continuous support during labour are not likely to use pain relief, more likely to be satisfied, and more likely to experience slightly shorter labour, and they are not likely to give birth through caesarean section, vacuum, or forceps compared to women who lack the support. Moreover, the newborns delivered in supportive environments were less likely to have a low five-minute APGAR (Appearance, Pulse, Grimace, Activity, and Respiration) score (Hodnett et al. 2012). A critical review of qualitative research by Van der Gucht and Lewis (2015) reported that continuous support enhances women's coping abilities with labour pain and makes them avoid the feelings of loneliness and fear of the unknown. In this review, women felt vulnerable during delivery when they experienced a lack of support during labour and therefore they valued the relationship they had with health professionals. Staff professionalism, the birth environment, the presence and support of the child's father in labour also ease the childbirth process for the women and positively enhance women's experience of childbirth and labour pain (Sawyer et al. 2013).

## Women's management of labour pain

Two contrasting perspectives on labour pain are described in the childbirth literature. According to Gaskin (2003), labour can be with more ease, less pain and fewer medical interventions when women trust their bodies and have a positive birth experience, in contrast to Melzack (1981), who reported that labour pain is the most severe pain that a woman experiences in her lifetime. When the body is in pain, the birthing woman is uncomfortable, and when the body is uncomfortable, it becomes hard for women to focus on giving birth. To be able to make the women giving birth comfortable, pain relief methods are desirable in order to reduce pain, discomfort, and stress (Hool 2010).

Women themselves identify proper pain management approach based on preferences for pain relief methods that may differ among women (Madden et al. 2013) and

based on women's attitude regarding the choice of pain relief methods (Doering, Patterson & Griffiths 2014). For some women it is acceptable to have access to different pharmacological pain relief methods while for many others pain relief methods conflict emotionally with their cultural beliefs in trusting their bodies to cope with labour pain. Women who used an EA were found to be more educated (OR 1.12) and have a higher income (OR 1.10) than women who were less likely to use EA (Koteles et al. 2012). However, it is important to point out that the differences were small. In addition, women were less likely to use an EA if midwives attended their births. A longitudinal study by Lindholm and Hildingsson (n=936) (2015) showed that women's preferences for pharmacological pain relief methods are the most popular in the north of Sweden. Women who preferred nitrous oxide, bathing, breathing techniques, EA and massage were most likely to use these methods in labour. The study also found that women who used an EA were two to four times more likely to have less positive birth experiences. However, what the women expected from their midwives in relation to the preferred pain relief methods was not explored in this study. Shaban et al. (2011) reported the high use of Pethidine as a pharmacological pain relief method among women in Jordan. However, the reasons for a high usage of Pethidine with low-risk labouring women in Jordanian public hospitals remain unclear. A recent study conducted in Iceland on pregnant women's expectations of intensity of labour pain and predictors of expectations and attitudes showed that women who expected childbirth to be painful had a negative attitude to the coming childbirth and that a low sense of security was the strongest predictor of high expectations of labour pain intensity (Karlsdottir et al. 2015). Whilst the study provided insights into expectations and attitudes during early pregnancy, significant gaps still exist in the literature with regard to studying the expectations after the actual experience of labour pain. A key element in exploring the expectations and attitudes towards labour pain is the actual experience of labour pain. It seems that no earlier studies explored midwives' attitude towards labour pain from both midwives and women's perspectives taking into consideration the actual experience of labour pain.

In Jordan, The earlier studies conducted examined women's expectations and experiences throughout the childbirth process, and labour pain encountered primarily during the second stage of labour (Hatamleh et al. 2012; Oweis 2009; Abushaikha 2007; Oweis & Abushaikha 2005; Oweis & Abushaikha 2004). These studies concluded that midwives do play an important role in managing labour pain and supporting women to cope with labour pain. To what extent midwives in Jordan understand the complexity of labour pain and the complexity of women' experiences of labour pain and fulfil their role in managing women's labour pain has not yet been explored.

Women's expectations of their midwives' approaches to management of labour pain remain unclear and fragmented in Jordan. Oweis and Abushaikha (2004) reported that women in their first pregnancy without any complications expected

a negative childbirth experience. In their study, 66% of the women (n=100) expected childbirth to be frightening, 66% expected a difficult childbirth, 78% expected painful childbirth, and 72% expected to cry when labour intensified. The women also expected inadequate midwifery and nursing support during labour. They did not expect the midwives to provide them with primary information on labour, to help them cope with pain, or to involve them in making decisions regarding their care. Oweis and Abushaikha (2005) conducted study in Jordan that showed the majority of women in labour (81/100) reported intense labour pain i.e. scores ≥ 8 out of 10 on the NRS and that women their study appreciated the supportive care provided by midwives, although labour pain was intense and the midwives' support was minimal. They also reported that the most common alleviating factor for labour pain in the second stage of labour was midwives' support, indicated by talking to the women and touching their hands. They therefore emphasized the importance of evaluating midwifery practices in relation to the management of labour pain in Jordan. An exploratory descriptive study conducted at a major public hospital in northern Jordan with 99 participating women showed that 82/99 respondents described their birth memories as negative (Hatamleh et al. 2012). The majority of them remembered labour as a painful (56%), frightening (24%), and difficult (17%) experience. Some women, though, remembered the kindness of the midwife during childbirth. It was not clear; however, how the midwives acted in a kind way in helping the women to cope with labour pain, but the women remembered the joy of having a new baby and becoming a mother. Such feelings helped them forget their painful and difficult labour (Hatamleh et al. 2012).

Abushaikha (2007) reported that breathing and walking were the most common physiological coping methods women used to manage labour pain in Jordan. Women used breathing and walking based on their inner instinct and not depending on antenatal education. Screaming and yelling were the second reported psychological method of coping with labour pain, although this method is unacceptable in Jordanian culture, as women are required to lower their tone of voice. Reciting the Quran and faith in Allah were also spiritual methods considered. Distraction and imagination were the least used cognitive coping methods. Callister and Khalaf (2012) also reported that women perceived the help of Allah as a way of coping with painful and stressful childbirth among Arab Muslim women. Arab Muslim women feel that they are in the hands of Allah, so they rely upon Allah to have a positive and safe birth and to deliver a healthy child. Therefore, they encourage nurses and midwives to listen to women's spiritual needs and to help women use their spiritual beliefs in coping with the childbirth experience and labour pain.

Numerous studies, both qualitative and quantitative, have previously examined the complexities of labour pain in relation to women's expectations and perceptions of the overall childbirth experience, the birth plans, the outcomes of childbirth, the expectations during early pregnancy, the satisfaction with the childbirth experience, and the

experiences with labour pain (Karlsdottir et al. 2015, Gibson 2014; Hauck et al. 2007; IP, Chien & Chan 2003; Malacrid & Boulton 2014; Martin, Bulmer & Pettker 2013; Mohammad et al. 2014; Moudi et al. 2012; Oweis & Abushaikha 2004). Although our understanding of the complexities of labour pain, actual experience of labour pain and labour pain management is expanding, literature do not account for midwives' collective attitude towards labour pain as it remains unexplored. The quantitative studies (IP, Chien & Chan 2003; Mohammad et al. 2014; Moudi et al. 2012; Oweis 2009; Oweis & Abushaikha 2004) used questionnaires that were not validated for measurement of midwives' collective attitude towards labour pain. Examples of these questionnaires are the satisfaction with childbirth care scale as cited by Mohammad et al. (2014), the childbirth expectation questionnaire developed by Gupton et al. (1991) as cited by IP, Chien and Chan. (2003), the women's expectations of childbirth care services questionnaire developed by Moudi et al. (2012), the expectations of childbirth experience developed by Oweis and Abushaikha (2004), and the satisfaction with childbirth experience questionnaire developed by Oweis (2009). None of these questionnaires was suitable for use in this research, as the items of the aforementioned questionnaires did not cover women's expectations and perceptions related to midwives' attitudes to labour pain. No earlier questionnaires developed based on any of attitude towards labour pain models i.e. Working with Pain Model and/or Pain Relief Model and Exemplary Model of Midwifery Practice. On the other hand, the methods of data collection used in the qualitative studies were individual interviews with focus on childbirth experiences, birth plans and outcomes of childbirth (Hatamleh, Shaban & Homer 2013; Hauck et al. 2007; Malacrid & Boulton 2014; Martin, Bulmer & Pettker 2013). Using one research approach i.e. quantitative or qualitative to address the midwives' collective attitude towards labour pain would be deficient. It is for this reason that mixed methods approach was used in this research to help us answer the research question as described at the end of this chapter.

## Significance of research

In Jordan, there is an increasing awareness of the need to improve midwifery practices, maternal health outcomes and childbirth experiences either by persisting with the 'widespread use of narcotics and medications' or by developing and evaluating midwives' approaches to labour pain management. The reason is that the majority of women were dissatisfied with childbirth care and described pain management during childbirth as ineffective (Abushaikha 2007; Hatamleh et al. 2012; IASP, 2010; Mohammad et al. 2014; Oweis 2009; Oweis & Abushaikha 2004; Oweis & Abushaikha 2005).

However, it is warranted to explore midwives' collective attitude towards labour pain in Jordan as Mohammad, et al. (2014) reported the dominance of the medical Pain Relief approach in Jordanian maternal hospitals, despite women's dissatisfaction with intrapartum care and women need for midwives' assistance, and the negative expectations of women experiencing labour pain. The fact that the different approaches

for management of labour pain have been studied in European countries (Christiaens, Verhaeghe & Bracke 2010; Christiaens et al. 2013; Gibson 2014; Klomp et al. 2013; Jones et al. 2012; Mccrea, Wright & Murph-Black 1998; Wiegers et al. 1998; Waldenström 1998) does not guarantee success in Jordan, given the fact that differences in birth culture, institutional contexts, models of midwifery practice and risk management strategies could have different impacts on midwives, women, families and policy makers.

The research may provide useful information about midwives' collective attitudes towards labour pain and suggestive solutions for the labour pain management and women's dissatisfaction due to painful labour dilemma in Jordan. To reach the 17 sustainable development goals, which include reducing child mortality and improving maternal health (Goal 3), in 2000, certain goals were agreed upon by 189 governments, including Jordan (UN 2015). The research may further provide detailed information, from both the midwives and the women's perspectives, which may be utilized by Jordan's Ministry of Health in designing and implementing a carefully-laid strategy or guidelines that will midwives' collective attitude towards labour pain. With the global flow of refugees, midwives everywhere can benefit from the findings in adopting a collective attitude towards labour pain that is culturally sensitive. The findings may help midwives recognize the importance of understanding the complexities of labour pain experience within the context of women's cultural values, pain behaviour and reaction, expectations and perceptions. It is crucial to mention that, no earlier studies have explored the midwives' collective attitude towards labour pain using mixed methods approach. In addition, no previous studies used both the Working with Pain Model and Exemplary Model of Midwifery Practice as the primary perspectives for constructing a survey questionnaire. This can be a significant contribution to the existing literature.

## Purpose of research

The aim of this research is to explore midwives' collective attitude towards labour pain by measuring/interpreting the midwives' knowledge of labour pain and the midwives' individual attitudes towards labour pain, the women's expectations and perceptions of their midwives' attitude towards labour pain and the possible association between women's perception and the midwives' knowledge. The main research question: can midwives' collective attitude to labour pain be explored by measuring/interpreting their knowledge of labour pain and their individual attitudes towards labour pain and the expectations and perceptions of women about midwives' attitudes to labour pain? The research was guided by specific quantitative and qualitative questions as follows.

### Quantitative questions:

1. What is the midwives' knowledge about labour pain?
2. What is the collective attitude of midwives to labour pain?
3. What expectations do childbearing women have of their midwives' attitudes towards labour pain?

4. What perceptions do childbearing women have of their midwives' attitudes towards labour pain?
5. Is women's perception significantly related to the level of knowledge of labour pain among midwives in Jordan?

To answer the relational question in this research, the research questions converted to hypotheses for testing were as follows:

### Hypothesis 1

Null hypothesis: The midwives' knowledge of labour pain is not significantly related to their collective attitude towards labour pain.

Alternative hypothesis: The midwives' knowledge of labour pain is significantly related to their collective attitude towards labour pain.

### Hypothesis 2 (main hypothesis)

Null hypothesis: The midwives' knowledge of labour pain is not significantly related to the women's perception of midwives' collective attitude to labour pain.

Alternative hypothesis: The midwives' knowledge of labour pain is significantly related to the women's perception of midwives' collective attitude to labour pain.

### Hypothesis 3

Null hypothesis: Women's expectation of the midwives' collective attitude to labour pain is not significantly related to the women's expectations of their midwives' attitudes to labour pain.

Alternative hypothesis: Women's expectation of the midwives' collective attitude to labour pain is significantly related to the women's expectations of their midwives' attitudes to labour pain.

### Hypothesis 4

Null hypothesis: Perception of the women about the midwives' collective attitude to labour pain is not significantly related to the women's perceptions of their midwives' attitudes to labour pain.

Alternative Hypothesis: Perception of the women about the midwives' collective attitude to labour pain is significantly related to the women's perceptions of their midwives' attitudes to labour pain.

### Qualitative Questions

1. How do the midwives experience their work with women's labour pain in Jordan?
2. How do women expect their midwives' attitudes towards labour pain?
3. How do women perceive their midwives' attitudes towards labour pain?

# 3. Theoretical and conceptual framework

## Pragmatism

This research is a convergent parallel mixed methods research. The underlying philosophy of the convergent parallel mixed methods design is Pragmatism (Morgan 2014; Creswell 2008). Morgan 2014 defines Pragmatism as "a philosophy in which the meaning of actions and beliefs is found in their consequences" (p.26). Creswell 2008 embraces that Pragmatism is the best philosophical worldview that provides foundation for convergent parallel mixed methods research because it is a practical philosophy that is based on elements and ideas, which employ "what works" by using different approaches and valuing both the subjective and objective knowledge. According to Morgan 2014, three main elements underpin this philosophy. The first element is that action cannot be separated from the situations and the context in which they occur. This element is in particular related to the pragmatist argument that all action is action in the world. This world is the world of experiences that occur in the lives of specific people in specific situations, and so the consequences of any act depend on the situation in which it happens. A similar argument by Dahlberg, Dahlberg & Nystrom 2008 as experience can only be considered within the notion of lifeworld; where we live and do our ordinary tasks and actions, and the life world is the "home for both subjective and objective experiencing" p.349. Therefore, the emphasis of Pragmatism is on warranted beliefs instead of universal truth. These beliefs are results of repeated experiences of predicable outcomes. It could be said that by taking the same actions in similar situations and the consequences of those actions, the likely outcomes of one way versus another will be learned. The second element is that actions are linked to consequences in ways that are open to change. This entails the situational nature of action. Pragmatists believe that the consequences and meaning of an action can change when a situation changes. Pragmatists also believe that it is not possible to exactly experience the same situation twice and the meaning of acts changes over time because of on-going experience. Hence, the beliefs about how to act in a situation are continually evolving. Such beliefs are called warranted beliefs. The third element is that action depends on worldviews that are socially shared sets of beliefs. It is about treating beliefs as interconnected instead of isolated and the worldview, which shapes the experience, as a product of experience. Although people have different experiences and thus worldviews, varied degrees of shared experiences among people can nonetheless be found, leading to different degrees of shared beliefs. When two people share similar beliefs about a particular

situation, they are likely to act in similar ways and have similar meanings to the outcomes of actions. Consequently, the worldviews are both unique at a detailed level and socially shared at a broader level. The Pragmatic philosophy incorporates both the quantitative and qualitative methods (mixed methods) in the research (Creswell 2008). In Pragmatic philosophy, the researcher focuses on the research problem rather than on the methods and hence uses the available approaches to understand the research problem. Pragmatism is not limited to a single system of reality and philosophy. The same applies to mixed methods research, where researchers draw from both quantitative and qualitative methods while undertaking a research. Pragmatic researchers have the freedom to choose the methods, procedures and techniques to use in a research project typically from either quantitative or qualitative research (Creswell 2008).

The most important key in the pragmatic approach is the determination of the outcomes and end-causes/results and not the extract first-causes. Pragmatism is useful to relieve 'paradigm wars' since researchers have been in a dilemma as to which method to use, i.e., quantitative or qualitative as explained by Cameron 2011. Researchers have achieved this by taking a pragmatic approach when conducting research, thus incorporating several methods. Pragmatism has been considered a bridge between the paradigms and the methodology and despite its challenge of being eclectic, mixed methods researchers are bound to defend it. Cameron 2011 claims that Pragmatism cannot provide a philosophical foundation for mixed methods research, but can, on the other hand, assist researchers in asking precise and better questions in their research when Creswell 2008 advocates the use of Pragmatism as mentioned above. However, Morgan (2014) claims that Pragmatism is a unique philosophical worldview based on all elements of Pragmatism. The main emphasis of Pragmatism is the nature of experience rather than the nature of reality. It also focuses on the outcomes of action rather than the nature of truth. Pragmatism examines shared beliefs instead of individualized, isolated sources of beliefs.

It is therefore I argue suitability of Pragmatism as a philosophical foundation for this research. To explore midwives' collective attitude towards labour pain, data on four variables (midwives' knowledge, midwives' attitudes, women's expectations and women's perceptions) should be obtained, analysed, combined and scientifically/theoretically interpreted using both quantitative and qualitative research methods. Nothing is known about midwives' collective attitude towards labour in Jordan as mentioned in chapter two. Therefore, the focus in this research is on collective i.e. shared attitude of midwives instead of individualized attitudes towards labour pain, the nature of experience and the value of both subjective and objective data. Additionally, I would argue that readers of this thesis might find it enough to interpret the midwives' collective attitude depending only on two variables, i.e., midwives' knowledge and attitudes or women's expectations and perceptions. Reader's conclusion would then likely to take the form of evaluative judgment i.e. the midwives have a positive,

negative, unclear attitude or have a have good or bad attitude towards labour pain. In this case, it is difficult for readers to catch and understand both the obvious (visible) and the shadow (invisible) attitude the midwives share. Reader's judgment when considering only two variables would differ from what this thesis concluded about collective attitude based on the four aforementioned variables.

# 4. Methodological framework

## Convergent parallel mixed methods

The research design is the convergent parallel mixed methods design, where both quantitative and qualitative elements integrated in order to obtain a comprehensive understanding (Creswell & Clark 2011). With reference to Creswell and Clark (2011), this design allow the survey findings in this research to be linked with the identified themes in individualised and focus group interviews and generate overall interpretation about the midwives' collective attitude towards labour pain.

Creswell and Clark (2011) provided a detailed definition of mixed methods that has a method, a philosophy and a research design orientation, and stated that mixed methods research is a research in which the researcher does the following:

> *'Collects and analyzes persuasively and rigorously both qualitative and quantitative data (based on research questions); mixes (or integrates or links) the two forms of data concurrently by combining them (or merging them) sequentially by having one build on the other, or embedding one within the other; gives priority to one or to both forms of data (in terms of what the research emphasizes); uses these procedures in a single study or in multiple phases of a program study; frames these procedures within philosophical worldviews and theoretical lenses; combines the procedures into specific research designs that direct the plan of conducting the study'. (p. 5)*

One may argue that the qualitative or quantitative approaches may well address the research questions. The investigated concepts are difficult to measure using only one research approach i.e. quantitative or qualitative because these concepts are subject to the researcher's own interpretation. Mixed methods research is therefore advantageous to answer complex research questions that are difficult to answer using separate quantitative or qualitative approaches, and gives a comprehensive picture of the research issue, enhances the validity once the research results of both approaches are convergent, and increases reflectivity that requires further research if the research findings are divergent (Lund 2012).

This research used concurrent triangulation strategy. In this strategy, equal value given to both quantitative and qualitative approaches, data collected concurrently, and integrated in the final phase of research; known as the interpretation phase (Creswell & Clark 2011; Terrell 2012). They indicated that the strengths of this strategy are that it requires a short time to collect data compared with sequential strategy and that it presents analytical and logical clarification of research findings,

particularly when the data is convergent. Mixed methods research weaknesses are that practitioners of the concurrent strategy need research experience, the substantial effort demanded by using quantitative and qualitative data, difficulty in comparing research findings at the final stage, and resolving any divergences.

In this research, both the quantitative and the qualitative data were collected and analysed during the same phase of research and then combined into an overall interpretation to have a thorough understanding of the midwives' collective attitude towards labour pain. Equal weight was given to both research strands; quantitative and qualitative, since each addressed related aspects of the same research question in a complementary manner. At the final stage of the research, the findings of the quantitative and qualitative strands compared to find corroborating evidence and build a complete understanding. The qualitative information provided a more meaningful and comprehensive understanding of the midwives' collective attitude towards labour pain. This is because the reflective lifeworld hermeneutics approach (Dahlberg, Dahlberg & Nystrom 2008) used as a qualitative approach in this research. This approach helped in exploring the experiences of midwives and women from their lived and worldly contexts. The lifeworld approach is not a method but an open and sensitive approach that requires the researcher to see, understand and critically think about the phenomena under investigation (Dahlberg et al. 2008). The main goal of life world hermeneutics is to meaningfully understand and interpret the meaning of texts and actions according to what expressed in the texts and actions, respectively (Bengtsson 2013).

The ontology of the reflective lifeworld approach is represented by belonging to 'being' so the world shows itself through the process of interpretation, the interdependence of life and world, and our lived bodies are our access to the world (Bengtsson 2013; Dahlberg 2006). For example, when a woman has labour pain and experiences stressful situations/events, she may feel unable to cope with labour pain. Furthermore, her responses, actions, perceptions and expectations related to the childbirth experience will change in different ways. When listening to a woman's story, it is necessary to be attentive to a mixture of her emotions, thoughts and experiences at that time. Such ontological bases have informed the choice of the qualitative approach used in this research. This approach is well suited to acquiring a rich, comprehensive and meaningful understanding and interpretation of the midwives collective attitude towards labour pain by interpreting midwives' knowledge and attitudes towards labour pain and the women's expectations and perceptions of their midwives attitudes towards labour pain, which aligns with the aim of this research. This approach also seems to be in line with the core philosophy of midwifery practice; Women-Centred Care which rely on the relationship between women and their midwives and centred on provision of holistic care for women so expectations and context are defined by women themselves (Klein 2010)

## Phases of research

The research in this monograph divided into four phases with the aim of facilitating reading the monograph and specifying the procedure of the convergent parallel mixed methods research. It is important to be clear that the research procedure was not sequential but it was concurrent according to the principles of convergent parallel mixed methods research as mentioned in chapter three. The quantitative data and the qualitative data of the research were collected concurrently i.e. During the same data collection period and after the SQM and the SQW validated. Then, the quantitative data and the qualitative data were analysed separately and independently; the quantitative data does not depend on the qualitative data, and vice versa. Finally, the quantitative and the qualitative findings combined to form an overall interpretation about the midwives' collective attitude towards labour pain. The phases are as follows: Phase One (Instrument development and validation), Phase Two (Quantitative), Phase three (Qualitative) and Phase four (Interpretation of combined quantitative and qualitative findings).

### Phase one: Instrument development and validation

Since there is no existing instrument that can appropriately address the aim/questions of this research, two self-developed surveys (Survey Questionnaire for Midwives (SQM) and Survey Questionnaire for Women (SQW) were designed based on previous literature; Kennedy 2000, Leap & Anderson 2004, and Walsh 2007.

Czaja & Blair 2005 defines the process of constructing a research survey as a "process that involves a planned series of steps, each of which requires particular skills, resources and time, as well as decisions to be made" (p. 60). Kitchenham and Pfleeger (2002) stated that this process requires four steps, namely: searching through the literature, constructing research questions, evaluating the instrument and using the instrument. In this research, the research surveys were constructed based on examining the existing literature concerning midwives' knowledge about labour pain, midwives' attitudes towards labour pain, women's expectations and perceptions of midwives' attitudes towards labour pain. Research instruments and data collection methods used in the literature considered before constructing the SQM and the SQW (Mccrea, Wright & Murph-Black 1998; Waldenstrom, 1988; Gibson, 2014; Hauck et al. 2007; IP, Ghien & Ghan 2003; Malacrid & Boulton 2014; Martin, Bulmer & Pettker 2013; Mohammad et al. 2014; Moudi et al. 2012; Oweis & Abushaikha 2004; IP, Chien and Chan 2003; Oweis 2009).

The search through the literature (listed above) revealed the need to develop two self-administered surveys: SQM and SQW. Both SQM and SQW aimed at exploring midwives collective attitude towards labour pain; SQM measures the midwives' knowledge and attitudes towards labour pain, while SQW measures women's expectations and perceptions of their midwives' attitudes towards labour pain. According to Saunders, Lewis, and Thornhill (2007), structured survey questionnaires enable researchers to analyse data using descriptive

and inferential statistics. A structured survey questionnaire has the advantages that it is easy to administer, to post it by mail or to administer it as a web survey.

The literature described the midwives' attitudes towards labour pain as, individual actions that are associated with midwives' desire to use either the Working with Pain or the Pain Relief models in labour (Jones et al. 2012; Leap & Anderson 2004; Walsh 2007) - in other words, attitude is desire, action, and consequence. This means that attitude towards labour pain - as described in literature - has two features: implicit feature (desire) and explicit features (individual action and consequence). So, if attitude towards labour pain viewed as desire, action, and consequence then attitude occurs if we only observe midwives or scale individual attitude as negative or positive. However, intention to observe attitude in general and collective attitude towards labour pain in specific directly is difficult. Because collective attitude is an elusive phenomenon (difficult to capture or grasp) and there is no tangible criterion to which we can to compare the observed collective attitude (DeVellis 2012). However, in this research, I generally view collective attitude as: what lies in between the instinct, the drive, the obligation, the urgency, the risks, the commitment, the inner and the outer wisdom, and the inner and outer self-validation. I therefore view collective attitude towards labour pain embodied in the act of empowering midwives (with focus on labour pain) working in a hospital context coupled with a rewarding function (activity, situation, event) aiming at enhancing productivity, contribution, future behaviours/actions, accomplishment and memory. Consequently, this realization may occur after considerable efforts to explore midwives' collective attitude towards labour pain in a hospital context.

For exploration, the boundaries of the phenomena i.e. midwives' collective attitude towards labour pain must be recognized so that the content of developed surveys drifts into the intended domains. DeVellis (2012) emphasized that a theoretical model offers guidance and clarity on the aspects of the phenomena to be addressed. Thinking about this research phenomena, requires asking questions like: What do midwives need to be empowered to act (with focus on labour pain) in hospital settings? How do midwives act, behave, or respond to their beliefs/disbeliefs of labour pain and to clients (birthing women) in relation? Should midwives know and realize what women expect in their attitude to labour pain and how women perceive their attitude? What traits, skills, and dimensions do midwives need to grow? That means that the collective attitude towards labour pain that I intended to explore in this research has different boundaries: Cognitive boundaries (knowledge); Affective boundaries (traits, expectations, perceptions); Behavioural boundaries (collective attitude has function); interpretive boundaries (midwives' self-reported interpretation and women- reported interpretation from experiences with pain). Hence, two theoretical models served as guides to develop the research surveys; the Working with Pain Model (Leap & Anderson 2004; Walsh 2007) and the Exemplary Model of Midwifery Practice (Kennedy 2000).

Three references were used to generate the SQM and the SQW items; Kennedy 2000; Leap &Anderson 2004; Walsh 2007. The first reference is a qualitative study that used the Delphi method to obtain a consensus on exemplary midwifery practice (Kennedy 2000). Kennedy (2000) collected the research data through open-ended surveys and subsequent rounds of surveys until reaching a consensus opinion from 52 exemplary midwives and 61 women who had received their care across six regions of the United States. The exemplary midwives and women in Kennedy's study responded to different survey questions. The questions were the essential characteristics of the exemplary midwife, the outcomes of exemplary midwifery practice in relation to the health of the women and/or infant, the process of care provided by exemplary midwives, and the aspects of the process of exemplary midwifery practice related to specific outcomes in the health of the woman and/or infant. Qualitative data in Kennedy's study was analysed using content analysis. Then, the data were structured in three predetermined categories that were specified in the research questions: qualities and traits, processes, and outcomes of exemplary midwifery care (Kennedy 2000). An Exemplary Model of Midwifery Practice was developed based on data analyses and three dimensions were emerged: therapeutics (how and why the midwife chooses and uses specific therapies), caring (how the midwife demonstrates a caring attitude), and profession (how midwifery might be enhanced and accepted by exemplary practice) (Kennedy 2000).

The other references describe the principles of the Working with Pain Model introduced by Leap and Anderson (2004) and Walsh (2007). The Working with Pain Model acknowledges that labour pain is a physiological part of normal labour to be viewed with respect by midwives and if women were given optimal support, women could cope with levels of labour pain using her own natural opioids (endorphins). The main role of the midwife in this model is to reduce stimulation to the woman's senses in such a way as to enhance endorphin release. The principles of the model are; labour pain is a normal component of normal labour, midwife language is suggestive of normalcy, labour pain is timeless, the influential impact of birth environment, the supportive role of midwife, a trend towards fewer pharmacological methods and the first birth is optimal and an informed choice (Leap, Dodwell & Newburn 2010; Walsh 2007).

The research team; the doctoral student and her supervisors constructed the SQM and SQW. The supervisors are a professor in midwifery sciences who had expertise in the meaning of childbirth for women and leader of a Nordic research network concerning childbirth, an associate professor of midwifery science who specializes in reproductive and perinatal health, and an assistant professor in nursing sciences who has particular experience in primary health care.

Survey statements of the SQM and the SQW were developed with reference to both the Working with Pain Model (Leap and Anderson 2004; Walsh 2007) and the Exemplary Model of Midwifery Practice

(Kennedy 2000). An explicit and simple language used to write the statements of the SQM and the SQW in order to be relevant to the research questions and understandable for midwives and women. The SQM statements were about midwives' knowledge of labour pain and attitude towards labour pain. Most of the SQM statements were developed based on the principles of the Working with Pain model (Leap and Anderson 2004; and Walsh 2007) and some statements were reflective of the three dimensions of the Exemplary Model of Midwifery Practice (Kennedy 2000). Whereas, The SQW statements were about traits of midwives, women's expectations and women's perceptions of their midwives' attitudes towards labour pain. The SQW was mostly developed based on Kennedy' Exemplary Model of Midwifery Practice and some items were reflective of the principles of the Working with Pain Model (Leap and Anderson 2004; Walsh 2007). The same original words reported by women who participated in Kennedy's study used when the question about midwives' traits was developed (Appendix 1).

The SQM and SQW items were generated and linked depending on the Working with Pain Model, and the Exemplary Model of Midwifery Practice as well as the aforementioned definition and boundaries of collective attitude; below is an example:

If midwives have knowledge that labour pain is normal and labour can be medication-free (Cognitive; the Working with Pain Model), this knowledge manifests itself in midwives' traits e.g. "understanding", being "patient", and "flexible" to the needs of women who have labour pain (Affective; the Exemplary Model of Midwifery Practice). Midwives then challenge the routine care for women in labour (Behavioural; the Exemplary Model of Midwifery Practice), and/or boost women's ability to manage labour pain (Affective; the Working with Pain Model), thus midwives would satisfy the women by meeting women's needs in relation to labour pain (Behavioural; the Working with Pain Model and the Exemplary Model of Midwifery Practice). It is imperative to mention, as aforementioned in this chapter, that Dahlberg et al.'s lifeworld hermeneutic approach were used to explore the interpretive boundaries of collective attitude.

The presentation of SQM and SQW statements were from purposeful to challenging after giving instructions to respondents at the top of the surveys. Demographic data in the SQM were placed at the end of the survey for the purpose of encouraging respondents answer surveys with confidence, as directed by Rattray and Martyn (2007). A free text 'other comments' were placed at the end of SQW to allow women freely comment on their midwives' attitudes, midwifery care or the quality of the care provided at the target hospital.

A five-point Likert item scale was used in the SQM and the SQW with the alternatives 1=Strongly Disagree, 2= Disagree, 3= Neutral (means neither Agree nor Disagree), 4= Agree, 5= Strongly Agree, and Additionally the respondents could chose a "0=No answer-alternative" (0) not included in the analysis. The interpretation of the respondents' scores in the Likert scale was based on the upper and lower limits of the numerical value for each scale point.

Table 2, p.184. describes the interpretation of respondents' scores in the Likert scale. This table used to analyse and interpret the scores obtained. To enable respondents answer the SQM and SQW in a timely manner, the response format was standardized as strongly agree, agree, neutral, disagree, strongly disagree and no answer. The reason for including a 'no answer' alternative was the intention of the survey to measure attitude, knowledge, expectations and perception. A 'no answer' alternative allowed a degree of freedom for respondents to provide no answer for any of the survey statements that were particularly challenging or sensitive.

A debate is still going on about including a neutral point in research surveys (Rattray & Martyn 2007; Johns 2005, Lozano, Garcia-Cueto & Muniz 2008). Krosnick etal. 2002 and Nowlis, Kahn & Dhar 2002 argue that the inclusion of a neutral (no opinion) increases the respondents' tendency to state they have no opinion when they actually do, feeling unmotivated, avoid cognitive efforts or negative feelings associated with choosing between their positive and negative beliefs on issue. In this research, neutral point interpreted as an option in the scale that reflects respondents' opinion, indicate that they have knowledge to forma an opinion, does not mean undecided or no opinion, and therefore donates a state of confirmation but not confusion. To ensure this we used neutral option in the scale and placed NA option at the end of the survey. Moreover, conducting interviews/focus groups with participants helps researcher in capturing the intention of respondents in choosing neutral option and provides evidence that participants have knowledge to form an opinion. The reason why the "No Answer" ("NA") response option used in our research surveys is the idea behind using the "NA" option, types of respondents, the benefits of data, the research objective, the type of information and the cost efficiency.

Including or omitting the "NA" option response option in surveys provokes debates and tensions in scientific literature about how we analyse the responses and what we consider the benefits of including/omitting them (Jackson 2016; Schwarz & Bohner 2008; Schwarz 2007; Bradburn, Sudman & Wansink 2004; Krosnick 2002; Schwarz & Bohner 2008; Bourque & Clark 1992; Oppenheim 1992; Krosnick 1991; Feick 1989). The aforementioned researchers discussed five main benefits for the inclusion of "NA" response option in research surveys. First, it allows respondents to recall their knowledge and experiences in relation to survey statements. Second, it allows respondents to respond to survey statements in a voluntary manner. Third, it allows respondents to state their opinion with less fear of consequences. Fourth, it helps to minimize noise and fabrication due to a procedure that is not transparent to respondents. Fifth, it helps to minimize automatic attitude reporting or non-attitude reporting. Bradburn, Sudman & Wansink (2004); Bourque & Clark (1992); Feick (1989) agreed that: to omit the "NA" option from research surveys, researchers need to consider both the value/meaning of including or omitting "NA" based on the research objective, and

whether factual or attitudinal information is being solicited. They also agreed that it makes more sense to include "NA" in attitudinal surveys particularly when researchers are not certain whether respondents have the ability to answer all of the survey items, including embarrassing/challenging items and items requiring cognitive workload. It is for this reason we decided to include the "NA" option in the SQM and the SQW.

The research team decided the interpretation of the SQM and the SQW scores by consensus and by using DeVellis (2012); scale development theory and application. For the overall score to have meaning (interpretation), the research team ensured that each item in the scale related to the SQM and SQW survey sections (attitude, knowledge, expectations, and perceptions) and the same research topic (midwives' collective attitude towards labour pain). In the SQM (attitude section), for example, all items were checked to ensure that they measured the intended topic (midwives' collective attitude towards labour pain). The same is applicable for other SQM and SQW survey sections. The highest score was given a meaning as very positive attitude, the midpoint meaning as neutral attitude, scores above the midpoint meant a positive attitude, scores below the midpoint meant a negative attitude and the lowest scores were set to indicate a very negative attitude (Table 2, p.184 ).

The research team developed the SQM and the SQW in English. For this research, the SQW was available in Arabic. A certified translator prepared translation to Arabic. The SQM was in English because English is the official work language in Jordanian hospitals (Appendix 2, 3, 4).

The quantitative data on midwives' knowledge and attitudes towards labour pain were collected using the SQM. The SQM consisted of two parts. Part one was named 'Knowledge level and Attitude', and was divided into two sections. The first section was about midwives' knowledge of labour pain and consisted of 14 questions, and the second section was about attitudes towards labour pain and consisted of 11 questions. Part two included a demographic profile and consisted of three questions about age, highest midwifery qualification and years of service. The structured items included in the SQM correspond to a particular research question.

The quantitative data on women' expectations and perceptions of their midwives' attitudes towards labour pain were collected using the SQW that consisted of three parts. The first part, 'expectations', asked women to check the top seven character traits midwives should pose in their attitude and respond to 7 survey items about expectations of their midwives' attitudes towards labour pain. The second part was about 'perception of care given by midwives' and consisted of five survey items. The third part as mentioned earlier, called 'other comments', required women to write any further comments about their midwives or the quality of the care received during childbirth.

The SQM and the SQW are the first instruments to explore midwives' collective attitude towards labour pain in midwifery. Thus, it was necessary to assess reliability and validity of the SQM and SQW before data collection. Whereas reliability

concerns extent that the instrument yields the same results over multiple trials, validity concerns the extent the survey questions measure what it is supposed to measure (DeVellis 2012; Office of Quality Improvement (OQI) 2010; Creswell 2009). A panel of three experts in the field established content validity for the two instruments. They were given copies of the SQM and SQW surveys in the presence of the main researcher. They were asked to assess whether the SQM and the SQW content reflected and related to midwives' collective attitude towards labour pain. From December 2012 to May 2013, the SQM and the SQW items were critically reviewed during the meetings with the research team (content/methodology experts). The research team reviewed the set of items and gave feedback on the formulation, prioritisation, clarity and relevance of the items. They assessed all items and made recommendations for changes, mainly to the SQM. Modifications to the SQM are briefly summarised in table 3, p.185. Then, a pilot study was conducted to evaluate reliability and validity of the SQM and the SQW, as described in the next section, Pilot study: Assessing the research surveys.

### Pilot study: Evaluating the research surveys

The main purpose of pilot study is to examine issues related to the design, sample size, data collection procedures and data analysis approaches (Nieswiadomy 2012). The major purposes of this pilot study were to test and retest the newly designed SQM and SQW and evaluate the research procedure. Different factors were examined; language barriers, the level of comprehension, the time required to collect the data and the expected responses from the research participants to the methods used during data collection. Difficulties in comprehension also assessed at the end of the process using an open-ended question: "Are any words or items difficult to understand?" Researchers should make required changes after a pilot study (Nieswiadomy 2012).

Ethical approval was obtained from the Ministry Of Health (MOH) in Jordan to conduct the research at both the target hospital in Amman and a maternity teaching hospital in northern Jordan (Irbid) in June/July 2013. The pilot study was conducted to evaluate the SQM and the SQW before starting the main research.

The inclusion criteria, data collection and research procedure of the sub-sample (midwives and women sample for pilot study) were identical to sample of the main research. The inclusion criteria for midwives were; licensed and registered midwives working at the labour unit at the maternal teaching hospital in Irbid. The head of midwives and the main researcher (SH) randomly chose eligible midwives using simple random sampling technique. Factors such as limited availability of midwives similar to the target respondents determined the inclusion of midwives from the teaching hospital in the north for pilot study. The midwives were informed about the research including; the purpose of the pilot study, description of the pilot study and the research procedure, benefits of the pilot study and the main research, confidentiality of information, voluntary participation and right to refusal or withdrawal according to Helsinki declaration (World

Medical Association (WMA) 2013). SH then provided the midwives with a written consent form to sign to indicate that they agree to participate in the pilot study. Thirty midwives were given the newly designed SQM. The midwives completed the SQM at the hospital's labour unit during the testing period and retesting period; one to two weeks after testing period. Thirty SQM were returned in both test-retest periods. Twenty-nine SQM were completed, giving a response rate of 96.7 percent. One empty SQM was rejected.

The inclusion criteria for participating women were, women who were educated and had normal vaginal delivery within 24 hours with the attendance of any of the midwives at the target hospital in Amman. Eligible women were invited to participate in the pilot study. The midwife in charge in postnatal unit checked the eligibility of newly delivered women that fulfil the inclusion criteria for the study. She then informed SH which women she could invite for participation. SH met the women and gave them both oral and written information about the research. Women were informed about the research including; the purpose of the pilot study, description of the pilot study and the research procedure, benefits of the pilot study and the main research, confidentiality of information, voluntary participation and right to refusal or withdrawal according to Helsinki declaration (WMA 2013). In all 30 women agreed to participate and gave their written consent to participate in the pilot study. The women completed the SQW at the hospital's postnatal unit during the testing period and during the regular follow-up care; one week after delivery for retesting purposes. Twenty-nine SQW (96.7%) were returned in both test-retest periods. One woman chose to withdraw from the pilot study.

The practicality, reliability and validity of the SQM and the SQW were considered during the pilot study. The practicality of the SQM was examined. The SQM was introduced to the midwives in English because English is their official work language Jordan hospitals. This facilitated their ability to understand and complete the SQM. The midwives were asked to report the time required to fill out the SQM and if they encountered any difficulties reading and understanding the SQM items. They completed the SQM in 20 to 30 minutes. The midwives stated that the SQM items were understandable and readable.

The practicality of SQW was tested. The SQW was introduced in Arabic because it is the women's native language. A certified translator translated the SQW from English to Arabic and SH checked the SQW Items for meaning after translation. The women were asked to report the time required to fill out the SQW and if they encountered any problems reading and understanding the SQW items. The women completed the SQW in 15 to 20 minutes and stated that the SQW were understandable and readable.

Collecting reliable data is an important step in the research process and requires examination of aspects of consistency and stability (Burns and Grove 2011). Hence, test-retest was used in this pilot study to check the stability of the SQM and the SQW. After 7-10 days of administration,

the SQM and the SQW were again administered to the same midwives and women and then analysis were performed. According to Gatewood, Field and Barrick (2011), conducting a retest over a period is useful in two circumstances. First, the respondents' memories did not affect their responses to the research survey because many detailed and complex questions were used. Second, the respondents' possibility to learn new information about the research topic from different sources is limited. Furthermore, Part B of the SQM concerned midwives' attitudes and Gatewood et al. (2011) explained that attitude is not stable over time, and the test-retest reliability may reflect the consistency of respondents' memories rather than the stability of memories or scores obtained on the measure.

Data was analysed using the Statistical Package for the Social Sciences (SPSS) software (version 15). The analysis of the data collected during the pilot study focused on internal consistency results; Cronbach's alpha, inter-item correlations and items to total correlation. Pearson correlation testing revealed a very high strong positive correlation between the SQM items measuring knowledge level r=0.94 and items measuring attitude r=0.87. The results were statistically significant ($0.001< p <0.01$). Estimation of Cronbach's alpha ($\alpha$) indicated a very high and strong internal consistency of survey items used to measure the knowledge and attitude in the SQM (knowledge: $\alpha= 0.91$ and attitude: $\alpha= 0.89$). See Appendix 8.

The reliability analysis of the SQW showed that the SQW is reliable. The 10 items reflected women's expectations from midwives, indicated strong internal consistency ($\alpha=0.95$) and very high and positive correlation between SQW items (r= 0.97). The five items related to women's perceptions of their midwives revealed strong internal consistency ($\alpha= 0.94$) with very high positive correlation between the items (r=0.96). The analysis of the SQW also showed that the top seven traits checked by women were; understanding (n=24, 82.8%), being patient (n=22, 75.9%), being reassuring and soothing (n= 19, 65.5%), being nurturing and non-judgmental were rated equally (n=18, 62.1%), flexibility (n= 17, 58.6%), being compassionate and trustworthy were shown at similar rates (n= 13, 44.8%). See Appendix 9.

### Phase two: Quantitative

For the main research, the SQM and the SQW developed in 2012 by SH (Shurouq Hawamdeh), Lundgren & Lindgren and tested in 2013 were the method used to collect the quantitative data. The target respondents were selected from the country's largest public hospital, in Amman in 2013; they consist of midwives and women.

### Setting

The main research was conducted in the labour and the postnatal units of the target hospital. The target hospital is the largest public hospital in Jordan as mentioned in Chapter one.

### Participants

Sixty-one licensed registered midwives working at the labour unit of the target hospital in Amman and 384 educated women who have had a normal delivery within

24 hours with the attendance of midwives were recruited from the postnatal unit of the target hospital.

### Power calculation in mixed methods research

Estimating the sample size for mixed methods research is different compared to other types of studies (Creswell 2013; Hulley & Cummings 2013). Mixed methods research is not experimental, does not have predictors and outcome, and does not compare different groups statistically. Therefore, the concept of power calculation does not apply (Hulley & Cummings 2013). Instead, the intent of the researcher is to choose samples that are representative of a population (Creswell 2013). Creswell recommends large sample sizes; more than 30 to enhance the generalizability with confidence that the sample represents the entire population. Furthermore, he explained the importance of considering different sizes of the two samples (quantitative and qualitative samples of midwives and women) in relation to the use of convergent parallel mixed methods design. Creswell 2013 describes that the size differential; the size of qualitative sample is much smaller than the size of quantitative sample is a good option in deciding samples sizes in convergent parallel mixed methods research. It facilitates obtaining in-depth qualitative exploration and a rigorous quantitative examination on midwives' attitude towards labour pain.

The sample size for the midwives was calculated based on the fact that the midwife population size at this hospital was known; 72 midwives but nothing is known about their behaviour and nothing is known about their attitudes towards labour pain. When little is known or nothing is known about the population, a sample of the population should be taken using Slovin's formula; that works for simple random sampling (Ariola 2006). It is for this reason not the all 72 were involved in this research and Slovin's formula was used to calculate the appropriate respondent-midwives' sample size; which allows a researcher to sample the population with a desired degree of accuracy (Ariola 2006; Ryan 2013):

N= N/ 1 + ne2,

where: n = sample size, N = population size and e = desired margin of error (percent allowance for non-precision because of the use of a sample instead of the population).

At a 5% margin of error with a population size of 72, the sample size was 61 respondent-midwives. The sample size for the respondent-women was determined using the table of required sample size (Table 1, p.184). Based on table 1, the women's population size is more than 18000 in the target hospital and so the sample size for the respondent-women women was 384.

### Data collection/ midwives

Target midwives were all 72 licensed and registered midwives working at the labour unit of the target hospital. The sample size calculation showed that 61 midwives were enough as mentioned above. The 61 midwives were chosen by a simple random sampling technique. First, SH and the head of midwives created a list of midwives; including midwives names and numbers from 1 to 72. Second, seventy-two pieces

of paper were numbered from 1 to 72 and placed in a box. Third, sixty-one pieces of paper were drawn from the box by the head of midwives in the presence of SH and the assistant of the head of the midwives. One piece of paper was drawn from the box and, without replacing the paper, a second piece of paper was drawn…etc. Fourth, the numbers on the pieces of paper were written, counted and matched with the names of the midwives on the created names list. The 61 randomly chosen midwives were invited to participate in research by SH. The midwives were informed about the purpose of the research, the duration of the participants' involvement, the description of the research procedure, the benefits of the research, the confidentiality of information, the voluntary participation and the right to refusal or withdrawal according to Helsinki declaration (WMA 2013). After oral information, all the midwives decided to participate and gave their written consent before filling in the SQM.

### Data collection/ women

Inclusion criteria were educated women who have had a normal delivery within 24 hours, in which any of the 61 midwives had attended. Three hundred eighty four women; who were educated and have had their normal vaginal delivery with the attendance of any of the 61 participating midwives were invited to participate in the research. The midwife in charge in the postnatal unit checked the eligibility of newly delivered women. She then informed SH about women that can be invited for participation. SH met the women and gave them both oral and written information about the research. They were informed about the research, the duration of the participants' involvement, the description of the research procedure, the benefits of the research, the confidentiality of information, the voluntary participation and the right to refusal or withdrawal according to Helsinki declaration (WMA 2013). Then all 384 women gave their written consent before filling in the SQW.

### Actual sample

In all 360/384 women and 60/61 midwives completed the SQM and SQW. One midwife and 24 women returned empty SQM and SQW; which were excluded from analysis.

### Data analysis

For the descriptive analysis; means, frequencies, percentages, Standard Deviation (SD) and variance were used to analyse and describe the respondents. The Likert scale data in this research were treated as interval data; reasons and methodological discussion are available in chapter eight. The means and standard deviations were used to describe the Likert scale and the Pearson's r was used to test correlations (Boone, H.N & Boone, D.A 2012; Perla & Carifio 2007). Perla and Carifio (2007) explained that the parametric statistical tests could perfectly be used to analyse the Likert scale data, stating that:

> *'If one using 5 to 7 point Likert response format, and particularly so far items that resemble a Likert-like scale and factorially hold together as a scale or subscale reasonably well, then it is perfectly acceptable and correct*

*to analyse the results at the (measurement) scale level using parametric techniques, such as... the Pearson correlation coefficient and the results of these analyses should and will be interpretable as well (p.115)'.*

The interpretation of the total scores was based on the upper and lower limits of the numerical value for each scale point (Table 2, p.184). For clarity of data presentation, figures, frequency distribution tables and contingency tables were prepared.

To test the relationship, Pearson's correlation coefficient was calculated to statistically measure the strength of a linear relationship between women's perception and the midwives' knowledge of labour pain. Describing the strength of the correlation was based on the guide that Gravetter and Wallnau (2013) suggested:

*'When judging how "good" a relationship is, it is tempting to focus on the numerical value of the correlation. For example, a correlation of + 0.5 is halfway between 0 and 1.00 and therefore appears to represent a moderate degree of relationship. However, a correlation should not be interpreted as a proportion. Although a correlation of 1.00 does mean that there is a 100% perfectly predictable relationship between X and Y; a correlation of 0.5 does not mean that you can make prediction with 50% accuracy (p.520) '.*

### Factor analysis

Factor analysis was conducted to ensure construct validity. This procedure is helpful in identifying clusters of items and if the survey measures only one or more construct (Nieswiadomy 2012). Factor analysis was also used to ensure that the survey items (questions) asked related to the measured construct (Field 2009). In this research, the SQM and the SQW were designed to measure a trait 'midwives' collective attitude towards labour pain'. Moreover, the data was examined to learn whether there were other traits that might contribute to midwives' collective attitude towards labour pain. 60 SQM and 360 SQW completed surveys were included in the factor analysis. The SQM and the SQW survey items elicit a response from the same participant. An initial consideration was given to the sample size because correlation coefficients fluctuate based on sample size; fluctuations are more noticeable in small samples compared to a large sample (Field 2009). In this research, the samples of 384 women and 61 midwives are a large sample size as mentioned earlier. Sample size is an important factor in ensuring the reliability of factor analysis. Field concludes that large sample size; sample size greater than 30 is adequate for factor analysis and communalities after extraction should be above 0.5. In this research, both midwives and women's samples are large and the communalities after extraction in both surveys are above 0.5.

Correlation procedure was used to create a correlation matrix. The inter-correlation between variables was tested when the statistician conducted the factor analysis. At this stage, the statistician decided to exclude: 1) items that do not correlate with other items 2) items that correlate very highly or perfectly with other items ($R < 0.9$). In our factor analysis, the surveys' items measured the same underlying construct and correlated with each other. No

items were excluded or found to be problematic before the analysis.

The research data had normal distribution. Ensuring normal distribution of data enhances generalizability of the results of the factor analysis (Field 2009). The survey items in the SQM were labelled as: A1 represents item 1 (knowledge), A2 represents item 2 (knowledge)…etc; B1 represents item 1 (attitude), B2 represents item 2 (attitude)…etc. The survey items in the women's survey were labelled as: B1 represents item 1 (expectations), B2 represents item 2 (expectations)… etc; C1 represents item 1 (perceptions), C2 represents item 2 (perceptions)…etc. The tables with a heading 'Total variance explained' lists the eigenvalues associated with each factor (component) before, after extraction, and after rotation. Eigenvalues were displayed in terms of the percentage of variance. For example, in the SQM (knowledge), factor 1 explains 41.95 percent of total variance. Before rotation, the first few factors in the survey explain a relatively large amount of variance (mainly factor 1). The other subsequent factors explain small amounts of variance. After rotation, factor 1 accounts for only 22.5 percent of variance (compared to 18.56, 17.96, and 10.58% respectively). Another example from the SQW (expectations) is that factor 1 explains the largest amount of variance (54.97% of total variance) compared with subsequent factors. Appendix 10 shows the complete factor analysis of the SQM and the SQW.

Appendix 10 also shows the tables of communalities before and after extraction. The initial assumption was that all variance is common so the initial communalities are all 1. The communalities in the columns labelled 'extraction' reflect the common variance in the data. The communalities table in the SQM show that 74 percent of variance is associated with item 1, which is common. The communalities table in the SQW show that 91 percent of variance is associated with survey item 1 is common, 87 percent of variance is associated with item 2 is common, etc. Final consideration in this analysis was given to identification of the common themes by considering the content of survey items that load on the same factor and measure the same construct. Factor analysis of the SQM Part A (14 items) and Part B (11 items) indicated that the survey measures two constructs: knowledge and attitude. Factor analyses of the SQW Part A (10 items) and Part B (five items) showed that the survey also measures two constructs: expectations and perceptions. Both the SQM and the SQM measured one trait; midwives' collective attitude towards labour pain. The data were analysed by the Statistical Package for the Social Sciences (SPSS, version 15).

### Phase three: Qualitative

The qualitative data explored the midwives' collective attitude towards labour pain from two perspectives: the midwives' perspective (knowledge and attitude via questioning the midwives' individualized experiences with labour pain); the women's perspective (expectations and perceptions about the midwives' collective attitude via questioning the women's general experiences of their midwives' attitudes towards labour pain). The aim was to explore, describe, understand, interpret and discover

unrevealed aspects related to the midwives' collective attitude towards labour pain. That interpretation and the discovery of midwives' collective attitude may possibly indicate primacy and significance, particularly when women communicate about negative labour pain experiences.

The point of departure to a new understanding and discovery of midwives' collective attitude was the experiences of both the midwives and the women with reference to Dahlberg et al. (2008). Dahlberg et al. have, from theoretical philosophy, produced a method for empirical research called reflective lifeworld research. They put into research practice the philosophical ideas in phenomenology and hermeneutics. They showed researchers how to practice reflective lifeworld research in order to gain scientifically relevant results. As mentioned earlier, lifeworld hermeneutics (Dahlberg et al. 2008) was chosen to explore the lifeworld phenomena (the midwives' collective attitude towards labour pain). Hermeneutic approach, based on lifeworld theory, begins with the world as it is experienced for understanding, describing, exploring, explaining, and discovering lifeworld phenomena; visible and invisible meaning. However, the meaning cannot be understood as 'universal' and considered as 'absolute', i.e., one final meaning for all contexts, because it emerges in relation to the lifeworld in a research context (midwifery care in Jordanian hospitals). Still, parts of the results of lifeworld research have meaning and are applicable to other contexts (Dahlberg et al. 2008).

According to Dahlberg et al. 2008, the lifeworld hermeneutic approach requires the researcher to maintain an open attitude towards the phenomena in focus. "Openness" can be practiced by being aware of the research phenomena, having a true willingness to listen, see and understand the phenomena, being sensitive and respectful to the unexpected, and by being flexible. This open and sensitive attitude to the lifeworld phenomena (midwives' collective attitude towards labour pain) was practiced throughout this research as follows. Questioning pre-understanding as in Chapters One and Two was questioned, prior knowledge was withheld, open interview questions was used, the interviews was conducted, the transcripts was analysed and the findings were lift above the concrete level by making a main interpretation, and scientifically rich findings were presented as they appeared in the research context.

### Setting

This phase was conducted in the conference room at the postnatal unit at the Department of Obstetrics and Gynaecology at the target hospital in Amman for the period June/July 2013-July 2014.

### Informants

Informants were five midwives who had completed the SQM. The five interviewed midwives were aged 25 to 36 years, three midwives were holders of a diploma and two midwives were holders of bachelor's degree in midwifery sciences and had work experiences of 2 to 10 years in the target hospital.

Women informants were six women that had completed the SQW and met the

inclusion criteria of having had normal vaginal delivery with the attendance of their midwives within 24 hours after giving birth. They were three multiparous, one primiparous and one nulliparous. A focus group interview allowed the women to talk in their own lively language and reflect upon unique shared expectations and perceptions (Gaižauskaitė, 2012).

### Data collection/midwives

Each completed SQM were already assigned a number by the SH representing the participated midwife in the quantitative phase. Ten out of 60 SQM were selected by SH and head of midwives. Midwives names and the contact details such as names, phone numbers, shift and duty of the participated midwives were obtained from the head of midwives the target hospital. In lifeworld hermeneutic approach, the selection of informants depends on the complexity of a phenomenon and the variations in data rather than the number of informants (Dahlberg et al. 2008). Dahlberg et al. 2008 suggested starting with five interviews if the phenomenon is not complex (i.e., concerning everyday life) and the researcher anticipates rich data due to skilled interviewers. They further pointed out the importance of having variations in data by including informants of different age groups, genders, professional backgrounds and culture, amongst others. However, according to the SQM results, 45 of the midwives were below 30 years of age, 43 were holders of graduate diplomas, and 45 had spent less than 10 years in service. For this reason, the midwives were given an equal chance to participate in interviews by being manually selected in order to ensure variation in data (Dahlberg et al. 2008). The selected midwives were invited to participate in audiotaped interviews to reflect in an open and deep manner on their experiences of labour pain when offering care for women in labour. Five midwives signed a consent form for participation and interviewed. Although the official work language in Jordanian hospitals is English, the midwives were interviewed in Arabic; to facilitate reflection, feel comfortable speaking and minimize the potential for linguistic misunderstanding (Tenzer, Pudelko & Harzing 2014). In line with Dahlberg et al. (2008), the researcher must be aware of the lifeworld informants' language. They emphasized that language is a vehicle to interpret and understand the meaning of the words as disclosed by the lifeworld informants (midwives and women). Words (particularly when viewed in the new lifeworld context) can mean different things, and be interpreted and understood in different ways. Therefore, Dahlberg et al. clarified that the role of the lifeworld hermeneutic researcher is to use a research language that conveys meaning that can be relevant to the lifeworld phenomenon.

Valenzuela and Shrivatstava (2010) state that face-to-face interviews are very effective in getting the story behind the participant's experience, because the interviewer can pursue more in-depth information on the topic, probe or even ask follow-up questions. Face-to-face discussion allows certainty and provides room for clarifying informant's views/opinions. In addition, it will enable the researcher to

collect information focusing on midwives' individual experiences of women's pain in labour. Arguably, one might assume that focus groups accomplish this by inviting different groups of midwives to participate on the same topic. The risk of conducting a focus group with midwives is the tendency to censor their experiences, knowledge and attitude in the presence of other midwives who differ from them in length of service, status, position, education, personal attitude, etc. (Creswell 2013). The focus group in this case will not allow the midwives to relax, be open, think critically and reflect on their individualized experience. This will minimize the quality of the qualitative data (Creswell 2013; Dahlberg et al. 2008). This explains why I conducted individualized interviews with midwives rather than a focus group.

### Data collection/women

Six of the women who completed the SQW and delivered by six of the midwives who completed the SQM were invited to participate in a focus group interview and signed a consent form. The choice of conducting a focus group after surveying the women is advantageous when investigating aspects of human behaviour such as expectations and perceptions that are difficult to observe. The focus group data enables researcher understand the meaning behind the facts (the SQW and SQW findings) both by listening to the women's discussion and by being attentive to their emotions, interactions, and contradictions (Creswell 2013; Dahlberg et al. 2008). Importantly, conducting the focus group after surveying the women generates overall valid interpretation about the midwives' collective attitude towards labour pain, which is considered applicable and important before any attempt to make sound decisions (Creswell 2013).

Dahlberg et al. (2008) stated that, "Lifeworld research does not keep a particular set of methods and techniques, but use all everyday means of understanding (p.174)". In this research, the aim of the focus group interview was to explore and describe the women's perceptions and expectations of their midwives' attitudes towards labour pain by giving them an opportunity to express and communicate their views. Consequently, the intention of the focus group interview in this research followed the principle of lifeworld interviews as open dialogue in accordance with Dahlberg et al. (2008). To facilitate women's disclosure of thoughts and feelings during the focus group; an open-ended, guiding questionnaire was prepared and translated into Arabic as in Appendix 5 and Appendix 6. As expected, the women' native language is Arabic. SH is Bilingual who speaks both Arabic and English languages and sensitive to the cultural and the social differences e.g. language, beliefs, behaviours, practices… etc; gradually assumed a stranger-to-trusted-friend enabler role. Certified translation of focus group data from Arabic to English was required before analysing the qualitative data. Notes were taken during the group interview so that, during data analysis, it could be revised in depth to reach a meaningful understanding.

### Data analysis

The interpretive analysis based on a reflective lifeworld hermeneutic approach was

used to analyse the data of the individualized interviews and the focus group with reference to Dahlberg et al. 2008. The overall aim of the reflective lifeworld hermeneutics approach is to explore, describe, represent, interpret and understand a well-defined lifeworld phenomenon (midwives' collective attitude towards labour pain from two perspectives) as the focus of research in a clear, comprehensive and reflective way. This makes interpretation of the collective attitude towards labour pain relevant for other midwives and women in particular lifeworld contexts and not just for satisfying the researcher's opinions (Dahlberg et al. 2008). The interpretive analysis based on Dahlberg et al' reflective life world hermeneutics approach is different from the hermeneutics interpretation. In reflective lifeworld hermeneutics, the interpretive lens of the researcher is on hold during the research for meanings and interpretations and there should be risk free results that are primarily based on experiences, thoughts and beliefs. Whereas, in hermeneutic approach the interpretive lens of the researcher is encouraged, particularly, in case of misinterpretation revealed; Recapture perspective and Prejudices are helpful to see beyond the text (Heidegger 1996). While Dahlberg et al.'s interpretive analysing an open methodical approach to data and its meaning with an attempts to balance complexity of the lifeworld and objectivity of science, hermeneutics refers to text interpretation, which takes into consideration the meaning and context in which the statements in the text are made (Holloway & Wheeler 2010). Generally, text is in itself a representation of human dialogue, and verbal communication can be interpreted in the same way as text (Todres & Galvin 2008). Todres and Galvin (2008) argue that the type of language used to describe the phenomena has to touch the reader's heart and mind so that the reader can achieve a rich level of logical understanding and feel the sense of it. In this respect, Gendlin (2004) states that:

> *'Words mean the change they make when they are said ... When we do not understand statement, we can only repeat the statement. But when we understand the statement, we can speak from it in many ways (p.141)'.*

Before analysing the focus group data, the transcribed data were translated into English by a certified translator. Then, the interpretive analysis Based on Dahlberg et al. (2008) started. Firstly, reading the text many times to get a sense of the whole meaning. Secondly, the similarities and the differences in how women perceived the midwives' attitudes towards labour pain and what women expected from midwives in their attitudes were identified in themes. Thirdly, the underlying meanings (the meanings that are between data lines as clarified by Dahlberg etal. 2008) in the data were formulated with interpretation of meanings. At the end of interpretive analysis, the researcher may use theory to support and explain the interpretations in a meaningful manner (Dahlberg et al. 2008). An important, but little understood concerning which or what theories to use in lifeworld hermeneutic research (Dahlberg et al. 2008). Dahlberg et al. (2008) highlighted the reflective lifeworld hermeneutic

researcher should only use the chosen theory on the behalf of interpretations (themes) and in connection to the presentation of interpretations. According to them, theory serves the purpose of supporting, illuminating and explaining the interpretations. It is therefore we used the theories in this research based on and in connection to the interpretations. The decision to choose theories in this research were made when the interpretations have suggested the need for supporting, illuminating and explaining what, how and why the midwives' collective attitude towards labour pain exists. It is therefore Hunter's model of the interrelationships between practice contexts, occupational ideology and emotion work (2004) was used to support and explain the interpretations of the midwives' interviews and the Halldorsdottir's caring and uncaring encounters in nursing and health care theory ((1996) were used to support and explain the focus group interpretations. The theories were chosen depending on its appropriateness, exploratory power, and explanatory power. The theories helped in exploring and explaining the interpretations, nature and challenges associated with the midwives' collective attitude towards labour pain; that is experienced but unexplained in the medicalized birth environment in which the midwives practice. The theories were connected to the interpretations finally developed. Fourthly, the tentative interpretations were examined to ensure that the main source of the data is only from informant's views, ensuring consistent interpretations, comparing the interpretations of the parts with the interpretations of the whole, and moving between parts and whole to determine that any areas of contradictions and all data were explained properly. It is, however, crucial to indicate that the data gathered from the women about their midwives' collective attitude towards labour pain were representative of the wider context in which both operate; Jordanian society itself with its attendant sociocultural and religious beliefs and practices. At the same time, the environment was defined by the existing midwifery philosophy (Women-cantered care) in a medicalized birth environment; environment in which the normal aspects of labour pain transformed into pathological issues.

### Trustworthiness

To ensure validity and objectivity of the qualitative findings, criteria for credibility and transferability were addressed in this research. Credibility was strengthened by having the SH return to the informants to have them verify the interviews and focus group transcripts, review clarify, and make suggestions if necessary and to indicate if the transcripts reflected their actual experiences. To validate the interpretations, SH, the SH supervisors and the qualitative research group at university of Gothenburg followed Dahlberg et al. (2008) criteria for examining validity of the interpretations. The research findings/interpretations were examined, reviewed and discussed with them, they indicated if the source of interpretations was only the interviews and focus group data, and if there were no other interpretations explain the same data, and if the chosen theories supported the interpretations. Minor changes were necessary in

light of this procedure. Transferability was established through "fittingness" (Streubert & Carpenter 2011) and "openness" (Dahlberg et al. 2008) in research. SH collected a detailed qualitative data that included both the informants' views/opinions/thoughts/feelings/emotions and a rich mix of the informants' quotations. In addition, the use of the reflective lifeworld hermeneutic approach and the interpretive analysis maximized the chance of exploring the midwives' collective attitude towards labour pain, which relied on the experiences of the midwives and the women and their ability to express and communicate their experiences. SH approached the research phenomenon i.e. midwives' collective attitude towards labour pain in this research in an open and pre-understanding- free way which allowed the midwives' collective attitude towards labour appears to be as it really is in this research context and supported objectivity and transferability of the interpretations/meanings of the research findings to other contexts.

### Phase four: The interpretation of combined quantitative and qualitative findings

Phase Four represents the final phase of the research. It involves combining the findings from Phase two (Quantitative) and Phase three (Qualitative). After analysing the results, both the quantitative and the qualitative findings compared. The purpose of the comparison was to assess whether the quantitative and the qualitative findings were congruent with reference to Creswell and Clark (2011); which means that the findings were related to each other. Henceforth, chapter seven of this thesis displays the congruent findings by presenting the quantitative findings followed by the related qualitative findings from both the midwives' and the women's perspectives. The findings were interpreted in relation to the research aim and the research problem and discussed in chapter eight according to the literature and SH educational and professional experiences/views. The interpretation helps to explain the research findings. The two sets of data; quantitative and qualitative were combined to form an overall interpretation about the midwives' collective attitude towards labour pain. First, the SQM and the midwives' interviews findings were compared and combined. Second, the SQW and the women's focus group findings were compared and combined. Lastly, the overall interpretation about the midwives' collective attitude towards labour pain was reported; the overall interpretation represents the main mixed methods research finding according to (Creswell & Clark 2011). It should also be emphasised that there was no specific intention to merge the research findings before the conduct of research. Discussing the overall interpretation about the explored midwives' collective attitude towards labour pain in the discussion chapter (Chapter Eight) serves as a vehicle for merging the research data (Creswell & Clark 2011).

## Ethical considerations

Collecting quantitative and qualitative data at different levels of data sensitivity is a feature of mixed methods research (Ivankova 2015). The qualitative data of women's focus group and midwives' individualized interviews were more personal and sensitive

than the quantitative data of the SQM and the SQW. The different levels of data sensitivity suggest a special attention the ethical issues of informed consent, freedom to withdraw, protection from physical and mental harm, confidentiality, anonymity and privacy (WMA 2013; Burke & Christensen 2014) in this research.

As mentioned earlier in this chapter, ethical approval was obtained from the MOH in Jordan to conduct the main research at the largest public hospital in Amman and for the pilot study at a maternity teaching hospital located in Irbid (northern Jordan) for the period from June/July 2013- 2014. The procedure for obtaining informed consent, participants' right to make an informed decision, right for respect, right for withdrawal, refusal to participate, and protection from risks, confidentiality, anonymity and privacy was incompliance with the declaration of Helsinki (WMA 2013). Oral and written information were provided for the midwives and the women. The information was the research aim, the nature of the SQM, the SQW and the interviews, the type of SQM and SQW questions, the length of time needed to answer the SQM and the SQW questions (based on the results the pilot study), and the place and the time for conducting the interviews. The midwives and women who agreed to participate in the research signed a written informed consent; which includes the aforementioned information. The informed consent form also included a statement assuring the research participants/ informants that participation is voluntary and that they could withdraw at any time without consequences. Another statement guaranteeing that the research findings would be kept confidential was also included in the informed consent.

Specific ethical precautions were taken in order to protect informants from any potential psychological harm associated with audiotaped interviews and focus groups. Audiotaped interviews create permanent records that can pose a threat to confidentiality and anonymity. Informants were assured that their names would not be mentioned during the interviews and that the information obtained would be kept confidential. Shared and sensitive views of women in focus group may pose threat to the women's privacy; thus, women were reminded to keep the information they heard within the group to themselves.

Anonymous SQM and SQW were collected to keep privacy and confidentiality of information. The midwives and the women were given numbers on the SQM and the SQW; which means no names were collected from the midwives or from the women. The midwives numbers were the same as the numbers assigned in the midwives list mentioned earlier. The women's numbers were assigned according to their midwives numbers. For example, if the midwife who completed the SQM had a pre assigned number in the midwife list e.g. 20; the women who have had normal vaginal delivery by midwife number 20 were assigned the same number on top of their SQW surveys. All confidential information was treated and respected according to the guidelines of the University of Gothenburg and the selected hospitals. The completed surveys/data forms were secured in a locked file cabinet at the university following the

compilation of the data. The consent forms were stored separately from the SQM and the SQW and managed with equal security. The data was available only to the researcher, the supervisors and the statistician.

## Summary

The research design was convergent parallel mixed methods; which was the framework for collecting, analysing, mixing and interpreting the quantitative and the qualitative data based on Creswell & Clark 2011. In this research, the quantitative and qualitative strands had equal priority in addressing the research aim. The strands were implemented concurrently and the findings were mixed in the final phase of the research (interpretation). The research was divided into four phases to facilitate reading and specify the research procedure; it should therefore not be considered a multiphase research in sequential steps.

In the first phase (instrument development and validation), the SQM and the SQW were developed by SH, Lundgren and Lindgren in 2012, pilot tested and validated in 2013. In the second phase (quantitative), the research data was obtained from 60 midwives and their clients (360 women) at the largest public hospital in Jordan. The measures of central tendency were used to describe the respondents and Pearson's correlation coefficient was used to examine the relationships. In the third phase (qualitative), a focus group of six women and five audio-recorded interviews with the midwives who had completed the SQM were conducted at the postnatal unit of the target hospital. The obtained transcripts were analysed using the interpretive analysis of the reflective lifeworld hermeneutics (Dahlberg et al. 2008). In the final phase (interpretation of combined quantitative and qualitative findings), following Creswell and Clark (2011), the findings the quantitative data and the qualitative data were compared, combined to formulate an overall interpretation about the midwives' collective attitude towards labour pain; that represents the main mixed methods research finding.

# 5. Quantitative findings

## Findings of the SQM

### Demographic characteristics of the midwives

Of the 61 midwives at the hospital surveyed, 60 responded, for an overall response rate of 98, 4%. Only one questionnaire that had not been completed was rejected, which resulted in 60 survey questionnaires for the final analysis. In order to create a demographic profile for the midwives, the research assessed their age, the number of years spent in their occupation and their education level to help gain an understanding of some of the individual characteristics that influenced their attitude and level of knowledge. Of particular note is the fact that all 60 midwives provided information relating to these variables. Forty-five of the midwives were under 30 years old, 10 midwives were 31 to 40 years of age and five Midwives aged 51 to 60 years. Regarding educational level, 43 of the midwives were holders of a graduate diploma while 17 of the midwives were bachelor's degree holders. Forty-five of the midwives reported that they had spent under 10 years in their occupation, 12 of the midwives reported that they had spent between 10 to 19 years in occupation and three midwives had spent 20 years or more in their occupation.

### The Midwives' knowledge of labour pain

This section presents the findings of SQM, part A about the midwives knowledge of attitude towards labour pain. The results are reported at both the macro level and the micro level. The macro level concerns the midwives' collective knowledge of attitude towards labour pain. The overall mean score of the midwives (individual) knowledge represent the midwives' collective knowledge of attitude towards labour pain. The overall mean scores are interpreted based on table 2, p.184 with reference to the upper and lower limits of respondents' scores in the Likert scale; very high, high, average, low, and very low. The micro level concerns the midwives (individual) knowledge of labour pain at items level. The mean score at the item level are reported and interpreted with reference the upper and lower limits of respondents' scores in the Likert scale table 2; very high, high, average, low, and very low.

The overall mean score of the midwives' knowledge represents midwives' collective knowledge about labour pain was 3.82 (SD = 0.53) which falls between 3.51 – 4.50 in the Likert scale; was interpreted as 'high' knowledge. The findings of the SQM at the 14 items level showed that the mean scores for items 1, 2, 3, 7, and 13 were the highest compared to the other nine items in the SQM. The mean scores of the aforementioned five items ranged from 4.02 to 4.15; interpreted as 'high' knowledge. The mean scores for items 10, 5, 11, 4, 12, and 16 ranged from 3.77 to 3.98; falls between 3.51 – 4.50 and interpreted as 'high' knowledge. Only items 8 and 9 had low mean scores (3.47; 2.63); falls between 2.51 – 3.50 and was interpreted as 'average' Knowledge of attitude towards

labour pain. Average means neither high nor low knowledge. The mean scores and the standard deviations for the 14 knowledge items in the SQM are presented in table 4.

**Table 4.** Descriptive statistics of the 14 items in the SQM, Part A. Knowledge (N = 60).

| Items | Mean (SD) |
|---|---|
| 1. To work with pain during normal delivery, i give full support to women to help them cope with pain. | 4.15 (0.80) |
| 2. To work with pain during normal delivery, i give full encouragement to women to help them cope with the pain. | 4.13 (0.81) |
| 3. Pain plays an important role in the physiology of normal birth. | 4.12 (0.90) |
| 4. I work as a partner of women in labour pain. | 3.58 (0.83) |
| 5. I am vigilant to the needs of women in pain. | 3.87 (0.93) |
| 6. I am attentive to the needs of women in pain. | 3.77 (0.85) |
| 7. I can recognize complications related to coping with pain by the way women express their pain. | 4.08 (0.72) |
| 8. I stay with the woman in pain as she desires. | 3.47 (0.83) |
| 9. I strictly abide with hospital routine care for women in pain. | 2.63 (1.03) |
| 10. I provide accurate information based on the woman's needs. | 3.98 (0.73) |
| 11. I render thorough education according to the woman's needs. | 3.83 (0.67) |
| 12. I motivate women that normal birth can be medication-free. | 3.82 (1.02) |
| 13. I let women understand that pain is part of the process in normal birth. | 4.20(0.84) |
| 14. I do my best to help address women's needs during labour. | 3.85 (0.86) |
| Midwives' knowledge (overall score) | *3.82 (0.53) |

The table shows the mean scores and the standard deviation of the midwives' responses to part (A) of a SQM. These scores were interpreted using the Likert scale (DeVellis 2012). *The overall mean score was 3.82, which falls between 3.51 and 4.50 of the Likert scale and were interpreted as 'high' knowledge (Table 2).

### The Midwives' attitude towards labour pain

This section presents the findings of the SQM, part B about the midwives attitude towards labour pain. The findings are reported at both the macro level and the micro level. The macro level concerns the midwives' collective attitude towards labour pain. The overall mean score of the midwives (individual) attitudes represent the midwives' collective attitude towards labour pain. The overall mean scores are interpreted based on table 2 with reference to the upper and lower limits of respondents' scores in the Likert scale; very positive, positive, neutral, negative, and very negative. The micro level concerns the midwives (individual) attitudes towards labour pain at items level. The mean score at the item level are reported and interpreted with reference the upper and lower limits of respondents' scores in the Likert

scale table 2; very positive, positive, neutral, negative, and very negative.

The overall mean score for the midwives' attitudes towards labour pain was 3.41 (SD = 0.51); which falls between 2.51 – 3.50 was interpreted as 'Neutral' collective attitude. Neutral collective attitude means neither positive nor negative; attitude that does not belong to the positive or to the negative attitude. The findings of SQM at micro level showed that the midwives had positive attitudes on item 10; the mean score was 4.40 (SD = 1.00) which falls between 3.51 – 4.50. Item 10 was the item with the highest mean score compared to the other 10 items of the SQM. The midwives had positive attitudes on items 4, 5, 8, 3, and 6 with a mean range of 3.78 to 4.28; the means scores fall between 3.51 – 4.50. The midwives had neutral attitudes on four items 1, 2, 7, and 11; the mean scores ranged from 2.97 to 3.45 and falls between 2.51 – 3.50. The lowest mean score was found on item 9. The midwives had neutral attitudes on this item as the mean score was 2.78 which falls between 2.51 and 3.50. Table 5 shows the detailed findings.

**Table 5.** Descriptive statistics of the 11 items in the SQM, Part B. Attitudes (N = 60).

| Items | Mean (SD) |
|---|---|
| 1. Labour pain is normal, so women can be left alone to manage the pain. | 3.45 (1.82) |
| 2. The focus of care for women in labour pain is to reduce the pain; so, women must be given pain reliever during intense labour pain even if they do not ask for it. | 2.97 (1.43) |
| 3. Midwives must provide the essential care and support to give comfort to women in labour pain even if it goes beyond routine practice. | 3.83 (0.94) |
| 4. Encouraging words of advice will reduce women's anxiety. | 4.28 (0.83) |
| 5. Encouraging words of advice will boost women's ability to manage labour pain. | 4.17 (0.85) |
| 6. It is good practice for midwives to be friend with their clients. | 3.78 (0.98) |
| 7. No woman should suffer the pain of labour; hence, they should be offered pain relief. | 3.22 (1.21) |
| 8. Women should realize that pain plays an important role in the physiology of normal birth. | 4.03 (0.86) |
| 9. I believe that routine care for women in labour pain must be strictly followed. | 2.78 (1.35) |
| 10. Shouting and yelling by women in pain cannot be disturbing to other clients. | 4.40 (1.00) |
| 11. When a woman in pain desires an assistance of pain relief that is not part of my routine, i don't provide it. | 3.40 (1.22) |
| Midwives' attitudes (overall score) | *3.41 (0.51) |

The table shows the mean scores and the standard deviations of the midwives' responses to part (B) of SQM. These scores were interpreted using the Likert scale (DeVellis 2012). *The overall mean score was 3.41, which falls between 3.51 and 4.50 and was interpreted as a 'neutral' attitude (Table 2).

## Findings of the SQW

### Demographics of the Sample

Of the 384 women at the hospital surveyed, 360 responded, for an overall response rate of 93, 8%. The 24/384 SQW were left unanswered. The general demographic features of our sample were all the women had normal vaginal deliveries attended by the 60 midwives who had completed the SQM at the target hospital and were well- educated; according to the midwife in charge in postnatal unit and SH. Both the midwife in charge in postnatal unit and SH identified women's educational status based on the written information concerning education/occupation/ workplace in women's hospital files/ hospital admission form. Then, the well-educated women were identified; the women who had completed an institute, a college or a university education.

### The Midwives' traits considered desirable

The 16 traits that were considered desirable for the midwives to possess in their attitude towards labour pain were analysed. The top seven traits the midwives should possess in their collective attitude towards labour pain were being patient (n=316, 87.8%), reassuring and soothing (n=291, 80.8%), understanding (n=273, 75.8%), nurturing (n=250, 69.4%), trustworthy (n=188, 52.2%), non-judgmental (n=177, 49.2%), and compassionate (n=142, 39.4%) Figure 1. Further, the findings showed the other traits considered desirable in the midwives' collective attitude; calm (n=140, 38.9%), gentle (n= 132, 36.7%), humble (n=123, 34.4%), approachable (n=113, 31.4%), intelligent (n=108, 30%), well-groomed and neat (n= 98, 27.2%), flexible (n=67, 18.6%) and sense of humour (n=61, 16.9%). Forty women (11.1%) expected the trait of being 'generous and loving' in their midwives' collective attitude towards labour pain.

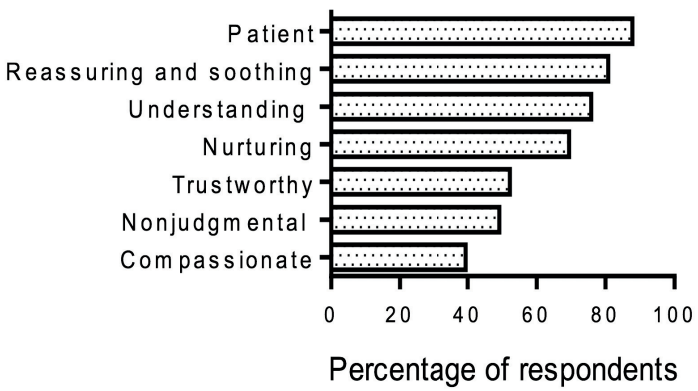



**Figure 1.** The distribution of midwives' traits considered desirable by the women. The women (n = 360) had responded to SQWand ranked the top seven traits they expected in their midwives collective attitude towards labour pain. Bars represent the percentages of the top seven traits reported.

### The Women's expectations of their midwives

This section presents the findings of the SQW; women's expectations of their midwives attitudes towards labour pain. The findings are reported at both the macro level and the micro level. The macro level concerns the women's collective expectation of their midwives' attitudes towards labour pain. The overall mean score of the women (individual) expectations represent the women's collective expectation of their midwives. The overall mean scores are interpreted based on table 2 with reference to the upper and lower limits of respondents' scores in the Likert scale; very high, high, average, low and very low. The micro level concerns the women (individual) expectations of their midwives attitudes towards labour pain at items level. The mean score at the item level are reported and interpreted with reference the upper and lower limits of respondents' scores in the Likert scale table 2; very high, high, average, low and very low.

The women had very high collective expectation of their midwives attitudes towards labour pain; the overall mean score was 4.52 (SD = 0.45) falls between 4.51–5.00. The findings at the items level showed that the women had very high expectations of their midwives' attitude towards labour pain on item 3 of the SQW; the highest mean score 4.60 and SD= 0.52 which falls between 4.51–5.00. The women had very high expectations of their midwives' attitudes towards labour pain on six items of the SQW with mean scores ranged from 4.52 to 4.59 that fall between 4.51–5.00; the items 1, 2, 4, 5, 9, and 10. The women had high expectations of their midwives' attitudes towards labour pain on three items with mean scores ranged from 4.40 to 4.44 that fall between 3.51 – 4.50; the items 6, 7, and 8. The detailed findings of SQW about women's expectations of their midwives' attitudes towards labour pain are presented in table 6.

**Table 6.** Descriptive statistics of the 10 items in the SQW which focused on women's expectations of their midwives (N = 360)

| Items | Mean (SD) |
|---|---|
| 1. Utilize a wide range of resources to assist the woman | 4.59 (0.57) |
| 2. Provide a thorough and ongoing assessment | 4.40 (0.63) |
| 3. Follow up on care | 4.60 (0.52) |
| 4. Timely in clinical actions | 4.52 (0.65) |
| 5. Provide continuity of care | 4.52 (0.58) |
| 6. Provide adequate time to meet our needs | 4.41 (0.65) |
| 7. Listen carefully and respond appropriately to our needs | 4.44 (0.68) |
| 8. Provide encouragement that we can cope with pain | 4.58 (0.57) |
| 9. Maintain a supportive presence in labour | 4.57 (0.54) |
| 10. Assist women in pain to gain confidence | 4.58 (0.62) |
| Women's expectations (overall score) | *4.52 (0.45) |

The table shows the mean scores and the standard deviation of the women's responses to the 10 items in the SQW which focused on the women's expectations of their midwives attitude towards labour pain. These scores were interpreted using the Likert scale (DeVellis 2012). *The overall mean score of 4.52 falls between 4.51 and 5.00 on the Likert scale and it was interpreted as 'very high' expectation (Table 2).

**The Women's perceptions of their midwives**

This section presents the findings of the SQW; women's perceptions of their midwives attitudes towards labour pain. The findings are reported at both the macro level and the micro level. The macro level concerns the women's collective perception of their midwives' attitudes towards labour pain. The overall mean score of the women (individual) perceptions represent the women's collective perception of their midwives. The overall mean scores are interpreted based on table 2 with reference to the upper and lower limits of respondents' scores in the Likert scale; very positive, positive, neutral, negative, and very disloyal. The micro level concerns the women (individual) perceptions of their midwives attitudes towards labour pain at items level. The mean score at the item level are reported and interpreted with reference the upper and lower limits of respondents' scores in the Likert scale table 2; very positive, positive, neutral, negative, and very disloyal.

The women had neutral collective perception of their midwives' attitudes towards labour pain; the total mean score was 3.43, SD= 1.13 which falls between 2.51 – 3.50. A neutral collective perception means that the women had neither positive nor negative perception about their midwives attitudes towards labour pain; they have perception that does not belong to the positive or negative perception. The women had neutral perceptions of their midwives attitudes towards labour pain on item 3 of the SQW with mean score of 3.47, SD= 1.19 that falls between 2.51 – 3.50; the time with the highest mean score. The women had neutral perceptions of their midwives attitudes towards labour pain on the items 1, 2, and 5 with mean scores 3.45, 3.43, and 3.44 respectively; the mean scores fall between 2.51 – 3.50. The women had neutral perceptions on item four of the SQW; the item with the lowest mean score 3.36, SD= 1.19. Table 7 shows the detailed findings of the SQW; women's perceptions of their midwives attitudes towards labour pain.

**Table 7.** Descriptive Statistics of the 5 Items in the SQW focused on women's perceptions of their Midwives (N = 360)

| Items | Mean (SD) |
|---|---|
| 1. I am completely satisfied with the service given to me by my midwife. | 3.45 (1.21) |
| 2. I owe it to my midwife that I got through with my labour pain. | 3.43 (1.15) |
| 3. My midwife was very patient and caring. | 3.47 (1.19) |
| 4. My needs were perfectly addressed by my midwife. | 3.36 (1.19) |
| 5. I liked the way my midwife treated me; I hope that in my next delivery (if ever) she will still be the one to attend to me. | 3.44 (1.25) |
| Women's perceptions (overall score) | *3.43 (1.13) |

The table shows the mean scores and the standard deviation of the women's responses to the 5 items in the SQW on their perceptions of the midwives' attitudes towards labour pain. The scores were interpreted using the Likert scale (DeVellis 2012). *The overall mean score of 3.40 falls between 2.51 and 3.50 on the Likert scale, and was interpreted as a 'neutral' perception (Table 2).

### Hypothesis testing results

To test hypothesis 1, a correlation was tested between the variable of the midwives' knowledge and the variable of midwives' collective attitude towards labour pain. A significant and moderately positive correlation ($r = 0.39$, $p = 0.002$) was found between the midwives' knowledge and the midwives' collective attitude towards labour pain. Therefore, the null hypothesis that the midwives' knowledge was not significantly related to the midwives' collective attitude towards labour pain was rejected.

Similarly, hypothesis 2 (the main hypothesis) was tested using correlation analysis between the variable of the midwives' knowledge (SQM) and the variable of the women's perception of the midwives' attitudes (SQW). The results showed that the correlation was significant and moderately positive since $r = 0.53$, $p < 0.001$. Therefore, the null hypothesis that the midwives' knowledge is not significantly related to the women's perception of the midwives' attitudes was rejected.

In testing hypothesis 3, the responses received regarding the women's expectation of the midwives were correlated with the aggregate of the women's expectations of their midwives' attitudes towards labour pain. The results indicated that the responses received regarding the women's expectation of the midwives were strongly and positively correlated with the aggregate of the women's expectations, which were all significant ($0.001 < p < 0.01$), with the highest being $r = 0.80$ and the lowest $r = 0.70$. Therefore, the null hypothesis that the women's expectation of the midwives is not significantly related to the aggregate of the women's expectations of their midwives' attitudes towards labour pain was rejected.

In testing hypothesis 4, the responses received regarding the women's perception of the midwives were correlated with the aggregate of the women's perceptions. The results indicated that there is a very strong and positive relationship between the responses received regarding the women's perception of their midwives attitudes towards labour pain and the aggregate of the women's perceptions, which were all significant ($0.001 < p < 0.01$), with the highest being $r = 0.95$ and the lowest being $r = 0.93$. Therefore, the null hypothesis that the women's perception of their midwives attitudes towards labour pain is not significantly related to the aggregate of the women's perceptions of their midwives' attitudes towards labour pain was rejected.

# 6. Qualitative findings

## Findings of the midwives' interviews – The midwives' knowledge and attitude towards labour pain

### Themes

#### Theme 1: Midwives see labour pain as suffering when women experience negative emotions

The midwives viewed labour pain as being normal and all birthing women experience that. They defined labour pain as being physical by nature, resulting as it does from uterine contractions, and it varies in intensity from woman to woman. They described it as being normal for all women giving birth to experience labour pain, resulting in a progressive dilatation of the cervix and giving birth naturally.

> *"The pain is basically tension and hardness felt in the abdominal area which is the result of pushing the foetus down through the neck of uterus and making the cervix dilate...It is caused by contractions; she (the woman) doesn't feel any pain and she speaks softly, saying the foetus will come out whatever its size - but she doesn't feel pain; she says the real pain was when she gave birth for the first time; she has gradually come to understand the stages of pregnancy and delivery, and the more delivery cases she has, the less pain she feels. She may feel a slight pain or cramps after delivery because the uterus is returning to its normal position...Pain is normally reduced; all clients experience pain but the limit varies from individual to individual; no two women are alike. Clients are able to bear the pain of the contractions to a certain extent. Some clients experience no contractions or only mild ones. I try to increase these so that they become severe". (MW1)*

> *"It is very difficult to express or write truly about labour pain. It varies from a client to another, but it is the pain from which a new human generates. I have not practiced it yet, but it's unbearable". (MW2)*

> *"Giving birth is extracting a soul from a soul... Women have pain, but silent pain ...Some clients do not feel contractions; some do not feel painful at all! Can you imagine that?" (MW3)*

> *"You know delivery is always accompanied by pain, we provide input during the first and second stages to help the client cope with pain... It's the labour pain which differs from one client to another" (MW5)*

However, the midwives view that the women approach labour with negative feelings, emotions, and previous childbirth experiences which makes them experience labour pain 'suffering'. When the midwives

described the women's experience of labour pain as 'suffering', they meant the intensified emotional aspect of the labour pain and the negative mental thinking of labour pain. Suffering is caused by fear of recurrent negative experiences of labour pain, anxiety and stress from not knowing what to do with labour pain and coming to the hospital in a negative frame of mind having heard from others that they know how to cope with labour pain. The negative experiences or emotions resulted in women's feelings of powerlessness about how to cope with labour pain and causes anger. Anger made women uncooperative or unresponsive in terms of accepting the situation and acting in a way that could help them cope with labour pain (e.g., breathing techniques, back massage, support and analgesics). Therefore, according to the midwives, the women experience a negative energy in their body instead of trusting that their bodies are able to turn the labour pain to their advantage; i.e., to make progress during labour.

*"If a multipara has trouble with her first and second deliveries, for example, she will expect to face the same kind of suffering and difficulties again, given her experience. But in cases where a primipara has been told that she will face a painful delivery, I find when I talk to her that she is quick to understand and so she behaves in exactly the way I tell her. In contrast, a multipara will say that she has had two bad experiences and she may not obey my instructions." (MW1)*

*"Most clients suffer from labour pain when giving birth. Our role is to offer help and make the client feel relaxed and to relieve her pain. Deep breathing reduces the pain a lot: inhaling through the nose and exhaling silently through the mouth. Using this method makes the client feel better and she starts talking about something else. In addition, back massage relieves pain and gives good results. Clients thank us for making them feel better." (MW5)*

*"When a woman is admitted, she feels afraid and the labour pain is unbearable. I am a woman myself and I understand how extremely painful this is." (MW4)*

The midwives explained that the women express the suffering they experience with labour pain using different signals. Body language is one of the signals some women show to indicate that they are suffering from labour pain, and this include changes in facial expression (looking tense), clenching their hands and placing them on their abdomen. Refusal to cooperate with the midwives is another signal that indicate the women are suffering; due to negative emotions and recall of previous negative birth experiences. In this way, the women add a negative energy to the experience of actual labour pain and they then feel both intense/intolerable emotional and physical labour pain. The midwives clarified that when women experienced labour pain as a form of suffering, they had trouble in managing their emotions and they behaved in an uncontrolled way that can be a life threatening by causing harm for themselves and/or their babies. The midwives gave examples of uncontrolled behaviours, aggressive behaviours and body movements such as the

women nervously moving their legs, hitting their heads against a wall, leaving the bed and lying down on the floor.

*"As midwives, we know very well that the suffering experienced from labour pain differs from one client to another. Some people may agree on this matter while others disagree. But in fact, the pain scale does differ between clients." (MW3)*

*"Facial expressions change as a result of pain; you become able over time to identify the nature of the client's feelings and suffering. Her face and hands will become tense, for example, and she will place her hands over her belly ... some clients move their bodies; they move their legs, for example." (MW1)*

*"When the client is in extreme pain, she becomes uncooperative; she is capable of doing something irrational...I remember one case, an unforgettable case. A primipara, who was 18 years old, was suffering from labour pain and had a fully dilated cervix...she was very uncooperative even though she had taken pain relief...she would leave the bed and hit her head violently against the wall. She lay down on the floor. I did not think that that was labour pain. She took off all her clothes." (MW2)*

*"Many clients...exhibit a lot of strange and unexpected behaviour during the second stage...One client wanted to get up from her bed at the crowning stage. She refused to push, and insisted on having a Caesarean... because of the labour pain, but she had to cooperate." (MW4)*

For other women, negative verbal signals indicate suffering from labour pain and high stress levels; shouting, refusing to lie on the bed in order to check the foetal heart rate and progress of labour, asking for analgesia and refusing to cooperate with the midwives. The midwives described the negative behaviour of the women as 'uncooperative' and 'a refusal to cooperate'; much stressed women displayed irresponsiveness to the midwives' instructions.

*"I can see the client's pain from her facial expressions; some clients shout, others may refuse to lie on the bed, some can't help moving around and sprawling about on the floor. They insist on seeing members of their family. Some clients refuse to give birth unless their mothers are present in the room, which is also a way of expressing their pain." (MW3)*

*"She may ask for drugs, she may want to give you money so she can have an injection...we hear this sort of thing, but at times like this the client is not fully conscious and doesn't know what she is saying... she means medication, any painkiller." (MW2)*

The midwives stated that not all women show suffering signals. Some women try to hide their suffering; they absorb the intense labour pain and stay silent and calm. The midwives described those women as 'cooperative'; they are able to cope with intense labour pain and tolerate suffering and not needing specific care other than routine hospital interventions such as foetal heart monitoring and observation.

*"Frankly, I don't do anything with a silent client. She stays attached to a foetal heart monitor, and the doctor can evaluate her case ... she is very cooperative. I can't find anything to do!" (MW3)*

*"It's the body: some bodies can bear pain while others cannot. Some clients have contractions...and they don't show any pain; it depends on the nature of the client's body." (MW5)*

**Theme 2: Working with women in labour is based on an individual perspective that demands time**

The midwives described their experiences with labour pain as it is based on individual differences in women's experiences of labour pain. However, they do not have enough time to meet the individual needs of every woman for labour pain management. None of the midwives talked about their experience of assessing each woman's labour pain, implementing individualised interventions to meet the need of the woman for labour pain management, or evaluating the effectiveness of their interventions on labour pain management provided for the woman. They only mentioned the variations in the degree of tolerance the women had for labour pain and how they addressed it. They reported that labour pain varies from one woman to another. They gave various examples of the differences in labour pain tolerance between women by focusing on the women's knowledge of labour pain, parity and age and any wrongly held beliefs about how to express or manage labour pain, and they focused on the women's previous experiences of labour pain. One of the midwives said that the women tolerate labour pain if they have had a positive labour pain experience in the past, an understanding of labour pain, and faith in the fact that labour pain is normal.

*"Labour pain differs from a woman to another. Some women can bear the pain while others cannot, and some have had experience of or have some idea about the pain and believe it to be normal." (MW1)*

Another midwife reported that women's tolerance of labour pain varies according to their woman's coping skills and parity. For example, primiparous cope with labour pain and respond to the midwife's instructions on how to behave during times of labour pain. They therefore tolerate labour pain and they are 'cooperative'. Whereas, another midwife said that the tolerance of labour pain depends on woman's age. She noticed from her experience that young pregnant women tolerate labour pain better than older women do.

*"Well, not all clients are the same. I mean that some have the ability to bear pain, whereas many do not, some are cooperative while others are uncooperative...when a primipara is about to give birth, she behaves well and is more cooperative than the multiparas are. So how well one copes with labour pain differs from one woman to another." (MW4)*

*"I have got long experience of different cases. Some clients have arrived with a "fully dilated cervix" and were grand multiparas. I think older clients have bodies that cannot bear pain in the way that younger clients'*

*bodies do. In fact, when a primipara is undergoing a Caesarean section with a fully dilated cervix, I feel very anxious because I still have fears concerning the case. I may intervene to help the client have a normal delivery instead; the doctors are always very glad to work with me." (MW2)*

The midwives reported that working with women's labour pain at the individual level demands time. They mentioned that primiparous and young women lack knowledge about labour pain and coping with it. This makes women become powerless to cope with their labour pain, intolerant of it, and more dependent on the help of the midwife; which demands time when midwives are overly loaded with the hospital work.

*"Sometimes the client doesn't know anything about giving birth, or labour, or what she must do during labour ...all she knows is that she is in her ninth month of pregnancy...she doesn't have a background in health education or any experience...these are the very young clients aged between 17 and 18...I want the client to take a good deep breath and know how to deal with labour pain, not to shout... she doesn't know what to do during the contractions...the client is totally dependent on the midwife and so she must help her." (MW4)*

*"Some women are here for the first time and have no idea about labour and the pain it involves — and that in fact increases their pain. You know, some women are educated and others are not. Some women have seen videos, so they are the ones who have some idea of what will happen, particularly those giving birth for the first time." (MW1)*

*"A primipara doesn't have any experience... she knows nothing...and that is because of a lack of health education." (MW2)*

One of the midwives spoke about her experience with primiparous who suffer because of their lack of knowledge about labour pain. She said that she collaborates with a primiparous by giving her instructions for dealing with labour pain. For example, she talks to the woman in her own social and cultural language, encourages her to take deep breathing when she feels intense labour pain, encourages her to tolerate labour pain, and push if she feels the urge to do so. In contrast, another midwife reported that in some cases primiparas know about labour pain and cope with it better than the multiparas do. She said that primiparous have not yet experienced labour pain for real; therefore, she gives them special attention, supports them during labour and helps them deal with labour pain.

*"I tell her to tolerate the extreme pain and I give her advice on how we can control it. When her abdomen/belly hardens, that means she needs to push, and so I ask her to push, to take a breath with each pain and to push as if she were in the toilet and wanting to pass stools." (MW1)*

*"I sometimes find that primiparous provide more feedback than do multiparas...a primipara sometimes copes better with the pain than a multipara...she is better able to cope with the labour pain because it's her first experience, and I can provide her with more support." (MW2)*

The midwives focused on the importance of understanding the individual variations between women when they work with women's labour pain. They rely on their accumulated experiences with women' labour pain and they use the same labour pain management interventions with women; regardless of the women's individual needs. For example, the midwives believe that they know what women feel and think about labour pain when they shout and scream. They therefore do not try to listen to women or ask them what they felt and how they feel. Based on their experiences, the midwives recognized that women who shout and scream are suffering and they need individualised interventions. These interventions help relieve the women's suffering, and these include informational support about labour pain, psychological and emotional support to calm them down and help them understand that it is normal to experience intense labour pain.

*"Some women are affected by the experience of others and what they tell them, they have certain thoughts...They believe that labour pain must be a bad experience; they think they have to scream and shout...primiparas - women giving birth for the first time - don't know enough about the pain, so my job is to help them understand what labour pain is." (MW1)*

*"They already feel pain, but they think that labour means they have to shout, or they think that when they shout they might receive more care. Some of them shout because of the kind of community background they come from. They shout because they feel they have to, not because of the pain as such...If they are primiparous, they feel frightened, and their background means they take a certain attitude to pain, such as the need to shout 'Cervix 1 cm dilated!'" (MW5)*

*MW 5 also said that: "The community the clients come from has also instilled in the minds of some of them beliefs about labour and labour pain which are wrong. Some clients believe things may be better if they shout. That does not stop me giving them psychological support, which ultimately gives good results. Clients come to us with a great fear of delivery that has been instilled in them from the people around them. These people have told them that labour is horrible, an internal examination is painful, and so on."*

*"The matter of bearing labour pain differs from one woman to another...In addition, the first thing you do is working on the psychological support, which I consider the most important thing to do in delivery room." (MW4)*

MW5 further talked about providing psychological support and comfort measures saying that:

*"Psychological support has a great effect on clients...The client shouts because she is in extreme pain. I ask her to take deep breaths, which relieves her pain. However, if she goes on shouting, that could harm the foetus and cause foetal bradycardia. I keep giving my clients instructions: lie on your left side, take a deep breath, and stop shouting, and so on. That helps the client feel better."*

The midwives seemed to believe that their work with women's labour pain depends on women's previous experiences of labour pain. They viewed that the women's previous experiences of labour pain determine their responses to both the pain itself and whether or not they follow the midwives' instructions on managing labour pain. The work with the women who have had a positive past experience of labour pain demands less time from the midwives because the women have the ability to manage labour pain by themselves with less reliance on the midwives:

*"I generally don't have any difficulty with multiparas because they have an idea of what to expect and understand what is going on. They know what to do and how to push the foetus, but the primiparas find it easier to understand than the multiparas do, and they are quicker on the uptake when I give instructions."(MW1)*

*"What is for certain is that multiparas know what to expect because they've given birth before. They have experience of previous deliveries." (MW2)*

Whereas, the work with women who have negative emotions associated with a painful birth in the past demands much time from the midwives because the women find it difficult to cope with labour pain and they may not respond to any kind of help from midwives or follow the instructions given by them:

*"If multiparas have had trouble with their first and second deliveries, for example, they think they will experience the same amount of suffering and the same difficulties, so they come with their past experience in mind." (MW1)*

*"Multiparas have a ready-formed idea about labour pain, and that means they find the experience traumatic." (MW2)*

*"A multiparous client with a dilated cervix of 8 cm was admitted ... I asked her not to push as labour was progressing well, but she still pushed hard on the fetus. Fortunately it was saved; we were able to save its life...because of her extreme pain, she had refused to respond to my instructions." (MW3)*

However, the midwives described the work with primiparous as it demands less time from them; because they are fast learners, cooperative though they have no prior experience of labour pain, and they are responsive to the midwives' instructions. The midwives reported that primiparous trust in what they are told by the midwives about managing labour pain because they have not experienced it before. They listen to the midwives, they become used to the birthing environment and give the correct responses to the midwives' instructions.

*"Sometimes a primipara accepts instructions faster and shows more cooperation. She says she can bear pain, but she wants to see the baby safe. She feels contraction and she can bear it." (MW1)*

*"When she reaches the stage involving labour pain, she is past feeling fear. She is*

*facing reality now. The foetus, which has spent nine months in her abdomen, is going to come out. She feels determination more than fear and pain. I feel more relaxed with a primipara than with a multipara or grand multipara." (MW2)*

*"Primiparas are more cooperative than multiparas ...I feel that they gradually get used to the birth environment and can cope with the labour pain ... Some primiparas are not very old or else are about thirty, and they are better able to cope with the pain than are those who are older and vice versa." (MW4)*

One midwife recalled her work on labour pain with a young primipara, who was suffering and simply was not responsive to the midwives' instructions on managing labour pain because she did not know about labour pain. The midwife reported that administering painkillers in situations like that will relieve the woman's suffering and make her feel comfortable and relaxed up to the end of labour:

*"Generally the situation itself determines what I should do. Some clients give birth easily and leave without the need for concern about their safety; they do not need painkillers. However, primiparas who have extreme labour pain and are very young need analgesics to relieve it. They also feel very comfortable and relaxed when we repair the perineum in the third and fourth stages." (MW3)*

**Theme 3: Working with women in pain by using midwives' own strategies and influencing the women's way of thinking**

The midwives expressed a desire to help every woman who is in labour through times of labour pain while still being responsible for accomplishing hospital tasks. They try to take every opportunity to support the birthing women and help them to endure labour pain. However, they encountered problems that presented obstacles to achieving the institutional goals. They talked about the problems arising from situations that require them to be supportive of women suffering from both the labour pain itself and from the negative thoughts induced by the feeling of labour pain. These negative thoughts distract the women from focusing on the importance of labour pain and being able to cope with it. These negative thoughts, according to the midwives, may also influence the mood and level of energy felt by the women at times of labour pain and during labour. The midwives described the situations they faced, such as working with difficult or uncooperative women, and how they have learned to deal with them in a certain way. They explained that one main approach they use in such situations is to support the women by breaking the pattern of negative thinking they have which stems from feeling pain.

*"At the onset of pain she understands that this will be followed by time when she can relax." (MW1)*

The midwives break the pattern of negative thinking on labour pain instead of, say, alleviating the sensation of labour pain by administering drugs. They explained that

they change the women's negative thinking about labour pain by showing their support or talking about the joy of having a baby. They connect with the women by asking them how they feel, making eye contact, holding their hand or joking with and smiling at them. In this way, the women realize that the midwives are listening to them and value them. This gives them more courage and they respond to the words and actions of the midwives. As a result, they feel more relaxed and able to tolerate labour pain:

*"Most women become cooperative when we talk to them. I ask the client about her family and children, about the foetus, if it is male or female, what she is going to call him or her, and that relieves her pain even if she is fully dilated." (MW5)*

*"I am familiar with all kinds of cases; you can speak kindly to all these women or maybe make a light joke. You can be friendly to all of them even though they are tired because of severe pain...Touching or smiling at the clients gives them encouragement... I give them one of my broad smiles, I feel very satisfied, and happy...When I hold the client's hand...I feel as if I am in her position. I feel I support her by providing energy and showing her kindness ... The foetus comes out safely and the client feels relaxed and not alone; she feels there are people taking care of her."(MW2)*

*"Pethidine wasn't the reason for her feeling relief from the pain. My smile and kind expression were what made her feel reassured. I told her that God would bless her, so she took a deep breath. In that way I made her feel relaxed and calmed her down; she became cooperative and responsive." (MW4)*

The midwives listen to what women say about labour pain and show their support by allowing the women to express their thoughts and feelings. They respond to the women's concerns in a way that reflects that they care about what they are experiencing. This, according to the midwives, helps the women feel supported and understood. For example, one of the midwives described her experience with one woman who was screaming hard while in labour. She said that some women scream from pain and therefore refuse to respond to the midwife's instructions, such as cooperating when having the CTG (Cardio Toco Graphy) monitor attached or staying in the same position on the bed. The midwife said that she used a kind tone when telling this particular client that she understood her labour pain but at the same time, she cared about the health of her baby. The woman then stopped thinking of labour pain, started thinking about the life of her baby, and understood her situation better and felt she was supported, and she accepted the midwife's actions.

*"Whenever there is a client who screams a lot, they ask me to take care of her...Some clients don't like being put on the device...the CTG...nor do they want to stay lying on the bed. Even when I speak kindly to a client... she can still refuse to have it attached. I then reason with her that it is essential for me to hear the pulse of the foetus and to know when it is getting tired. And that convinces the client to have it attached so as to protect her foetus." (MW1)*

In the experience of other midwives, the amount of emotional support provided to women who are in severe pain depends on their views regarding 'shouting and screaming'. The shouting and screaming seem to be allowed when the women are feeling severe pain, which is mainly during the birth of the foetus (the second stage of labour). The justification for this approach (to screaming and shouting) is that screaming is allowed when it is an expression of severe pain, but is not allowed when it is a call for attention from the midwives. The midwives stated that it is on this basis that they support the women when they shout from severe labour pain. This means, in the midwives' view, that the times and the ways in which the women shout are a decisive factor in supporting women and relieving women's labour pain. However, the midwives' inability to communicate sufficiently well with women in labour appears to limit their understanding that screaming could be a sign of stress release. When the women persist in suppressing this level of stress mentally and physically they reach a stage, where they cannot listen to or cooperate with anybody, and they give vocal expression to their feelings of stress:

*"During periods of contraction, she is afraid of the pain, she says she feels as if her abdomen will explode. In fact, she ignores some facts about labour and the foetus, so we help her understand that it is normal to feel pain. We want consecutive contractions to speed up the labour. She starts to understand that she has to endure a 10-15 minute window of temporary pain, and that the pain will vanish after that. The hardest moment is when the foetus comes out. The contraction when the foetus's head appears is the most difficult time because the head is a bone mass; however much she shouts is acceptable because that is the climax of the pain. It is great pain in fact, and she should push harder. Then once the foetus is born she can relax, we place the baby close to her so she can feel and touch it. All her pain has now gone away. Maternity is a great feeling." (MW1)*

*"I tell her that shouting has a bad effect on the foetus and on her too because she will not be able to push. She will not have enough energy to push, and especially not when the head is to be pushed out." (MW5)*

*"Multipara generally starts shouting... This means that it is possible that multipara will refuse to sit in the bed...They are uncooperative... I may ask her family to help me to convince the multipara in order to let me perform the vaginal examination during contraction time." (MW4)*

Some midwives explained that understanding what the women are saying is important, but being supportive does not mean they have to agree with the women's wants. They cannot address a woman's wants when such action is not practical, such as changing her to another bed when others are occupied or when it affects the safety of the woman or baby – if, say, the woman wants frequent doses of painkillers.

*"There are many times when a client says that she can't bear the shouting of others...I tell her I'll give them an analgesic if they continue shouting...She tells me that her pain*

*stems from fear, so she asks if it's possible to move her somewhere else. I say that I will move her when possible, but she will have to stay in her room in the meantime. Therefore, the sound of shouting does not go away because the others are in the same wing 'first stage'. I want to put her in another bed, hoping that will relieve her fears." (MW1)*

*"She asks me at times to let her husband buy her analgesics from the pharmacy. I try to go along with her wishes, but do not mislead her." (MW2)*

The midwives found that a good way of supporting the women is by speaking kindly and reassuring them that it is normal to feel labour pain, asking them to breathe deeply whenever they have labour pain, and encouraging them to cooperate with their midwives. Some midwives reported that they felt that encouraging the women to be physically energetic during labour helps the women themselves as well as the midwife achieves a safe birth outcome. They said that they tell the women that labour pain is normal, will disappear once they have given birth, and it will be nothing more than a memory the moment they see their baby. The midwives give guidance to the women by saying to them that all they need to do is be calm, not feel scared by the sounds of other women shouting, and to tolerate the labour pain so they can see a healthy baby at the end of labour. The midwives found that these words encourage the women to stay calm instead of screaming to save their physical energy for the rest of labour and be able to manage labour pain.

*"My way of talking must be meaningful and effective, and it plays a significant role. I tell her she will feel very little pain when the head of the foetus comes out, and then the pain will totally vanish. That helps her believe that when the foetus comes out her pain will stop at that moment - the hardest moment. She will feel pain for a short time, then that pain will be forgotten and the most difficult moment passes over peacefully. She will feel relaxed after giving birth and seeing her baby. She says it is the last time she will ever get pregnant - she says never again! - but once she sees the baby, she changes her mind and says, 'See you again next time'." (MW1)*

*"When talking to the client, I try to talk to her soul, and that improves her mental well-being; she can bear the pain because there is a kind person next to her who is taking care of her. I tell the client that the more calm and relaxed she is, the better she will feel which helps her achieve a good outcome and also helps the others around her to feel better." (MW2)*

*"Sometimes, I tell a shouting client that the less she shouts, the more progress she will make during labour: 'Those clients doing less shouting will give birth before you do!' That makes her feel envious and stops her shouting so much. She begins to realise that she should save her energy to push the foetus out, which works: it helps her to give birth. Once her labour is over, she starts to cry and apologize, and says she was out of control... She gives birth safely, and says she was able to bear the labour pain, but not the others shouting."(MW1)*

The midwives reported that supporting the women during times of labour pain is beneficial in helping the women to feel relaxed, reassured and calm, and able to collaborate with the midwife in order to be able to give birth safely.

*"I received two clients, I took down their full history, I examined them and tried to provide them with relief, I spoke to them really kindly, provided support, told them they would feel more relaxed and I would help them to give birth, and I told them I would give them an analgesic." (MW2)*

*"My approach is to start off by giving the client emotional support. I try to provide her with some reassurance. I explain to her about the pain. I tell her that all the women here suffer from labour pain, and she has to bear it too." (MW3)*

*"You know the patient comes here with a phobia about giving birth. Most of the shouting and screaming behaviour stems from the fear of being unable to give birth. She is scared of the labour process, particularly if she is a newcomer. When she is provided with proper support, she can relax and feel calm ...When you give support by telling the client that it is normal to feel pain, she feels the pain, but she does not know that she is going to have contractions; she only knows that she feels the pain. I tell her that whenever she has pain, she needs to take a deep breath, push downward, and be cooperative. This gives her a greater feeling of this being part of a collaboration and it helps to relieve or kill the pain, which in turn results in the safe delivery of a healthy baby." (MW1)*

The midwives view that verbal support is sometimes not enough. They therefore do everything in their power to help the women regard labour pain as being necessary in order to achieve a normal birth. They talked about changing the way the women think about labour pain. They switch the focus of women's thinking from being 'fear-based' and manifested by 'shouting and screaming' to be 'comfort-based' and manifested by 'patience and tolerance' as a result. This facilitates their work as hospital midwives at the same time. They do things for the women that they know the latter may well appreciate, feel better from and cooperate with. The midwives continue supporting the women by talking to them until the latter feel they are indeed being given support, such as by allowing family members to be with the women, by asking the women to relax and take deep breaths, and by calming them down or offering water/snack food to them. The midwives felt, for example, that their role in supporting primiparous women is to increase their tolerance of labour pain and save their physical energy for the end of the labour. They know when and how to treat primiparous women who are feeling scared and entering into labour while thinking negative thoughts about labour pain. They treat them with kindness and tell them how important it is to collaborate with the midwife during the labour. If the women do not feel convinced by their midwives' reassurances, a family member may be of help. They said that the women will not necessarily stop screaming but they will feel comforted and cope with the labour pain, and at the same time become more responsive to facilitate the work of the midwife.

*"I look at her as if she is a child. I try to be kind to her. I tell her she will experience labour pain at first, but at the end of it, she will have her new baby after nine months of pregnancy. This helps her relax and feel happy. She copes with the pain knowing that she will have her baby in the end. She will suffer, but she should not be afraid. I try my best to provide her with some relief. That then makes her more cooperative. I do not think it is tremendous pain; it is true that the client shouts and talks a lot, but she may be able to help you and you can help yourself. You can reduce 18 hours of labour to 5 hours or less and save time and effort." (MW2)*

*"Very young clients or primiparas sometimes want their mother to be with them in the labour room. This is not allowed, but I let them come in to talk to their daughters...I tell the client's mother to convince her daughter to cooperate with me and not to shout. The client has to tolerate the pain. It will all be over very soon." (MW4)*

Nevertheless, the difficulties faced by a woman who refuses to collaborate with the midwife as a result of being stressed from certain conflicts relating to her family or feeling uncomfortable in the birth environment are solved not only by the midwife providing verbal support. The key to solving these difficulties lies either with the woman's family or with the midwife being present. The midwives help the women feel safe in the birth environment, and their role is to look after them when they need the midwives and to ensure a safe birthing process.

*"A client came in to give birth. It was very difficult dealing with her. She refused to be examined. She refused to lie down on the bed. She refused CTG. When she became completely uncooperative, we tried to place her on the bed, but she refused. We worked as a team and the doctor helped us, but we were obliged to bring her mother into the birthing room...the client then felt calm and comfortable having her mother present. Some clients feel they are alone in this environment, so they need a familiar face." (MW3)*

*"I start by providing psychological support in order to make her feel comfortable and understand that she is in a safe environment. I really sympathise with her. I tell her that if she helps me, her labour will be made easier. God will facilitate her delivery. I am here simply to look after her and to keep the foetus' pulse going. Some clients relax after hearing this, and they cooperate with me." (MW4)*

*"I do my best to help her...I keep on asking her questions or helping her. I keep trying to calm her. I tell her that there is no complete relief from this pain; delivery and pain go hand in hand. The greater the pain is, the more dilated the cervix will be. In addition, as a midwife, I am responsible for mother and baby. I must end these nine months of pregnancy successfully without asphyxia or hypoxia." (MW4)*

Meeting certain institutional criteria can be challenging for the midwives because they need to ensure there are beds available for the women who are waiting for admission into the labour ward. They need to activate the labour and deliver the women safely

within a short time. They therefore help the women tolerate the labour pain either by talking to them about the joy of having baby or the importance of saving their physical energy instead of using it up by unnecessary screaming (in the early stages of labour), or by calming them in the form of offering them a drink of water or some chocolate. The midwives want the women to feel relaxed and have some physical energy in reserve so they can collaborate with them during the birth without there being delays or possible complications.

*"I relieve her pain, and I help myself by making my job easier. I keep talking to her about the foetus, which will soon come into the world, but she never believes that until she sees it in front of her. She asks me to help her give birth; she is eager to see it." (MW2)*

*"I myself do my best to provide help and make the client feel relaxed. Some doctors call me the client's 'Pethidine'...I do my best to help her give birth at a certain time, and there are many clients waiting. It is collaboration between the client and the midwife; the more she understands about the nature of collaboration, the more we cut down on the shouting and screaming. Some clients think they have to shout and scream whatever sort of contraction they have...They come from a certain kind of background; they think they have to spend their energy on shouting and screaming. I try to make her understand that that is wrong behaviour because her energy should be used to bring on the delivery process. Moreover, her energy will be gone and that will make us both tired. Educating the client makes things easier." (MW1)*

*"At first, the client was shouting out loud. I asked her to take a good long breath. She did not hear me at first. I asked her for a second and third time, and then she started to respond. She calmed down and slept. She began asking about when she would be giving birth; she forgot her pain and talked about something else. I told her about her case and how much time she needed to give birth. The client felt relaxed and gave a big smile ... I may give her a drink of water or a piece of chocolate. She may drift into unconsciousness. I may give her a tiny amount of food. In this way, she may forget her pain for a little while and stop shouting. When another contraction comes along, I do the same thing." (MW5)*

### Theme 4: The institution makes an inability to work on women's pain without being given a chance to prove it

The role of the midwives working in the labour ward is to care for the women in labour in line with their colleagues and their hospital's policy. This means that they do not necessarily care about what, why and how the women feel, given that they are to accomplish their hospital tasks and satisfy their colleagues. They believe that the real reason they care is to gain the appreciation of colleagues and hospital managers. They satisfy their institution and colleagues by working as a 'team' and carrying out their hospital tasks in a proper and timely manner with little risk to the lives of the woman and baby. By 'teamwork', the midwives meant that they carry out their hospital tasks in coordination with other birth carers such as the midwives and physicians who are on duty. In cases where they work

with five to six women in labour, have difficulty in dealing with the women or find that mother and baby are in critical condition, they said that they collaborate with other birth carers or delegate their tasks to them. In this way, they share the responsibility of providing care for the women and they carry out their hospital tasks safely and efficiently.

*"I'm in a central hospital. I try to speed up the woman's labour and make faster progress. I have to do this because I cannot have her using the bed for that long. We have many admissions, so time is a deciding factor." (MW1)*

*"It is a public hospital, a hospital that is over full, but what helps is that we are have a high level of experience; we are able to stay in control of the situation...even though the situation here is busy and crowded, I can stay in control of it; no complications will arise. I may give a client Pethidine, which relieves her pain and helps her to give birth and during that time, I may monitor another client's blood pressure. Therefore, teamwork reduces work pressure and stress. The levels of pressure and stress in the birthing room are higher than the pressure and stress on the normal floor where the clients are stable. Critical cases are never handled on this floor." (MW1)*

*"I gave her 50 mg of Pethidine, which I brought and gave to her myself, not the doctor. This is generally the policy followed ... It was my case, so I made the decision". (MW3)*

A midwife talked about her emotional stress when dealing with uncooperative women's pain at times of work overload. Her concern was not to expose women to dangers of drugs (e.g. Pethidine as a pain reliever or Syntocinon as an uterotonic drug) overdose. Particularly, when women ask for more repetitive doses than the usual dose, and when she has coordinate care for other clients to achieve the tasks of labour with minimal risks:

*"I cannot give her analgesic every half an hour; I also can't speed up contraction to have dilatation quickly. I find clients sometimes put on the fluid on very quick position, that all makes me nervous and stressed. I tell her that is not correct behaviour, it leads to dangers...I tell her that I do my job and understand she is in pain, but that I cannot give her more analgesic. Also, I can't stay that long by her side holding her hand". (MW3)*

The midwives described their feelings about the tasks they are asked to accomplish. They feel stress and a sense of guilt when they fail to complete their tasks successfully, and are therefore apprehensive about taking on responsibility and risking being on their own in difficult situations. They therefore feel a sense of security when they share the responsibility with other colleagues in such critical situations, knowing there is less chance the institution will be blamed for complications or risks.

*"I want to reach the point where I feel the client is OK with me ... we are here in a public hospital. We cannot act in the way we would like. Sometimes, I feel dissatisfied and tense*

*because I cannot help a client suffering from extreme labour pain... I feel guilty if I do not offer the right help. I think of the clients at night in bed. I cannot forgive myself if something goes wrong." (MW2)*

*"Work pressure is stressful for the staff...I should be responsible for one or two clients, not more than that. If they give me duties that are beyond my ability, I will not be able to do my job properly. I will feel stressed if I am responsible for a critical case, labour; fourth stage, second stage, repair - and I have the doctor wanting me to assist him. This heavy workload is the main reason for pressure or stress." (MW3)*

*"When I feel I have not provided enough help, it makes me anxious and worried." (MW1)*

*"The overload makes managing labour pain very difficult. That makes us here feel stressed and this will result in chaos. How can we tidy things and make successful arrangements while we are very busy? I may help 20 or 22 clients in addition to four Caesareans to give birth. The load and the shortage of the nursing staff are our problems in the hospital. In addition, the hospital lacks hotel services that clients find in private hospitals. For example, you can't give the client any analgesic which may relieve her after delivery." (MW4)*

In contrast, the midwives feel satisfied and pleased when they are in control of the women's progress in labour and can bring the birth journey safely to an end without any complications because they know others will appreciate their efforts in return.

*"It's enough that I can sleep at night feeling easy and content that I ever use the wrong treatment on my clients. It is enough that I can help them and that they are satisfied. We can help the women at the birth because the foetus also assists by descending through the uterus. I feel satisfied whenever the client has been spared any complications and I am doing my best to provide help." (MW1)*

*"I hope all clients leave satisfied and happy, I think it would be a good memory for the mother, but we don't like her to have bad memories, we like her to tell others about her well experience, kind midwives, cooperative staff and so on...". (MW3)*

The midwives reported that they try to find ways of accomplishing the hospital tasks without complaint. They show willingness to take on responsibilities and challenges. They do their best to maintain a professional relationship with their colleagues and to work as a team to make for a better work environment. At the same time, they carry out their work in compliance with hospital policy and the opinions and beliefs of their colleagues. They considered that their efforts contribute to a reduction in risks and complications and thus contribute to the success of the hospital.

*"When she comes to this hospital, we hope there will be two of them leaving us: the mother and the baby. What I am concerned about is not only the mother. I do my best to save both of them. Nevertheless, the decision*

*is not mine alone: we consult the doctors and our colleagues. The client wants herself to be safe first and foremost and then her baby, but as for me, I want to see them both safe." (MW2)*

*"The labour ward needs more than the seven or eight workers it currently has, but because of the ample experience we have; we perform our duties fast and are able to deal with a high workload. The more success I have in dealing with cases, the more experienced I will become. Going on training courses also increases our ability to deal with clients." (MW1)*

*"It is essential to get help from others. There are also two doctors on duty; why do not they offer to help? My method might not help the client, so others can provide help instead...if something untoward happens, the team will take responsibility for it. There is the foetus' life and that of the mother; a high level of care is necessary." (MW3)*

*"If I am very busy, another midwife might help me...I try to see them all. I find out if they need Pethidine or a Syntocinon infusion. It also depends on the doctor's opinion."(MW3)*

*"I think about both the foetus and the mother, but I may stop thinking about the mother for a few seconds because the baby is tired. The paediatrician and attending physician are there, so I am not the only one responsible for the foetus and mother."(MW4)*

The midwives said that when working in a crowded labour ward, they worry about not being able to control the birthing encounter in situations such as delaying actions, losing the baby or the likelihood of afterbirth complications. They become more worried when they have to work with women who are feeling severe labour pain but are not in control or are 'uncooperative', particularly when delivery times or care times overlap. In these situations, therefore, they use different approaches that they view it effective in order to get their work duties done and deal with the women's labour pain, such as shouting at, frightening or exerting control over the women. One of the midwives felt that shouting at the women who are not in control or are 'uncooperative' while giving birth is the only form of communication she can use to ensure the women give birth, thus 'encouraging' them and making them realize that saving the baby's life is essential while 'frightening' them at the same time.

*"I helped many people in this way – using a gloves-off approach. Once I have finished with one client, I hurry on to the next in the planned order, not when the foetus is descending. On one occasion, I was aggressive with a woman who was being uncooperative. I repeatedly asked her to push. I raised my voice at her. If she did not push, the foetus would become tired or would not be able to breathe. I wanted to encourage and frighten her at the same time in order to make her cooperate with me." (MW4)*

Another midwife talked about creating the image in the woman's mind that being 'uncooperative' is very closely related to developing birth complications which would make her feel pain even more severe than

labour pain. This instils in the woman the fear and desire to collaborate with the midwife in order to save her from the experience of an extremely painful childbirth. At the same time, said the midwife, she herself is able to carry out her duties efficiently. As a result, the woman is saved from the experience of painful complications and the birthing encounter is more easily controlled in the labour ward.

> *"I told the client that she did not have to give birth the normal way as otherwise she would become very tired; there could be complications and an extended tear, or the episiotomy we would carry out might result in a fourth-degree tear. I had to minimise these potential difficulties." (MW2)*

Another common method of dealing with 'uncooperative' women is to exert control over them, as was indicated by one of the midwives. This midwife said that she sometimes feels unable to organize her care activities and perform her duties efficiently while having to assist two women complaining of severe labour pain at the same time. In such cases, she let the women know that when they feel unbearable labour pain, she will step in and help them once she has finished seeing to the other women in her care. However, these momentary acts of kindness should not be confused with the controlling nature adopted by the midwife when telling the women that they have no choice or say in the pain of labour without her being present; i.e., exerting control over the woman instead of controlling the encounter.

> *"I arrange it so that I have two cases. Everything must be organized so I can deal with these two cases, and the women have the right to receive proper care ... I can control both cases. I tell one of them to be patient while I see to the other one for two minutes ... and so on." (MW1)*

The midwives explained that if they were given the chance to address the women's need of pain relief; this would enable the women to benefit in a holistic sense in terms of targeted management of their labour pain, the available resources and collaboration of the midwife. However, nobody talked about the importance of listening to the women's individual need of pain relief or motivating the women to cope with labour pain. They rely on the experience they have of the women in thinking they know what they need and how they feel, which means they are working on the basis of assumption instead of on the women's behalf. The reason for this, as was pointed out by the midwives, is that they do not have enough time to spend with each woman when they are in a crowded birth environment and when they encounter an overlap in delivery times. They only gave examples about making the decision to give Pethidine to the women complaining of severe and intolerable labour pain. They said that they know when to decide to give Pethidine to a woman and they take a decision based on certain criteria such as cervical dilatation or progress of labour and parity (primiparous) aimed at both relieving labour pain and accelerating birth, but not based on a woman's individual needs. They rely on the doctor's opinion and decision when they feel it

is necessary to give Pethidine to relieve the women's labour pain with respect to hospital policy and when they want the woman to save her energy and bring the labour process to an end by minimizing the shouting and screaming. They ask the obstetricians to order Pethidine; when a woman's labour is progressing well; when the cervical dilatation is 5–7 cm with the head of the foetus well applied, when the woman is screaming and does not tolerate labour pain or when the woman is primiparous.

*"If the case needs Pethidine, I give it. If the head is applied, you can decide whether to give Pethidine IV or IM; these are different from each other. If she has a thick cervix, I may give her Buscopan with Pethidine — that is a good analgesic for helping her." (MW2)*

*"On the whole, however, we rely on the doctor's orders, but sometimes I have to be the one to take the decision. I gave two clients Syntocinon with 500 ml RL after rupture of membranes: one of them had a 6 cm, 65% effaced cervix. I did everything by myself. I had the doctor's permission when I administered Pethidine ... Effacement and head applied were satisfactory and the most important reason was to kill the pain ... At that moment she was not conscious and she couldn't feel what we were doing ...She said she didn't need an analgesic, but in fact she was in pain ... I should tell her that I am going to give her it. Most clients accept an analgesic because they trust me ...They trust me because they are sure I would only give them instructions that are absolutely correct, and I reinforce their trust by performing my job appropriately."(MW2)*

*"The policy followed here is to give the client Pethidine only when she reaches 7 cm or when the cervix has dilated enough. Why don't we give it when she reaches 4 cm or 3 cm!! I mean 50 mg before and 50 mg after ...When dilatation is 4 cm and effacement is satisfactory, I need to give it to her fast. I should not have to wait until crowning to give her Pethidine. The entire labour process should be improved and revised." (MW3)*

*"It is the doctor's decision. As a midwife, I cannot make this decision, but I can consult the doctor...I must consult the doctor: this client, for example, is primiparous with a 5cm effaced cervix. Is it possible to give her Pethidine? The doctor decides whether to give it to her. The doctor refuses to give Pethidine when it is too early on in labour because the client may then go to sleep." (MW4)*

In contrast, midwives mentioned that they usually adhere to hospital policy by not offering painkillers to women who are giving birth. If they do offer them, they give priority to the women who are either primiparous or continually shouting:

*"It is our policy not to give the client any analgesic...We don't have to give an analgesic... unlike the private hospitals...We may give it to particular clients; we just give Pethidine - not to all clients, just to primiparas." (MW4)*

*"When she goes on shouting and it is loud, I feel obliged to give her Pethidine. It is the medication most easily available in the labour room that has the potential to kill the pain but sometimes it's not effective, and the pain comes back again." (MW1)*

The midwives reported that although there are limited resources for relieving labour pain and facilitating delivery, and the hospital policy regarding the administering of analgesics is restricted, they could use the resources available to help women. The midwives described how caring for high numbers of women in labour can be when few or no analgesics are available and how the hospital guidelines for offering pain relief being restrictive limits the ability they have to support the women at times of labour pain and offer them an adequate care. They talked about not being able to offer sufficient care to each of the women when the labour ward is crowded with birthing women. They cannot spend a long time supporting every single woman in pain or offer analgesia to every single woman when there is not enough of it to go round for all the women and when they are restricted from offering it to all of them. However, they said they do try their best to encourage the women to have faith in their actions and the potential help they can offer, the reason for this being that they do not have enough time to involve them in decisions related to pain relief when they, in their capacity as midwives, are not authorized to make on-the-spot decisions. They try to show kindness where possible, apologize when they hurt or offend the women and encroach upon their rights, and offer pain relief when they are allowed to do so in their capacity as midwives, but not necessarily at the time the women need it.

*"We hope that the client leaves us in a positive frame of mind and with positive memories. If I give her an injection, I try to do so nice and smoothly, and I apologize to her. I explain to her first that whatever I do in treating her is for her benefit ...That makes her relax and feel better. She feels satisfied and believes she is giving birth in a safe environment without complications. In the future, if and when she is due to give birth a second time, she will think of this hospital where she received the full level of care to enable her to have a labour that was not too painful." (MW1)*

*"Sometimes we feel helpless, particularly when the birthing room is full and we have many more clients admitted who are waiting for a vacant bed."(MW1)*

*"The number of clients we have does not normally count, but when we have a large number I worry that we cannot provide sufficient care for all. I try my best to provide them all with care, but in one or two cases, it is not enough. I want to show kindness and tenderness to all our clients equally." (MW2)*

*"She wants me to stay right by her side while she grips my hand firmly. I cannot stay beside her for that long and give emotional support. With or without support, she will give birth in the end. In addition, I cannot give the client an analgesic whenever she wants; how can I convince her that analgesics should not be given at random? The client thinks she can have analgesics anytime she wants, and many of them insist and beg to have it." (MW3)*

The midwives also said that they are willing to help women and relieve their labour pain. However, it would be almost

impossible to work with the women in the labour ward without having an adequate supply and various kinds of pain relief and without having a work environment that is equipped for them to deal with the women's labour pain. They therefore try to persuade the women not to leave the hospital by helping them feel reassured that they as midwives will support them to the best of their ability.

*"I try to convince her that this is the equipment we've got. We do not have more or better things to offer, and ultimately it is up to her to decide whether she leaves or stays...I cannot make her stay. Some clients leave after an hour, they are in extreme pain...I try to convince them to stay in the hospital and give them an analgesic. Some clients ask to leave after taking an analgesic! They are not satisfied with the service offered by the staff." (MW3)*

*"The client must not stay still in the supine position. She cannot guarantee to be in the one position she would prefer during labour. Also, not all the equipment is available, and that can have an adverse effect on the client."(MW3)*

*"Pethidine is the only available analgesic medication. If we had epidural, the client would not feel the pain, it is just an injection. As soon as the client arrives, she asks for the injection in the back." (MW1)*

*"The first obstacle ... is the load. Furthermore, what we require is not available. The hospital does not have many of the simple requirements which we see as essential, whereas in other hospitals they are secondary...Every client needs pain relief; we may give Perfalgan instead of Pethidine. The client's privacy, the environment she's in, the colours, these are important factors and can help the client feel better...I feel relaxed while working with the client, and she has more energy." (MW2)*

They talked about the shortage of midwives, inadequacy of midwifery staff on each shift, in ability to offer holistic care for the women. They said:

*"The only thing that makes me feels I don't offer sufficient help is when we have a full load. Sometimes the beds are all full; there is four of us plus one doctor. All the clients are critical cases, not all cases are stable in the birth room...When a client is shouting and screaming out loud, I want to give her Pethidine, but I cannot leave the client I am taking care of, as the one shouting and screaming has her foetus is in the normal position and the foetal heart rate is normal. I continue keeping an eye on my high-risk client and know I can reach the other one later on...I wish we had more staff." (MW1)*

*"If the number of midwives increases, we might be better off. Our great problem is overload with only a small number of midwives." (MW3)*

The midwives wished the hospital would provide them with resources for managing labour pain and allow them to use different types of pain relief methods other than Pethidine such as an epidural. According to the midwives, many women who come in

to give birth ask about epidural analgesia so they just feel a minimal amount of labour pain and can enjoy the labour. Although the women prefer an epidural, the midwives said that they would not offer all women epidural analgesia if it was available option for women and the anaesthetic should always be available in the labour ward.

*"We have not had enough staff or medical supplies ... If we could offer an epidural, the client would not feel the pain; it is just an injection. As soon as the client arrives, she asks for an injection in the back...The client feels relaxed after an epidural and may be able to enjoy every moment of the delivery because she feels no pain. The client feels annoyed when she has pain and feels everything is taking a long time, but the absence of pain means that she is not aware of the length of time." (MW1)*

*"Because it is a public hospital, one that is central and overloaded too, this means that if you want to give an epidural, the anaesthetist must be there in the labour room the entire time." (MW4)*

*"We don't offer epidural anaesthesia for labour; many clients ask for an epidural, but we can't give it to every client - it kills the client's pain." (MW5)*

One of the midwives said if midwives given the chance to make decisions about management of women's labour pain on the behalf of those women, the midwives would be more autonomous in their care of women and would be able to commit to their actions. Feeling autonomous would make the midwives feel that they are of value.

*"I can encounter difficulties with some doctors, because the doctor is the decision-maker .... I wish the midwife could make decisions ... I could make a decision to suit the client ... In England, for example, the midwife takes complete care of the client from start to finish. She can also use ultrasound to examine her, she can also take decisions; we do not have that here...But as a midwife, I do not get to decide what to do or say ... I feel I enjoy what I'm entitled to do when my duties go beyond normal delivery; I want to take decisions by myself...I hope the midwife can be given the authority to make decisions herself once she's acquired long experience."(MW2)*

**Main interpretation: Dominance of the with institution ideology despite the intentions to demonstrate the with women ideology**

The aforementioned themes were interpreted based on Hunter's model of the Interrelationships between practice context, occupational ideology and emotion work (2004) in order to gain a more in-depth understanding. The main interpretation made has been the dominance of the with institution ideology despite the midwives' intentions to demonstrate the with women ideology, which is explained by Hunter's model. Hunter investigated midwives' experiences and the management of emotion in their work. Her findings described a model of interrelationships between practice context, occupational ideology and emotion work. In the model, Hunter describes two main conflicting ideologies; the with institution and the with woman ideologies. The with institution ideology predominates

the hospital-based practice context, where the midwives describe the emotions they feel as being difficult. Whereas, the with woman ideology predominates the community-based practice context, where the midwives experiences their work in the community as being rewarding.

According to Hunter (2004), the hospital-based practice is characterized by the medicalized approach, the universal provision of equitable care, reduced autonomy, the interchangeability of the midwives, and the reduced significance of the midwife's relationship with the client and the increased sense of affiliation with colleagues and the organization. The practice within this context is dominated by the occupational ideology of with institution whereby the midwives are more attentive to the needs of the institution, the standardization of care, the reduction of risks and the efficacy of work than they are to the needs of the individual. The midwives who work in a hospital context experienced their work as being emotionally difficult and stressful, resulting in negative emotions such as frustration, anxiety and anger.

The main interpretation shows that, according to the aforementioned four themes, the with institution ideology is dominant in the midwives' collective attitude to labour pain. The midwives know about some aspects of the with woman ideology, but are mostly unable to put this ideology into practice. They said that although they must meet individual needs of women for labour pain management, this approach demands time. Instead, they primarily relied on their own strategies gained from their various experiences of managing women's pain in labour such as influencing the woman's way of thinking about labour pain. They explained that labour pain is part of the normal labour even though the experience and response to it can vary depending on the woman's knowledge of labour pain, tolerance of pain, parity, age, previous experience of labour pain and past beliefs – wrongly held according to the midwives – about labour pain. Little was reported by the midwives in terms of listening to and interacting with the women and meeting their individual needs during labour – a key aspect of the with woman ideology. The midwives have to follow certain criteria related to the hospital policy and guidelines such as the progress of labour, caring for many women at the same time and being dependent on doctors' orders in order to offer pain relief for women. Either there are only situations in which they do not necessarily adhere to hospital policy or they question doctor's orders regarding restricting the use of drugs to relieve a woman's labour pain. These two situations are when dealing with 'uncooperative' women and caring for primiparous. In the hospital context, the midwives consider that their presence with women in labour important factor in helping women effectively cope with labour pain. However, it is a struggle for them because of work overload to strike a balance between ensuring the right of the women to receive holistic care and appropriate pain relief interventions during labour and at the same time remaining committed to the hospital policies, routines and guidelines related to labour pain management. The midwives reported that not all the women are able to receive the same

kind of support, and the care they provide for women in labour is fragmented due to practical difficulties; staff shortages, work overload and hospital routines. Therefore, the midwives dominantly adopted the with institution ideology in their collective attitude towards labour pain the.

The with institution ideology at the hospital focuses on providing equal care for a large number of women in accordance with the hospital's policies and practices. The midwives were not able to meet the women's needs adequately in terms of offering pain relief in labour due to an overload of tasks and the lack of authority to apply their clinical knowledge on behalf of the women. Lack of resources did not help them to perform well or meet the women's expectations of enjoying labour with less labour pain. The issues that made them feel frustrated were the stress involved in addressing the women's labour pain and the feelings of guilt about being unable to utilize the resources that would benefit the reduction/relief of the women's pain during labour. The midwives explained that if certain institutional changes made they would be able to achieve the ideal of introducing flexibility and making the decision to offer analgesics when needed without having to wait for the doctor's orders. They mentioned changes such as those in hospital policy which would allow other pain relief methods such as Dormicum, Perfalgan and epidural to be used alongside the available resources (Pethidine and analgesics) in the labour room; giving the midwives relative training to support women in labour; and increasing the number of midwives on every shift. However, none of the midwives described the advantages of having available resources and a flexible policy in order to meet the woman's need for labour pain relief or to motivate the woman to cope with labour pain.

The midwives experienced their work as being emotionally rewarding and valuable when the success they had in their work acknowledged by their colleagues in the hospital rather than by the women in their care. At the same time, they felt less motivated to work based on the women's needs because the work environment was not conducive to putting into practice the ideal knowledge and skills. Meaning that, the midwives forced to perform the required tasks and utilize the hospital resources that they neither prefer nor value. Thus, it is reasonable to assume that the midwives adopted the with institution ideology in their collective attitude towards labour pain according to their experiences with women's pain in labour.

## Findings of the women's focus group - The women's expectations and perceptions of their midwives' attitude towards labour pain

### Themes

#### Theme 1: Caring calms the women and relieves labour pain

The women reported that the midwives showed a caring attitude when they understood their need to cope with labour pain. They felt calm when the midwives were present during periods of pain and showed a sense of purpose, and when they kept their promise to be available during times of need. The women provided various

examples of how they perceived their midwives as being caring. One of them reported that her midwife assured her of her presence during labour by constantly evaluating her progress and keeping her informed about her status during labour, which meant a lot to her. The Caring attitude described was mainly that perceived by the women during the first stage of labour.

> *"My midwife gave me some idea about my health status. She was constantly evaluating my situation to the extent that she was telling me about the results of internal examination, and in particular the dilatation of the cervix...at the beginning of the birth process and during the labour stage, I was satisfied with the midwife's treatment."*

Another woman described how her midwife had understood her need for pain relief. She had experienced severe labour pain during the first stage of labour and so the midwife gave her a painkiller. The woman reported that she felt that the midwife's intervention in the form of giving her a painkiller was helpful at a time of her having severe labour pain. She was therefore satisfied that the midwife understood her need for pain relief during the first stage of labour:

> *"At the beginning of birth process (the contractions stage), I suffered severe pain. The midwife then helped me by giving me a painkiller that relieved that pain...The first stage went well."*

Another woman said that she was surprised when the midwife kept her promise of staying close by during labour; she calmed her to the extent that she was giving birth on a bed without the presence of her midwife. The woman said that another midwife and the doctor had evaluated her progress at times when her own midwife was not available. Then her midwife had done an internal examination and reassured her about her progress. This led her to understanding that there was still some time to go before she would give birth, so she was surprised to find herself giving birth on the bed without the midwife being present. She was not satisfied with the birth experience overall, but the midwife's assurance that she would remain at hand made her feel calm for a while:

> *"The midwife asked me to lie on the bed so she could give me a nutrition solution mixed with artificial labour solution...After fifteen minutes, another midwife asked if she could evaluate my situation. She did an internal examination and told me that that my cervix had a dilatation of 4 cm....Then the doctor evaluated my situation and took some measures to speed up my birth. He treated me well ... Before I was due to give birth on a normal bed, the midwife had carried out an examination and told me that the dilatation was satisfactory... I realized that the delivery would take more time, so I was surprised that I then gave birth on the bed in the first stage room without the midwife being present."*

The women described how caring qualities can be a physical and psychological comfort to them during a painful labour. Although an understanding of the need for pain relief

can calm and satisfy the women, caring for them in a gentle and respectful way can mean even more to them. The women reported that when the midwives carried out their job by showing respect for their dignity, this helped the women feel more at ease and able to tolerate painful birth, and also come away from the experience with positive memories.

*"I was expecting that the treatment I would get from the midwife would be better than that I'd received before. I remember that when I'd had my last child at the same hospital the midwife had encouraged me to recite the Quran verses. She had also addressed me as "my daughter" and given me painkillers... What was more, I had expected this midwife to show more interest than that midwife had done the previous time."*

*"I expected the midwife would be courteous, show me respect, make me feel relaxed, calm me and reassure me ...."*

The women wanted the midwives to understand their labour pain and listen to their concerns based on a true willingness to help them. They also wished that the midwives could have shown a caring attitude throughout the birth process to enable them to enjoy a normal childbirth and cope with labour pain.

*"I wish she had told me what to do while giving birth and what would happen in the birth process from beginning to end. Also, I wish she had cared about me as much as she did about my baby."*

*"I wish the midwife hadn't left me alone from the beginning of the birth so that I hadn't felt afraid and could have coped with the pain. I wish she could have felt the pain, fear and tension I had."*

*"I wish she'd cared for me the way she did at the beginning of the birth."*

*"I wish she had understood what I needed and treated me with respect without shouting at me, and had been nicer than that."*

### Theme 2: Empowerment enables women to tolerate and cope with labour pain

Being encouraged to act and think in a way that helped them cope with labour pain was a boost to the women. According to them, some midwives encouraged them by making simple comments, informing the women about their progress in labour, and responding to the women's needs in a way that gave them strength and confidence. One woman reported that she felt she was able to give birth when her midwife made encouraging comments such as "soon finished", "so close" and "push hard":

"All I remember is that she kept saying to me during the birth (near the end) that it would soon be over and to push hard. By saying those things, I felt that I was able to give birth and cooperate with her."

Another woman spoke about how being informed about what was happening to her during labour made her more aware of how her labour was progressing. She said that her midwife reassured her by telling her the results of an internal examination.

Although the information provided by the midwife was simple, the woman trusted it and felt reassured and able to cope with labour pain because there was still some time to go before she could deliver her baby.

> *"Before I was due to give birth on a normal bed, the midwife had done an examination and told me that the dilatation was satisfactory...I realized that the baby's delivery was going to take more time."*

The women expected to greater encouragement at times of labour pain and during labour. They talked about their need for the midwives to share with them information about the progress of their labour and the actions they were taking on their behalf, to be at their side, and to support them. According to the women, this approach gave them the strength, confidence and ability to cope with the labour pain on their own. The comments made by the women were:

> *"She knew that I was a primipara, and I needed her to be present and to feel her support...I am a human being who feels pain and fear, and who needs to feel safe and confident."*

> *"I expected her to encourage me to overcome the pain or give me some relief from it, or at least help me in a way that made it easier to cope with it."*

> *"Because my labour progressed smoothly except for the last fifteen minutes during birth, it was so hard and nobody helped me ... I wanted my midwife to explain the situation to me and which actions she was taking"*

**Theme 3: The uncaring attitudes of midwives create negative emotions and fear on the part of the women**

The way in which the midwives care for the women from the time they admitted into hospital to the time they discharged with their babies speaks volumes about the midwives' capabilities. The women felt that the midwives did not pay attention to how they were reacting or feeling in relation to what the midwives did and/or said, and they also felt that having the presence of the midwives as part of their role of caring meant a lot. Instead of being empathetic, interested, tolerant, respectful and responsive in relation to women needing help with labour pain, the midwives displayed the opposite qualities. As a result, the women perceived the uncaring attitudes of their midwives as one that increased their fear of labour pain, and they were not satisfied with the care provided by their midwives during labour. One primiparous woman reported that the callous attitude displayed by her midwife made her negative emotions and feeling of fear more intense than the pain of labour itself:

> *"When I arrived to give birth, I was so worried and scared and also had such severe pain that when they admitted me to the maternity ward, I wanted to undergo a Caesarean operation rather than give birth naturally. That was because of the terrible distress I felt in giving birth, the pain of childbirth and the treatment I got from the midwife. The midwife left me by myself on several occasions during the final stage of labour and also after the birth. She did not help me much either before or during the birth. She claimed that*

*she pushed hard on my abdomen while I was giving birth so as to deliver my baby safely. In fact she caused me a lot of pain, shouted at me, and asked me to take deep breaths, but I didn't know how to do that. At that stage I would have loved not to have succeeded in giving birth naturally and instead to have been transferred to the operating theatre, because the pain resulting from the operation would have been easier to bear than the distressing and painful treatment I received from the midwife."*

Another woman felt that some of the midwives were too busy having a nice time with their colleagues when on duty and therefore generally provided less care to the women than they should have. They appeared to share a good rapport with their colleagues, but if that rapport does not translate into a concerted effort on their part to help the women feel comfortable and instead makes them feel they are neglected, the situation becomes highly intolerable.

*"No, the nursing provided was no good. The proof of that was that when my midwife set up the nutrition solution, it stopped after a while. I kept calling out to her to come and reset it, but she did not respond. She was laughing out loud with the rest of the midwives. When she did come to see to it, my labour became more difficult and I was in such agony."*

The women believed that the midwives did not tolerate any complaints about labour pain or even any call for help. They said that the midwives were not responsive to their needs and punished them when they asked for pain relief or any means of comfort. The women said that this punishment could be either taking longer to assess their progress of labour, taking longer to repair their perennial incision, repairing the incision without analgesia, ignoring the women's calls, leaving them to deliver the baby while alone on the bed, or leaving them in the birthing bed for a long time.

*"I was surprised that I gave birth on the bed in first stage room without the midwife being present. I kept calling out to her to help me, but she thought I was in pain, not actually giving birth. I felt that the midwife punished me for that – she stitched up the perineal incision using no anaesthetic. I suffered and cried a lot, but she said: 'I'm not giving you any anaesthetic for stitching up the incision, just take a deep breath'."*

*Another woman added that: "If I screamed because of the pain, the midwife would ignore me and really punish me."*

*Another said: "When she transferred me to the birth chair I felt I was dying because of the severe pain and fear. She was pressing so hard on my abdomen to deliver my baby. At that point, I wanted to die rather than give birth. Once I'd delivered my baby, I stayed there in the birthing bed for long time - nearly twenty minutes - and did not see anybody. There was a lot of blood on my body, I felt tired and was suffering from pain, but no one cared about me."*

*And yet another said: "The first stage went well, but when the baby was born, that midwife was slow in helping me to give birth on*

*time. She was also slow in coming to stitch up the incision after the birth (episiotomy). I kept calling for her over and over again, but she did not respond. I was so annoyed when I was just discarded in the birthing bed. I was tired and felt cold but nobody took any interest. I had severe pain in my abdomen and feet, but no one was aware of my pain and suffering."*

As a consequence, the women became uncertain as to whether it was their own fault for not being able to control their labour pain and discomfort. They might well interpret the uncaring attitude of the midwives as meaning that maybe others in their situation would have handled the situation better, or they might think that because they were unable to put up with their labour pain and discomfort the midwives became less tolerant in return:

*"When I asked her to raise up the head of the bed to put me in a sitting position, she gave an unkind and disrespectful reply saying, 'Thank Allah that you have a bed to lie down on. I'm not going to push the bed up'."*

Another woman said that she had left her fate in the hands of the midwife and had expected her to ease her labour pain, but when she asked her midwife for a drink of water, the midwife refused and the situation became a painful one:

*"I begged her to help me to give birth safely and easily, but she did not even hear my words. I asked her for some water because I was so very thirsty but she refused to do so. She only focused on the baby's heart rate. She did not care about my pain or needs during labour and didn't reassure me about the situation either. When she transferred me to the birthing chair, I felt I was going to die because of the severe pain and fear."*

Furthermore, the women were not satisfied with the midwives' attitudes towards labour pain. They said that they had expected them to display caring qualities such as being kind, supportive, calm, patient, helpful, encouraging and respectful. However, the qualities they had expected were not evident in their midwives' attitudes. The women also said that had the midwives displayed the qualities expected in their attitudes, the labour pain would have been tolerable.

*"I'm not satisfied with that level of care ... I expected the midwife to treat me better than that and to be more patient, particularly given that I was a primipara and did not know what to do or what to say while giving birth. I expected her to help me understand everything relating to my situation, not to ignore me; I expected her to be kind to me and to ease my pain and reassure me about the concerns I had."*

*"No, I was not satisfied ... I expected the midwife to cooperate with me, to be kind, to help me feel relaxed; I expected her to be quiet and show tolerance so as not to increase my pain. I expected her to advise me on how to relieve the pain at the right time, especially during labour. I expected her to be patient as there is no pain like that of childbirth. I expected to have a midwife who would stay with me from beginning to end and not just*

*now and again, or to receive care from more than one midwife at the same time. Unfortunately, my expectations were too high."*

*"I was definitely not satisfied and so annoyed by the care and treatment I got...I expected the midwife to make me feel better and help me as soon as she understood my needs and my situation with regard to the birth, and to ease the pain of delivery. I expected her to give me a painkiller, and actually she did do that. That said, she did not make me feel calmer because she asked me to take a deep breath, but I did not know how to do that."*

"No, the care I got from the midwife was not that good…I expected the midwife to help me let go of my fears and lend me a helping hand until I'd got through the stage of pain and fear, and to show me respect and be gentle. But nothing turned out the way I'd expected and she left me on my own."

**Theme 4: Making women feel discouraged about coping with labour pain may lead to feelings of worthlessness**

The women perceived the unreasonable actions and upsetting comments of the midwives as reasons for their feeling discouraged about coping with labour pain. The women reported that their midwives provided them with information that was either insufficient or not understood by them. The midwives did not allow the women to follow their natural instinct during labour. They implemented practices felt to be uncomfortable and unsafe such as pressing on the woman's abdomen during giving birth. They made upsetting comments and showed no tolerance when the women mentioned their labour pain. The women therefore felt they were worthless, helpless and had no control of the situation. They also believed that not expressing their labour pain and needs meant they spared the unnecessary pain that caused by their midwives:

*"I concluded that if I listened to everything she said and followed her instructions, I would be safe and she would treat me well. However, if I screamed because of the pain, she would neglect and really punish me."*

The women provided different examples of how the midwives' words and actions discouraged them from coping with labour pain. They reported that the midwives did not provide them with enough information about their condition or the condition of their unborn babies. The women also said they did not understand the information or instructions given to them in different situations. They felt that they needed to be provided with clear information in order to understand what was going on and what to do in order to cope with labour pain and feel confident about giving birth. One primipara described her fears about losing the baby and suffering from labour pain during the birth. She said that during the birth the midwife was pushing hard on her abdomen to save her baby's life and she caused her pain that felt worse than the labour pain itself. The woman described how she felt when the midwife informed her that her baby was not in a good condition. The women said, without telling her why her baby was not in a good condition, the

midwife asked her to take deep breath, told her how to take deep breaths and said to her that what only she had to do to save her baby's life. This caused the woman great suffering and the woman felt twice as scared about losing her baby.

> *"She claimed that she was pushing hard on my abdomen while I was giving birth so as to deliver my baby safely. In fact, she caused me a lot of pain, shouted at me, and asked me to take deep breaths, but I didn't know how to do that...I expected her to explain everything to me. For example, she said 'Your baby is not in a good way', but how and why that was so I did not know. When she told me this, I started suffering even more and became twice as scared that I might lose my baby."*

Another woman added her view, describing how the midwife's unfeeling words discouraged her from coping with labour pain and made her feel unworthy as a human being. This woman said when the midwife asked her to move to the birthing room, she also heard her say that she would not attend the birth if the woman did not follow her instructions to move to the birthing bed. The midwife also said in a loud voice: "It's not a problem, it's easy, let her give birth on the bed in the first stage room." The woman said that she did not expect to hear the midwife saying this; instead, she expected the midwife to treat her in a respectful and helpful manner.

> *"I heard my midwife saying, 'I do not want to supervise her birth. Let her give birth on the bed in the first stage room. It's easy! Let the baby's head come out. It's not a problem.' I felt she didn't treat me as a human being. She didn't care about other people's pain. She was so impatient. She abandoned me because she did not accept that I was feeling pain or expressing that pain in any way ... Unfortunately this midwife did not treat me the way the other midwife had done the previous time. I had expected her to treat me kindly and respectfully and to help me to cope with and accept the pain of giving birth, or to give me a pain killer to relieve the pain. Moreover, I expected her to show more interest than the midwife I'd had the previous time had done".*

Another woman explained how she forgot how she should push during labour because of her fears about the midwife's reaction and her perception that the birth environment was "messy, annoying and a strain on the nerves." This woman concluded that she would have to listen to the midwife's instructions in order to have a safe delivery and be treated with respect. She said that she felt the urge to push during labour, but that the midwife would not allow her to do so. At this stage, the woman felt too scared to push because she was under the impression that if she did not follow her midwife's instructions, she would be punished. This increased her pain and fear during labour. She also felt she could not live up to her midwife's instructions and was less confident about being able to give normal birth:

> *"I concluded that if I listened to all that she said and followed her instructions, I would be safe and she would treat me well. I also found the atmosphere in the birthing room to be messy, annoying and a strain on the*

*nerves. That applied to not only the women in there, but also the midwives. I suffered a lot while giving birth....Although that was not the first time I'd given birth, I experienced a lot of fear and pain about what would happen to me and how severe the pain of labour would be...I was giving birth and felt so scared. I did not help myself during the birth. I forgot how to push because of my fear and pain."*

This prompted an immediate reaction from two other women who shared this woman's perception and had felt the same suffering and fear:

*"Yes, absolutely, what she says is true. I now feel that that fear has had an effect on my heart."*

*"It's true. I stop and think now and then and understand better how my mother must have suffered when I was born."*

The unclear instructions given by the midwives discouraged the women and left them in doubt about what they had to do in order to cope with labour pain. One woman said that she did not understand what she had to do when she felt labour pain because the midwife had shouted at her when, in order to alleviate it, she had placed her hand on her abdomen. She said that the midwife had prevented her from moving her hand there in order to keep the nutrition solution flowing. The woman was in agony and started wondering what she could do if she was not allowed to do that in order to cope with labour pain, and also wondered if her expressing labour pain was deterring the midwife from carrying out her work:

*"Unconsciously I placed my hand with the solution tube in it on my abdomen; she shouted at me and said, 'You are not allowed to put your hand on your abdomen because you need to keep the solution flowing.' What could I do? I was in agony, and when I put my hand on my abdomen, I did so because of the pain and not to deter her from her work."*

Another woman remembered what she considered her midwife's unreasonable action of pressing on her abdomen during labour due to the fear of losing the baby. The woman said that what caused her pain and fear was not the action of pressing on the abdomen alone but was also the midwife shouting at her, telling her that the baby was not in a good condition yet without clarifying why, and preventing her from pushing during labour. Consequently, the woman felt a lot of pain and fear and was less able to stay in control herself during labour to the extent that she wanted to die rather than give normal birth. She also said that if her midwife had treated her differently, i.e., with courage and respect, she would have tolerated labour pain and been more in control during labour.

*"I still remember in particular the pain when she pressed on my abdomen. At that point I felt that my baby and I were so close to death. The midwife was impatient and shouted at me. I wanted her to be patient and not to shout at me, and she made me feel so afraid. I remember when she told me that my baby was not in a good way. (I felt the nine months would have all been wasted, and I*

*was panicking about the state of my baby.) If she had dealt with me in other way, given me confidence in myself and encouraged me, I would have borne anything and addressed all my fears and pain ... I felt I was dying because of the severe pain and fear...I felt that I wanted to push hard when I was delivering the baby, but she asked me not to push. That made me feel I had no control of my own over the birth."*

### Main Interpretation: A predominantly uncaring and discouraging approach even where a caring attitude and feeling of empowerment had been reported during the first stage of labour

In order to gain an overall and meaningful understanding of the women's expectations and perceptions of their midwives' collective attitude towards labour pain, these findings interpreted based on caring and uncaring encounters in nursing and health care theory (Halldorsdottir, 1996). According to Halldorsdottir (1996), a caring encounter with a health professional involves perceived competence, caring and connection. In a caring encounter, the notion of a 'bridge' represents the open communication, connectedness, mutual trust and respect shown between the health professional and the client. The caring encounter results in a positive change that constitutes 'empowerment', an increased sense of well-being and better health. On the other hand, the uncaring encounter with a health professional involves perceived incompetence, indifference, a lack of trust and disconnection. The notion of a 'wall' symbolises communication that is either negative or non-existent, a sense of detachment, and the lack of a caring connection between the health professional and client in an encounter perceived as uncaring. An encounter perceived as uncaring produces negative results in the form of a diminished sense of wellbeing and health and feelings of 'discouragement'.

The perception and expectation of the women about their midwives' collective attitude towards labour pain were described and interpreted in light of Halldorsdottir's theory. The findings showed that an uncaring attitude and discouragement were predominant even where a caring attitude and feeling of empowerment were reported during the first stage of labour. The women said that there were times when the midwives provided them with information, supported them, calmed them, and kept their promise to stay at hand, listened to them and responded to their concerns, and met their need for pain relief. They reported that they felt calm, satisfied with the midwives' attitude and able to cope with labour pain, and they recalled their positive experiences of previous occasions when they had given birth. The women felt they were able to cope with their labour pain when the midwives used words that inspired and motivated them. Therefore, when the midwives showed they cared about a woman's individualised need for pain relief, the women perceived the midwives' attitudes towards labour pain as caring and they felt empowered. This was the result of the midwife's intention to establish or maintain a positive relationship with the woman, i.e., this was 'the bridge'. However, the women expected the midwives to treat them gently, respect them, show patience, show a caring

attitude, and be helpful and responsive, but the midwives did not meet these expectations. The main interpretation showed that the midwives' collective attitude towards labour pain was predominantly an uncaring. According to the women, their midwives showed a caring collective attitude only by carrying out their hospital tasks. Examples given by the focus group about what the midwives had done to address the women's labour pain; assessing the women's general status, the progress of their labour, vital signs, foetal heart rate and the intensity of labour pain; instructing the women to take deep breaths; administering intravenous fluid mixed with Syntocinon; and following up care where that was possible. The midwives only focussed on performing their hospital tasks and communicating with the women in a way that had a negative effect on the women's emotions and experience. In such a situation, the relationship between the midwife and the woman was superficial and not aimed at meeting the individualised needs of the women; i.e. this represented 'the wall'. The women therefore described their midwives' collective attitude towards pain as uncaring and they felt discouraged, helpless, stressed, subjected to suffering and out of control.

Halldorsdottir's theory (1996) identifies three basic components that form the uncaring encounter with a health professional. These are the lack of professional caring, the perception of a wall and the perceived effect of professional caring. This helps in understanding what the women had been expecting from their midwives and how they perceived their midwives' collective attitude towards labour pain.

The first component of the uncaring encounter is the lack of professional caring. This component involves perceiving the health professional as uncaring, incompetent, inconsiderate, insensitive, disrespectful and disinterested in the client both as an individual and as a client, unwilling or unable to connect with the client, resulting in the perception of a 'wall'. The women stated that the midwives demonstrated their incompetence by not providing them with enough clear information about their progress in labour, about how to cope with labour pain, about what to do when they felt pain, and about the condition of their unborn baby. They reported that the midwives were unkind and showed intolerance when the women expressed their labour pain. The women felt that the midwives were not attentive to their individualized needs for pain relief, that they were only present now and again, and that they ignored them and appeared to be unfeeling and disrespectful. The women therefore perceived the midwives to be inconsiderate, insensitive and disrespectful in their collective attitude towards labour pain.

The perception of 'The wall' is the second component of an uncaring encounter. 'The wall' means the lack of a caring connection, detachment and negative or no communication. The health care professional is perceived by the client as inattentive and cold, i.e., as working in a robot-like manner, inhuman, carrying out her work contrary to the client's wishes, and impatient. The women stated that the midwives worked as though they were robots who ignored their labour pain and fears about the process of

childbirth, and they said that the midwives did not respect their feelings or their needs for pain relief. They felt that the midwives did not tolerate any form or expression of pain during labour and therefore ignored their calls for help and support during the early stages. The women complained of spending the early stages of labour alone or with only the intermittent presence of the midwives. They felt that they needed to have the midwife with them most of the time and not to have her leave them on frequent occasions to supervise other women. Some women excused the midwives on the basis that they were busy, but in order to feel safe, they did at least want to know what she would be doing and for how long before she left them. The women felt that if they called their midwives during the time they were left on their own, the midwives would assume that they needed help to relieve the labour pain. They further believed that the midwives would punish them in return, by either shouting at them, refusing to meet their need to change position on their bed, refusing to offer painkillers, refusing to use an anaesthetic to repair the perennial incision, delaying their seeing to the repair, or restricting the amount of water the women could drink. What the women have described above is considered a form of negative communication and detachment.

The third component of an uncaring encounter is the perceived effect of the lack of professional caring. Halldorsdottir (1996) stated that a lack of professional caring leads to a feeling of discouragement and a negative sense of wellbeing and health. Patients (as Halldorsdottir described) report feelings of rejection, uneasiness, insecurity, distress, having no control, less confidence and/or a sense of failure. In this research, the women reported that the midwives did not tolerate any form or expression of labour pain and therefore ignored their calls for help and support during the early stages. The women for their part felt that they were allowed only to follow the midwife's instructions to manage labour pain and that they were not allowed to follow their own natural instincts during labour. For this reason, the women said that they lost the confidence to give birth normally and felt discouraged.

# 7. The interpretation of combined quantitative and qualitative findings

The previous chapters contributed to understanding of how the four variables (midwives' midwives' knowledge and their attitudes towards labour pain and women's expectations and their perceptions of their midwives' attitudes towards labour pain) were measured using mixed methods, how both the quantitative and the qualitative data were analysed and how the quantitative and the qualitative findings independently presented. This chapter presents the final stage of this research based on Creswell & Clark (2011). This stage involves combining and comparing the findings of the SQM, the SQW, the midwives' interviews and the women's focus group. In all, the findings that displays convergence, relate to each other and produce complete understanding of the midwives' collective attitude towards labour brought together during interpretation and summarized. The resulting finding of this stage called an overall interpretation that indicates to what extent and in what way the combined findings converge/relate or divert in response to the research's overall purpose; the main mixed methods research finding. Creswell & Clark (2011) claimed that confirmation and validation of the convergent parallel mixed methods research findings could not occur until the convergent findings are combined and interpreted.

## Midwives' collective attitude towards labour pain - Midwives perspective

A convergent findings were found when the SQM items (part A knowledge: items 1, 3, 7, 9, 13; part B attitude: items 3, 7, 8, 10) were compared with the themes and the main interpretation of the midwives interviews. Combining the convergent findings explored the midwives' collective attitude towards labour pain; neutral collective attitude towards labour pain. A summary and interpretation based on the research findings and Creswell & Clark's approach follows.

The SQM findings indicated that the midwives had a high knowledge of attitude towards labour pain (overall mean = 3.82). The top items were; "I let women understand that pain is part of the process in normal birth" (mean = 4.20), "To work with pain during normal delivery, I give full support to women to help them cope with pain" (mean = 4.15). Followed by "Pain plays an important role in the physiology of normal birth" (mean=4.12), "I can recognize complications related to coping with pain by the way women express their pain" (4.08). The midwives had average knowledge of the item "I strictly abide with hospital routine care for women in pain" (mean= 2.63). The findings of the midwives' interviews revealed the midwives' collective attitude of knowing about the normality of labour

pain i.e. labour pain is a normal part of the childbirth process (Midwives: Theme 1). They also know that the experience of labour pain is different for every woman. For some women, it is severe labour pain and intolerable; for some others, it is suffering; and for still others, it is tolerable. They described that labour pain is the pain resulting from uterine contractions and leading to cervical dilatation, which enhances the progress of labour. They recognize that labour pain is not only physical, but also emotional. They defined the intense emotional pain during labour as "suffering"(Midwives: Theme 1). The manner in which women express their labour pain gives midwives some indications of the amount of labour pain the women are experiencing. They recognize how necessary it is to support suffering women and women who are not able to endure labour pain in order to prevent birth-related complications. They also talked about how important it is for women in labour to understand that labour pain is normal and helpful in achieving progress during labour and having a safe birth.

The SQM indicated that the midwives had a neutral collective attitude towards labour pain (overall mean=3.41, SD=0.51). The midwives had positive attitudes on the items "Shouting and yelling by women in pain cannot be disturbing to other clients" (mean=4.40). "Women should realize that pain plays an important role in the physiology of normal birth" (mean=4.03), "must provide the essential care and support to give comfort to women in labour pain, even if it goes beyond routine practice" (mean=3.83). However, they had a neutral attitude towards the item "No woman should suffer the pain of labour; hence, they should be offered pain relief" (mean=3.22). The SQM findings do not explore what was the midwives' neutral collective attitude, though the midwives had high knowledge of the attitude model towards labour pain i.e. Leap and Anderson's Working with Pain. In other words, the midwives had an inner attitude of highly knowing about the working with pain as well as the Exemplary Model of Midwifery Practice but their collective attitude towards labour was neutral. As it was mentioned earlier in the thesis, neutral means neither positive nor negative but an attitude that does not belong to the positive or negative attitudes. Hence, the benefits of combining the SQM with the interviews findings were immense in exploring the neutral collective attitude of the midwives. The qualitative findings revealed the midwives' neutral collective attitude towards labour pain with reference to the main interpretation of the aforementioned four themes. It was fund that the midwives adopted Hunter's with institution ideology despite the intentions to adopt Hunter's with women ideology in their collective attitude to labour pain (Midwives: Main Interpretation). The midwives believe in the normality of labour pain and that every woman should understand that labour pain is important in order to achieve progress in labour and facilitate safe birth (Midwives: Theme2). They also believe that supporting women during labour helps women cope well with labour pain or tolerate labour pain. The midwives believe that shouting and screaming are expressions of suffering and intense labour pain (Midwives: Theme 2). At the same time, they believe that

shouting and screaming consume women's energy and affect their physical power to give birth, but this behaviour is acceptable and does not disturb the midwives or other women in their care (Midwives: Theme3). Some midwives believe that offering pain relief could be the best intervention to help suffering women feel at ease and relaxed during labour. For other midwives, psychological support and teamwork relieve women's suffering and facilitate their work with uncooperative women during labour (Midwives: Theme2; 3). Though the midwives know about handling labour pain (Midwives: Theme 1) and that labour pain requires individualized care (Midwives: Theme 2) as well as a strategy to work on women's thinking about labour pain (Midwives: Theme 3), they spoke about not being able to perform to the standards of the ideal knowledge (Midwives: Theme 4). Consequently, the midwives had a neutral collective attitude towards labour pain; the dominance of the with institution ideology based on the midwives' perspective.

## The midwives' collective attitude towards labour pain – Women's perspective

A convergent findings were found when the SQW items (part expectations: items 1 to 10; perceptions: items 1 to 5) were compared with the themes and the main interpretation of the women' focus group. Combining the convergent findings explored the midwives' collective attitude towards labour pain; neutral collective attitude towards labour pain. A summary and interpretation based on the research findings and Creswell & Clark's approach follows.

The SQW showed that the women had a very high collective expectation of their midwives' collective attitude towards labour pain (M=4.52). They very highly expected their midwives to 'Follow up when it comes to care' (M=4.60), 'Utilize a wide range of resources to assist the woman' (M=4.59), 'Assist women in pain to gain confidence' (M=4.58), 'Provide encouragement that we can cope with pain' (M=4.58), 'Maintain ssupportive presence in labour' (M=4.57), 'Timely in clinical action' (M=4.52) and 'Provide continuity of care' (M=4.52). Meanwhile, the women had high expectations of their midwives attitudes towards labour pain on three other items: 'Listen carefully and respond appropriately to our needs' (M=4.44), 'Provide adequate time to meet our needs' (M=4.41) and 'Provide a thorough and on-going assessment' (M=4.4). The findings of the focus group showed that empowerment, support and continuity of care, the right timing of actions, understanding, and responsiveness to women's needs were relevant expectations for the women (Women: Theme 1; 2; 3; 4). Other expectations concerning proper assessment, provision of time to meet women's needs and follow-up care were also relevant to capture the midwives' attitude to labour pain. Although the women had a very high expectation of their midwives' collective attitude towards labour pain, the midwives did not meet many of the women's expectations (Women: Theme 3). The women expected encouragement and support from midwives in order to cope with labour pain (Women: Theme 1; Theme 4). Instead, the midwives alleviated the women's labour pain by administering

painkillers (Women: Theme1) and discouraged women from coping with labour pain by implementing unsafe and uncomfortable practices, using words likely to cause stress, being intolerant of women's expressions of labour pain, providing unclear information for women and not allowing women to follow their inner instinct (Women: Theme 4). The women asserted that the midwives should act at the right times of need and respond to their needs to make them feel less labour pain and fear and be satisfied (Women: Theme 3). From the women's perspective, the belief that no woman has to suffer from labour pain is not enough to meet the women's expectation and improve their perception of their midwives collective attitude towards labour pain. In the SQW, the women had a neutral perception of their midwives' collective attitude towards labour pain (Mean=3.43). The item 'My midwife was very patient and caring' was the top item of importance scored by women (M=3.47, SD= 1.194). This item was followed by 'I am completely satisfied with the service given to me by my midwife' (M= 3.45, SD= 1.205), 'I liked the way my midwife treated me; I hope that in my next delivery (if ever) she will still be the one to attend to me' (M= 3.44, SD= 1.248) and 'I owe it to my midwife that I got through with my labour pain' (M= 3.43, SD= 1.149). An item with a low mean score was 'My needs were perfectly addressed by my midwife' (M=3.36, SD=1.185). In the focus group, the women perceived the midwives' attitude as discouraging, and they felt worthless and powerless at the time of giving birth (Women: Theme 4). The midwives did not encourage and support women during times of pain, which aggravated the women's sense of pain and fear of labour, and made women set high expectations of their midwives. It is possible that, if women perceive midwives as unable to meet their needs for coping with labour pain, the women can become agitated and more demanding of the midwives (Women: Theme 4). Some women described how they empowered felt when midwives encouraged them to cope with labour pain (Women: Theme 2). They felt encouraged when midwives used encouraging phrases, informed them about their progress in labour, and responded to their needs for pain relief. Therefore, they felt a sense of ability and confidence to cope with labour pain and give birth. The midwives were perceived as caring in their attitudes when they understood and met women's needs to cope with labour pain, and so they were not expecting more encouragement from midwives (Women: Theme 1). However, the women reported that the midwives were ignorant, intolerant, disrespectful, and would punish them when midwives delayed in acting at times of need. The women thought that the reason for delayed actions and irresponsiveness to their needs by midwives was the women's impatience and/or expressions of labour pain. The focus group findings indicated the dominance of Halldorsdottir's uncaring attitude despite caring attitude in midwives' collective attitude towards labour pain (Women: Main interpretation). Uncaring attitude involved midwives that were intolerant, impatient and irresponsive to the women's expressions of labour pain, possibly due to a noisy birth environment and work overload (Women: Main

interpretation; Theme 3). Accordingly, the midwives had a neutral collective attitude towards labour pain; the dominance of the uncaring attitude based on the women's perspective.

### Overall interpretation - Main finding

The findings of the research showed that the midwives' collective attitude towards labour pain can be explored by measuring, analysing, combining and interpreting four variables; midwives' knowledge and their attitudes towards labour pain and women's expectations and their perceptions of their midwives' attitudes towards labour pain. Second, we used the correlation analysis to test the four hypotheses concerning the relationships of the four variables to the midwives' collective attitude towards labour pain (chapter five). Hypotheses findings provided evidence of the significance and the moderate (direct) positive (sustainable) relationship between SQM and SQW ($r = 0.53$, $p < 0.001$). The research revealed the midwives' neutral collective attitude towards labour (overall mean=3.41, SD=0.51); the dominance of the with institution ideology and the uncaring attitude as an overall interpretation (main finding) of this mixed methods research.

# 8. Discussion

Our research considered the first to explore the phenomena of collective attitude towards labour pain among midwives in Jordan. Our findings indicated that the midwives had neutral collective attitude towards labour (overall mean=3.41, SD=0.51); the dominance of the with institution ideology and the uncaring attitude. We were only able to find any study with similar findings. Six studies (Alzyoud et al. 2018; Hatamleh, Shaban & Homer 2013; Hatamleh et al. 2012; Khresheh & Barclay 2010; Oweis 2009; Oweis & Abushaikha 2004) reported labour pain; childbirth process; neglect during childbirth; family support during labour; quality of maternal services as experienced by women but not reporting the midwives' collective attitude towards labour pain. In comparison our qualitative findings are consistent with a qualitative study conducted by Hatamleh et al. (2013) (n=460). Hatamleh et al. (2013) identified that a number of Jordanian women who were included in their study had lacked support from midwives and midwives' presence (75%), lacked encouragement during labour (22%) and had been exposed to dehumanized care by health care providers (31%); impoliteness and disrespect. The reported findings about dehumanized care were not reported in direct relation to the midwives but to health care providers in general. The reported themes were related to the concept of neglect and verbal abuse but not specifically the midwives' collective attitude towards labour pain. Alzyoud et al. (2018) (n=390) in their cross-sectional study also reported high prevalence of exposure to neglect (32.2%) and verbal abuse (37.7%) during childbirth among child birthing women in Jordan. Half of the women participated in their study delivered by a nurse midwife, 20.5% by an obstetrician and 28.2% by both. Our qualitative findings were similar to Alzyoud et al. 2018 reported findings related to the women' negative experiences of the childbirth process. They reported that the women were not informed of what was happening to them (35.7%), answered in an angry way when they asked questions while in labour (27.8%), not received any type of pain relief during stitching (27.8%), and not assisted by health care providers during or after giving birth (21.2%). Their findings were about neglect and abuse but not about the midwives' collective attitude towards labour pain. What was missing in their study was the perspective of health care providers including midwives, nurse midwives, and obstetricians. Women's reports of their midwives dehumanized and undignified care are consistent with Hatamleh et al. 2012 who found that many women in their study reported that they were maltreated by health professionals, treated as

machines and were restricted to mobilize, eat and drink during labour. However, the reported findings were not directly focused on midwives and their attitude towards labour but on birth memories of childbirth experience. Their study was exploratory descriptive, focus on 160 primipara and missing the perspective of health care professionals.

In the other hand, the women in this research had very high expectations of their midwives' attitudes towards labour pain. The literature does not present findings concerning women's expectations of their midwives attitudes towards labour pain. The findings of studies done in Jordan described the women' expectations of their childbirth experience or reported the women's expectations of labour in terms of family support (Khresheh & Barclay 2010; Oweis & Abushaikha, 2004). Findings of a qualitative study by Khresheh & Barclay (2010) revealed women's negative expectations of labour and lack of support by the healthcare providers in the labour room. The 25 women in the sample were interviewed 6 week after delivery; they were young primipara, educated and had normal vaginal delivery. The themes emerged in their study concerned the lived experiences of the Jordanian women who were given family support during labour but they were not related to the women's expectations of their midwives' attitudes towards labour pain. Similar results were found in other nursing research in Jordan (Oweis & Abushaikha 2004) indicated that the majority of primigravida expected negative childbirth experience and inadequate midwifery support. However, their study used two valid and reliable questionnaires developed for the purpose of the study to collect data from a convenience sample of 77 primigravida: the Expectations of Childbirth Experience (ECE) questionnaire and the Expectations of Nursing Support During Labour and Birth (ENSDLB) questionnaire. Still the questionnaires used in their study need validation with a larger sample. Khresheh & Barclay 2010 and Oweis & Abushaikha 2004 studied expectations of primigravida and primiparas but not the expectation of multiparas. The sample size, sampling technique, qualitative and descriptive research designs their studies limits the generalizability of the results. However, our research included both primiparas and multiparas women. As aforementioned in the thesis, the women responded immediately after giving birth (within 24 hours) to valid SQM and participated in focus groups on expectations of their midwives' collective attitude towards labour pain. Thus, the overall expectation of women represents women's expectation based on previous and current experiences. It may sound questionable how one can ask about women's expectations after childbirth but not before giving birth. Hubbard and Purcell 2001 outlines that expectations is framed by the beliefs individuals hold about what will happen as a result of actual experience and they change as individuals modify them based upon their perceptions, the result of communications or any other triggering factor. In terms of how expectations defined and framed, I would argue that expectations occur because of experience and therefore we should draw upon expectations of child-birthing women after giving birth but not before giving birth.

Still, one can assume that new expectations of midwives' collective attitude towards labour pain emerge when women feel fear of painful childbirth. Thinking about these expectations causes a shift in women's awareness from the belief in ordinary expectations to new ones. The new expectations reported in this research are simple, and they are devoid of complications, as explained in this section in terms of what the women noted. These consist of new ideas such as – according to the women – 'be nicer', 'do not shout at me', 'be patient', 'be present with me and support me', 'did not leave me alone', 'feel the pain, fear and tension I had', 'encourage me', 'assure me' and 'respect me'. After that, women reinforce the new expectations with examples and experiences that prove that these expectations are real. Martin, Charlesworth and Henderson (2010) summarized that our daily expectations are formed and guided by others, stating that:

> *'We all have expectations of what is necessary for a reasonable life, including good health and social well-being. Expectations arise from companions with our families, friends and colleagues, from previous experience, from what we are used to, and from information about service and treatment (p. 106)'.*

When a woman expresses a specific expectation of a midwife who has cared for her, this indicates that the woman became aware of her needs. It also means that the woman started to see midwifery services in realistic way. Women in this research reported that midwives did not meet their expectations related to pain management in labour. They expressed that they felt disappointed, frustrated and helpless. In light of this relationship conflict, this finding necessitates clarification of the roles of midwives and women. According to Fraser and Cooper (2009), it is known that the relationship between the midwife and woman is based on a mutual set of expectations. They described the midwife-woman relationship stating that:

> *'Relationships may become unbalanced, and in these situations emotion work is needed by the midwife. For example, a woman may be hostile to the midwife's advice, or alternatively, she may expect more in terms of personal friendship than the midwife feels it is appropriate or feasible to offer (p. 14)'.*

Invariably, a woman approaches labour with expectations about how both she and her midwife should think, act and behave. For instance, women expect their midwife to be helpful, humble, trustworthy, skilful and responsive to her needs. A woman expects that the midwife will not try to harm her or hurt her intentionally. From my perspective, the more a woman is aware of her expectations, the more power she will have in her birth experience. Any violation of women's expectations can be a direct source of neglect, frustration, sadness, depression, powerlessness and guilt. At the same time, this will help the woman to learn how to see her midwife's attitude towards labour pain in a different way and to adopt self-regulated strategies to cope with labour pain during labour next time.

The women in our research had neutral

perception of their midwives attitudes towards labour pain and reported the dominance of uncaring attitude. There is no prior findings concerned the women's perception of their midwives attitude towards labour pain. However, the women in our research perceived painful labour than they expected, inability to cope with labour pain, powerlessness and perceived that they had negative experience of labour pain through some women reported positive experience of labour pain, dissatisfaction with their midwives' care and attitude though some women reported satisfaction and caring attitude of midwives. The findings are consistent with the findings of Oweis (2009) (n=177) who found that the women in her study perceived painful labour than they expected and they had an intense childbirth experience. The 15.8% of the women in her study indicated that they were not satisfied with the overall childbirth experience, and 12.4% of the women were not able to cope at all. Oweis study used descriptive cross-sectional design and non-random sampling. Her findings were limited to the unemployed women, primiparas and multiparas with both normal and high-risk pregnancy history. Additionally, Oweis findings were focused on the women's perceptions of different aspects of labour in Jordan (labour pain was an included aspect) but not on women's perception of their midwives attitudes and the study were conducted in primary health centres in Irbid but not in hospital setting. It is clear that the findings of the aforementioned studies from Jordan were not about the midwives' collective attitude towards labour pain. The studies concerned women' overall experience, perceptions and expectations of childbirth in Jordan and they lacked the perspective of health care providers; mainly the midwives. Moreover, the findings of the aforementioned studies cannot be generalised because studies were either small, samples were not randomly selected, data were collected either during pregnancy, months after delivery but not immediately after giving birth, limiting the inclusion criteria e.g. including primiparas or excluding multiparas, qualitative, descriptive or context/setting based in nature or they possess methodological/research design issues.

Our research showed moderate positive significant relationship between the midwives' knowledge of attitude models of labour pain; Working with Pain and the Exemplary Model of Midwifery Practice (SQM) and the women's perception of their midwives' collective attitude towards labour pain (SQW). The more the midwives had high knowledge of attitude models of labour pain the more the women perceived their midwives' collective attitude as positive. In contract, the more the midwives had low level of knowledge of attitude models of labour pain the more the women perceived their midwives' collective attitude as negative. Our findings indicated a moderate positive correlation but not a strong positive correlation. However, this is the first research to report such findings in terms of correlation and magnitude. These findings could indicate the importance of midwives' collective attitude towards labour. The midwives' knowledge of attitude models of labour pain, the midwives' individual attitude towards labour are important in relation to women's expectations and

perceptions of their midwives' attitudes. The midwives' collective attitude towards labour pain tend to occur positive when midwives have high knowledge of the models of attitude towards labour pain and have positive individual attitude towards labour pain so women's high expectations met and perceived the midwife attitude as positive. These finding also could demonstrate the need for the Jordanian healthcare system to evaluate how midwifery education and training and how managing midwives' collective attitude are currently being carried out in the system.

The research findings showed that although the midwives were highly educated and often provided advanced health care services in a well-equipped hospital with other skilled health care providers. The majority of women were dissatisfied with their midwives' attitudes and care concerning women's labour pain and they reported uncaring attitude. This could be assumed to the fact that knowledge affects the quality of care and ultimately pain relief and satisfaction with care as Ojerinde, Onibokun and Akpa (2016) found that there is a strong relationship between knowledge and nurses / midwives' level of education, and a moderate relationship between nurses /midwives' practice and their knowledge. Halldorsdottir 1996 suggested that health care professionals including midwives must possess knowledge of caring attitude and demonstrate caring attitude in health care settings, if quality of care to be enhanced.

As mentioned earlier (chapter one), the direct entry midwives in Jordan have studied for four years and practiced during their studies as midwives in governmental teaching hospitals. As a part of the their theoretical education, midwives educational courses focus on the normality of labour pain, models of attitude towards labour pain care, labour pain management approaches, and care aspects of child birthing women. However, they struggled to practice the ideal and theoretical knowledge due to power struggle, lack of resources, shortage of midwives, work overload and burn out, institutional and social demands; an issued that contributed negatively to the midwives' collective attitude towards labour pain as shown in this research. In contrast, countries such as Sweden have different academic program for midwives; nurse midwifery program. In this academic program, Swedish midwives work as nurses for two years before going through midwifery specialization. They are theoretically prepared on aspects of pathological pain before studying normality of labour pain. This requires the Swedish midwives to change their knowledge and attitude from handling pathological pain to handling labour pain as normal. This matter provided a challenge among Swedish midwives on how to handle labour pain as normal and how to shift their knowledge and attitude towards trusting the physiology of labour pain (Gleisner 2013). The reason for the contrast of Jordanian and Swedish midwives is to compare and possibly understand the impact of midwifery education on the midwives' collective attitude towards labour pain. For midwives in Jordan, it is notable that they struggle to marry theory into practice and practice what they have learned. From my academic experience, midwives' professional status and

education contribute to the midwives' clinical performance and care they provide for women. Furthermore, the conflict between academics on best midwifery academic program is an important issue in Jordan. Some academics claim that the outcomes of nurse midwifery academic programs are better than the outcomes of direct entry midwifery programs. Some academics agree that direct entry midwives are not allowed to persuade their education in Jordan, direct entry midwives should only have 3 years college diploma, and there should not be available midwifery academic programs for them at the university level. As mentioned earlier in the thesis, there is only one academic program available at university level to prepare direct entry midwives for health care market. Obstetricians view direct entry midwifery as a competitive profession compared to nurse midwifery. Some others consider direct entry midwifery as backward, unnecessary, or not unique, though they trust direct entry midwives to offer care for child birthing women. This makes it very challenging for direct entry midwives to value their education and work, persuade advanced education in Jordan, perform and function to the ideal standards and they may, therefore, offer health care services that are not as good as those expected and perceived by child birthing women. Therefore, understanding the direct entry midwives' attitude in general and collective attitude towards labour pain is of great importance. Future research compares the collective attitude of direct entry midwives to the collective attitude of nurse midwives towards labour pain is suggested. In addition, further research is warranted to examine the midwives' attitude towards labour pain from an international perspective (Floyd et al. 2014).

The midwives in our research adopted the with institution ideology in their collective attitude towards labour pain despite their intention to adopt the with women ideology. This ideology restricted them from demonstrating the aspects of intrapartum support including emotional, informational, and physical and advocacy (Hodnett et al. 2012). The possible explanation is that they focused on accomplishing hospital tasks and met the needs of the hospital due to the midwives shortage per shift, the work overload and burnout, and their commitment to achieve the hospital aim of preventing birth-related complications. They were restricted in making decisions on behalf of the women because they lacked resources; pain relievers, staff and institutional support. Lack of resources can cause a fall in the quality of health services that the midwives provide (Miquelutti, Cecatti & Makuch 2013). Despite the health indicators showing a lower range over the years, throughout the past 20 years, the Jordanian health indicators have improved dramatically in spite of the enormous challenges in the healthcare system, including a severe shortage of midwives and female nurses. The number of women that are of childbearing age is gradually increasing, and this, combined with a shortage of qualified midwifery staff that can cater to the healthcare needs of Jordanians and a difficulty in attracting and retaining staff makes the situation rather complicated (High Health Council (HCC) 2015).

In Jordan, obstetricians are the birth attendants for high-risk women and the decision makers for ordering pain relief for women in public hospitals, whereas midwives attend birth for low-risk women, advocate the rights of women to have pain relief and administer painkillers after obtaining orders from the physician (MOH 2007). Thus, even given the presence of physicians' dominance, midwives are responsible for helping women to cope with pain during labour. In the target hospital, the midwives share the care provided for women in labour with obstetricians. This means that: the lead professionals in labour are both obstetricians and midwives; the midwives are mainly responsible for offering intrapartum care for low risk women in consultation with the obstetricians; the midwives assist in offering care for high-risk women under medical supervision. Due to shared model of care, work overload and shortage of midwifery staff, the midwives were recommended to activate labour, use analgesia (such as Pethidine and tramadol), provide interrupted and uncoordinated care for women, and commit to the institutional boundaries (rules and guidelines) with women. This research uncovered the difficulties the midwives encountered in having neutral collective attitude towards labour pain, incapability to applying the theoretical knowledge they have about normality of childbirth, labour pain, models of attitude to labour pain, and the philosophy of women-centred care. Therefore, women perceived the midwives' attitude to labour as uncaring, not as expected and were not satisfied with the midwives' attitude and care. Whilst Sandall etal 2016 stressed that women in labour should be offered midwife led continuity of care than a shared care because it is more beneficial for women. In their Cochrane review, they found that women who offered midwife led continuity of care experienced spontaneous delivery, less use of analgesia, lower risk of losing babies, and more satisfaction with the midwives' care.

The women reported dissatisfaction with the midwives' management of labour pain, attitude towards labour pain and overall care provided in labour particularly when their midwives did not demonstrate caring attitude in their collective towards labour pain. A possible explanation could be based on the midwife-woman ratio in Jordanian public hospitals. In Jordanian public hospitals, the midwife-woman ratio is high, usually one midwife for every five women (Shaban et al. 2012); four midwives and nurses per 1000 women (World Bank 2016). The target hospital had to cope with 37 – 40 normal deliveries per day. This was a high number considering that there were typically five midwives available per shift (Al Slemaat 2012). This created the unbalanced management of the situation where each midwife had to attend to at least seven to eight deliveries a day. This could be compared to high income countries where the ratio of midwives and nurses per 1000 women is also critical: Sweden and Qatar with 11.9/ 1000; Germany 11.5/1000; Finland 10.9/1000; Australia 10.6/1000; USA 9.8/1000; Canada and France 9.3/1000; UK 8.8/1000, Spain 5.7/1000; Saudi Arabia 4.9/1000; Kuwait 4.6 as evidenced by the World Bank Data (2016). The situation in Jordan is also comparable to other

upper income countries (nurses and midwives/1000 women) such as Turkmenistan 4.4/1000; Romania 5.6/1000 and Brazil 7.6/1000. If birth times overlap, the midwives would be forced to shuttle from one woman to another. Perhaps for this reason, the women reported their midwives were uncaring, they were neglected, maltreated, and their labour pain not properly managed. , While in essence, it is possible that the midwives were actually overwhelmed with pressure from the work environment. During such shuttle care, they might have attempted to reduce women's anxiety levels, but ignored their calls sometimes if they were attending to another woman or were simply tired. In Sweden, the same situation can happen, especially where there are many women to be attended to and the where the reason for the call is not deemed to be critical. Staffing at the target hospital was inadequate, which may have affected the quality of the health care offered. As a result, the midwives experienced increased stress levels, as they had a heavy workload. Moreover, the quality of midwifery services was lowered by this situation, and ethical standards expected from midwives (JNC 2006) were disregarded. Still, because they did not meet the expectation of the women, one question is whether they intensified the emotional and physical trauma that women in labour have to undergo instead of alleviating it. According to Hunter (2010), it is possible that, in this case, the emotional trauma of the women is increased, since the author relates the expectations to the emotional outcomes. This may be one of the many problems facing midwifery services in Jordan, because the outcome of women's dissatisfaction in relation to their emotions and perceptions is not well cared for. Based on the work of Hunter (2010), it is possible that the problem is increased because, when there is no satisfaction, the outcomes are worse in terms of emotions.

Khresheh and Barclay (2010) suggested that changing the policy at Jordanian hospitals by allowing a family relative to stay with the woman in labour improves birth experiences and enhances women's satisfaction. They reported that the presence of a female relative with the woman in labour made the woman feel safe, encouraged, and it facilitated communication with the care provider; particularly when women lacked midwives 'support and presence. Currently, it is possible for a family companion to support women in labour due to renovated labour designs. Renovating and equipping the obstetric departments was implemented during the first phase of the Jordan Health Systems Strengthening II (JHSS II) project in the years 2009–2011 (United States Agency for International Development (USAID) 2013). The second phase of the project for the years 2010–2014 is focusing on improving the quality of care services provided for women. The whole project is a five-year project from 2009–2014, and the vision for the JHSS II project is:

> *Better health for the Jordanian population through access to high quality health services and empowered communities participating in healthy lifestyles (p. 5).*

Thus, to attain this vision, policy makers need to understand the women's collective perception and expectation of their

midwives attitude towards labour pain; particularly women's high expectation having continuous support from midwives in labour. If there is no possible solution to meet the women's expectation for having continues support from midwives due to staff shortage and work overload, women's requests for permitting a relative to be a companion has to be taken into consideration in our health care system. A recent review of literature revealed that women require midwives to support them during childbirth, involve them in making decisions related to the management of labour pain, empower them, provide them with adequate information about the progress of labour and answer their questions Borrelli (2014). Shaban et al. (2012) suggested a solution to ensuring adequate staffing levels; employing qualified midwives or midwife assistants or unqualified staff, such as receptionists or auxiliaries to support women in labour. However, ensuring the midwife-to-woman ratio is a first step in organizing the work environment but not enough to attain JHSS II vision.

In my opinion, a focus on midwives' collective attitude towards labour pain and a change in leadership style is obligatory; as the needs of women change, women's expectations rise, difficult decisions need to be made, important standards of practice are not met, professional growth needs to be achieved and job satisfaction needs to be improved. I also encourage health institutions in Jordan to facilitate the means to let midwives shape collective attitude towards labour pain 'shaping-attitude' instead of 'attitude-shaping'. Midwives at all levels should be empowered to influence their practice and be motivated to adopt a collective attitude towards labour pain based that best suits the child birthing women in Jordan. Midwives' collective attitude in institutional settings influences their association and interactions with child birthing women. The collective attitude could be reflected in the midwives reaction and responses to women in labour pain, their performance in the hospital, and their perception of their work capability. The midwives' work in hospitals involves carrying out routine tasks through collaboration with other health care teams (doctors and midwives). That means that the midwives contribute to the attitude of health care teams through the ability to handle tasks, work needs, women's needs, labour pain management, work problems, and work place morale. As a result, the midwives collective attitude towards labour pain affects the collective attitude of other health care professionals that lead to success or failure of a work group and change in quality of care provided for child birthing women. Sullivan and Garlan (2010) emphasized that a leadership style concentrating on external forces from nurse managers is not a guarantee of task completion and change in the quality of care provided for clients. They explained that internal motivations from health care providers are also required in order to understand the needs of both clients and nurses. Therefore, in my opinion, it is necessary to create a healthy work environment, which requires ensuring leadership support and recognition. Both midwifery managers and midwives themselves have to upgrade their leadership skills. To become a leader, midwives should

be skilled in influencing other midwives and health care professionals, facilitating learning, thinking critically, delegating care properly, communicating effectively, making decisions and managing problems. They have to learn how to collaborate with health care providers at all levels in order to ensure delivery of optimal care for women. Midwives have to be involved in the stages of developing and coordinating activities to engage in within their work environment. Midwife leaders should establish standards of performance in labour, the means to measure midwives' performance, abilities to manage midwives' collective attitude towards labour pain, evaluate care provided by midwives and offer constructive feedback. Hence, focusing on improving leadership skills in midwifery practice has a superb value, which may exceed ensuring staff adequacy – particularly when long-term, educational and financial efforts are required in order to ensure staffing.

## Implications for practice

It was not our purpose to critically evaluate the theoretical models on attitudes towards labour pain; the Working with Pain and the Exemplary Model of Midwifery Practice. However, the research approached the question about midwives' collective attitude towards labour pain from all directions (from a knowledge base standpoint, as well as ethical, professional, clinical, social and cultural ones) and from two perspectives; the midwives and the women's perspectives. To improve the midwives' neutral collective attitude towards labour pain currently and in the future, it is important that a collective attitude-based approach to midwifery care be incorporated into theoretical midwifery courses and clinical practice settings. Midwifery educators, clinical midwifery educators and midwifery managers have a mandate to model and facilitate collective attitude-based midwifery through learning activities in Jordan. Unfortunately, issues present within health care system and clinical practice settings may make this approach difficult for midwives to fully incorporate into practice. This section outlines implications for midwifery practice including strategies and suggestions for neutral collective attitude change that can be used by policy makers, hospital administrators, midwifery educators, clinical midwifery educators, midwifery managers and midwives to enhance the use of collective attitude-based midwifery approach in clinical practice settings.

### Managerial implications

Midwifery managers should articulate their roles and responsibilities as well as those of the midwives. Before blaming midwives for their neutral collective attitude towards labour pain and women's dissatisfaction, managers should understand the influence of obstetrician-driven health care system in Jordan. Obstetrician-driven healthcare system in which obstetricians design, develop, organizes, coordinate health care for pregnant and child birthing women and ensures to deliver quality health care in Jordanian hospitals. Such system position midwives at the top list of blame game for any possible medical error, maltreatment and reports of dissatisfaction that occur. Add to the power imbalance the fact that midwives spend much time than obstetricians caring

for child birthing women, and so the probability that any harm occur to women during their care is higher. Those dynamics often lead to blaming midwives even when the cause of the harm is systemic, rather than individualized. The health care representatives of MOH are the obstetricians occupying different positions at the target hospital and they are responsible to shape the midwifery practice in Jordan. Therefore, before blaming the midwives in the target hospital, the health care representatives of MOH and the midwifery managers should understand the midwives' neutral collective attitude towards labour pain. They should articulate how each of the midwives fulfil her roles and responsibilities in labour (e.g., that as a manager are required to provide and maintain a psychologically safe workplace, instruct and supervise midwives, monitor work practices to ensure success, address the midwives' collective attitude towards labour pain, address inefficiency, manage midwives' collective attitude and solve problems as needed). They should clarify the roles and responsibilities of the midwives (e.g., that all midwives are required to respect the rights and needs of child birthing women, interact with child birthing women and manage their labour pain, follow clinical guidelines, policies and procedures, complete tasks in a timely manner …etc.). They should ensure adequate midwifery staff but not only adequate hospital supply and resources; to ensure that the health care system has enabling functions but not disabling functions. Midwives and midwifery managers should have a key role and participate in planning evidence-based polices and policy decisions at the country level taking the fact that they are the main health care providers for the majority of women and child birthing women in Jordan. Collaborative contribution to policy development and planning probably increases organizational, institutional, and health care system success at national level and adds a meaningful contribution to the achievement of the goals of universal maternal health coverage.

Our research findings challenge Leap and Anderson's models on attitudes towards labour pain and in particular the Working with Pain Model. It challenges the model in the sense that there is more to the models i.e. Working with Pain and Pain Relief than just the use of pharmacological and non-pharmacological approaches, and the individual educated correct or incorrect use of models. The midwives' collective attitude towards labour pain was not only reflected in their individual educated attitude towards labour pain with reference to Leap and Anderson (2004) but, as we found, it was also reflected in the mix of guided and open collective experiences of labour pain and the design of health care system as was discussed initially. The findings of this research context suggest the need for considering a new collective attitude towards labour pain that could be the Optimistic collective attitude towards labour pain. Our findings have laid the foundation for this new approach, but there is need for further research on the same.

Accomplishing institutional goals is a concern for both employers and midwives, but equally important is adopting an Optimistic collective attitude towards labour pain. This attitude provides foundation for

the work with women's labour pain based on the mix of both guided and open collective experiences of labour pain and requires changes at both the design of health care system and educational practical levels. This attitude includes: the midwives' ability to be inwardly directed; reflect a "can do" attitude; maintain challenging standards for themselves; persist with awareness and a constant state of readiness to work with women's labour pain despite obstacles. Adopting this attitude can enable both employers and midwives to work with child birthing women from diverse cultural groups, satisfying clients, and/or reducing the cost of over-quality.

Implementing the Optimistic collective attitude towards labour pain requires a change of midwives' individual attitudes towards labour pain in Jordanian hospitals. The midwives should promote self-awareness of collective attitude towards labour pain, values and beliefs, self-development and personal attitude. Promote and maintain respectful and professional communication in their interactions with child birthing women and other professionals and recognize professional boundaries. Participate in on-going collective attitude development that improve their attitude and the care they provide for women and their families. Participate and utilize research in the field of labour pain management, collective attitude towards labour pain and management of attitude and/or other. They should be consistent in providing a caring attitude and sticking by their promises when it comes to handling child birthing women's labour pain throughout the labour process. Midwives should advocate for women, families and peer's rights of health and dignified care within institutional structures. This, however, is only attainable in the 'one to one' midwifery care that suggests that the number of midwives should be increased if an Optimistic collective attitude towards labour pain is to be demonstrated and maintained. Since frustrations that come with the overwhelming workload of the midwives poses a challenge to this new approach. The approach has its foundations in the midwives having to work with women in times of labour pain and show caring relationships in their collective attitude. This will go a long way in fulfilling the expectations of the women, thus alleviating labour pain in the process. As a midwife lecturer, I consider that this is the most difficult attitude to educate and adopt in practice taking into account the research context. In my opinion, midwifery academics can teach this attitude to midwives and midwifery students through spontaneous training and provoking a desired response to a mental process. Midwifery managers can participate in continuous education sessions concerning midwives' collective attitude towards labour pain and implement strategies to improve/promote midwives' collective attitude in their institutions.

### Policy implications

Our research findings proved that the child birthing women's needs concerning labour pain and its management are relational, rather than therapeutic. This suggests a change in planning and implementing national labour pain polices and clinical guidelines at hospitals in Jordan. New labour pain polices and guidelines or

reconsidering/redesigning previous policies and guidelines to be relational and collective attitude-based rather than methods/models-based. The need for policy change is justified based on our research findings from both the midwives' and the women's perspectives on midwives' collective attitude to labour pain. Strategies to a relational care of women's labour pain such as the midwives should accept and understand the women in labour and normality of labour pain, they should have stability and strength when listening to women's labour pain, stressors and conflicts, and they should adopt a spirit of responsibility to women's labour pain are crucial. Establishing labour pain policies and guidelines with focus on midwives' collective attitude towards labour pain assists in meeting best midwifery practice standards and improving quality of midwifery care. Eight initial steps for developing new labour pain policies and guidelines are suggested. First step is to initiate collaboration with the MOH representatives, obstetrician, midwifery managers and midwives to address the issues related to labour pain management and the midwives' collective attitude towards labour pain in the target hospital and to support the implementation of evidenced-based best practices. Second step is establishment of an interdisciplinary team. Third step is exploration and evaluation of current labour pain management practices and midwives' collective attitude towards labour pain. Fourth step is identification of opportunities for change in midwives' collective attitude towards labour pain when required. Fifth step entails continuous education for and support to midwifery staff. Seventh step includes assignment of midwives' responsibilities according to their collective attitude, knowledge and skills. The final step is on-going evaluation of the outcomes of labour pain management, and revision of labour pain management guidelines based on collective attitude- midwifery approach towards labour pain and latest evidence based labour pain management approaches.

However, the shift in labour pain policies demands the utilization of emotional intelligence in the midwifery profession. It is a complex shift that involves the midwives' perception of their collective attitude towards labour pain, understanding women's expectations and perceptions, and utilization of collective expectation and collective perception to manage women's labour pain in different situations. The goal is directed toward effective care for child birthing women, improving women's satisfaction, and reducing the costs of care over-quality.

### Working implications

Before the move to policy shift, there is a need to focus on the work environment and efficiency (not hours) as motivators for midwives. The hospital environment in which midwives work has a tremendous effect on their collective attitude and work. Hospital managers need to keep facilities and equipment up to date. Even nice, well-designed and/or equipped labour rooms for child birthing women can make a huge difference in midwives' psyche and collective attitude towards labour pain and care for women. Moreover, midwives should feel holistically safe in the target hospital, which mean

feeling physically, emotionally, socially and intellectually safe. For instance, midwives were challenged or unfairly challenged in their approaches to managing women's labour pain and reported feelings of being threatened, unsafe, uncomfortable or unsupported by their managers and other professionals. It is of importance to support the midwives' believe that their work with child birthing women is valuable but not only their value limited to supporting the hospital demands. The midwives' managers need to emphasize that the midwives' positive contribution to the clinical practice, which results in positive outcomes and optimum health for child birthing women and meeting the institutional goals at the same time. Sharing stories of midwives' success in handling women's labour pain shows the midwives how their work made a difference in women's experiences of labour pain, makes the overall birth process succeed, resulting in greater efficiency and satisfaction. Midwives should also receive regular timely feedback on their performance, and should feel that they are adequately challenged in their practice, although not overly challenged. In this way, the midwives will recognize that their leadership skills are for use but not abuse.

### Educational implications

Supporting direct entry midwives by allowing them to pursue advanced midwifery education and education and training focused on collective attitude towards labour pain is crucial. Advanced education will promote midwives' feelings of being valuable for practice and fulfilled professionally. Educational advancement could be the best reward that reflects the level of midwives' achievement. Perhaps the greatest hope is to expand the midwives' view of managing/handling labour pain beyond a question of pain relief methods/models and towards a view of labour pain management as a desired collective attitude with philosophical roots and practical implications.

## Reflection on the research process

Although Pragmatism has been described as a unique philosophical worldview (Morgan 2014), the paradigm has also been subjected to criticism and debate (Moore 1905). To place criticism into the context of this research, it is useful to refer to the main philosophical aspects of Pragmatism (Morgan 2014; Creswell & Clark 2011). Pragmatism informed this research by employing 'what works', using different approaches from different perspectives; the midwives' perspective and the women's perspective. It also provided us with insight to explore the midwives' collective attitude, to establish a position with regard to the ways that should be taken for exploration and the proper implications. Pragmatists tend to view the nature of reality as both singular and multiple (Morgan 2014; Creswell & Clark 2011). As singular reality, there may be a theory that is helpful in explaining the research findings and a tendency to hypothesis testing. As multiple reality, there may be a tendency for assessing phenomena from multiple perspectives. Therefore, the nature of reality in this research is not only a singular and multiple 'pragmatist view', but also with use of interpretation from the reflective lifeworld research, in other words I can call it- interpretive pragmatist.

The reason is that the midwives' collective attitude towards labour pain were explored using both quantitative and qualitative approaches, from two perspectives, and theories were used to ascertain the exploration and explain the research findings; Hunter's model of the Interrelationships between practice context, occupational ideology and emotion work (2004) and caring and uncaring encounters in nursing and health care theory (Halldorsdottir 1996) contributed to a full understanding of the midwives' collective attitude. Both Hunter's model and Halldorsdottir's theory were used after analysing the qualitative data according to Dahlberg, Dahlberg and Nystrom (2008). The use of the aforementioned theories helped us in elucidating the interpretations/themes in the qualitative findings and presenting a more thorough overall interpretation of the midwives' collective attitude that can be transferable to other contexts. Hence, readers may notice that the research findings were communicated using both formal and informal styles of writing (rhetoric) which is allowed when pragmatism is the underlying philosophy of mixed methods (Creswell & Clark 2011; Lincoln & Guba 2002).

The suitability of exploring the midwives' collective attitude towards labour pain using convergent parallel mixed methods design based on pragmatism as an underlying philosophy is questionable (Tashakkori & Teddlie 2003). It is questionable because of the possible heavy reliance on the quantitative techniques to measure the midwives' collective attitude though the qualitative techniques were used. It is necessary to highlight – according to Creswell & Clark 2011 – that in this research there was an equal reliance on both the quantitative techniques (SQM and SQW) and the qualitative techniques (focus group and individualized interviews) to explore the midwives' collective attitude towards labour pain. The application of the research surveys to a population that is different from the original population is another questionable issue. This issue is addressed in our research via: 1) externally (participants from another hospital, not included in the research) and internally piloting the surveys (participants from the target hospital, included in the research); 2) using the qualitative techniques to interpret the midwives' attitude (by exploring worlds of midwives' and women experiences) as ways of measuring reality.

There is another questionable issue about considering the reported emotions in the qualitative findings as feelings that are separated from facts or information – merely subjective (Charles, Bybee & Thompson 2011; Pham 2007). But I see no grounds for considering this issue in this research for three reasons. First, the midwives and the women reported their immediate experiences in relation to attitude to labour pain that arose in a medicalized birth context and belonged to the lived world of experience. Second, the midwives and the women were not only reported feelings that were affective experience, but also feelings as experienced and perceived in relation to an affective situation. Third, emotions reported here in this research are no longer emotions, but they are thoughts that are real and concrete things in the world of experience; integral affective response (

Pettinelli 2012).

A final questionable point is that when Pragmatism is the underlying philosophy of mixed methods research, there is no guarantee of application and reaching final absolute results (Moore 1905). However, this research was based on Creswell & Clark's approach of mixed methods, who suggested the guarantee of relevancy through applying the findings to the ultimate research purpose. Moore argued that if purpose is reached, then it is final and absolute (Moore 1905). In response to Moore, here the purpose is reached for this research context so it is for that context is final, complete and relevant Creswell & Clark (2011). But after all, just what makes the completion of this purpose in other contexts should be a starting point for finding answers for another context. Then reaching what is absolute finality of purpose and generation of collective attitude towards labour pain theory that is unique to midwifery science and health care sciences.

## Methodological discussion

The midwives' collective attitude towards labour pain was measured by midwives' and women's responses to the entire set of items i.e. SQM and SQW survey statements. This is an important point to discuss in this thesis. In this research, the Likert scale was developed as an aggregated rating scale composed of multiple items and treated as interval scale. It is known that Likert scales are a set of items used together (aggregated) (Likert 1932; Desselle 2005; Uebersax 2006) but if it is used as an individual item-by-item using a Likert response format (Carifio and Perla 2007; Carifio and Perla 2008) then it is not a Likert scale (Likert 1932). The important difference between the individual item-by-item rating scale and the aggregate rating scale has resulted in a great deal of controversy surrounding acceptable statistical analytical approaches i.e. aggregated/interval scale/parametric tests vs. item-by-item/ ordinal/ non-parametric analysis. The confusion in analysing Likert scale appears to have been promoted by researchers supporting "ordinalist" views on Likert scales (Kuzon, Urbanchek & McCabe 1996; Jamieson 2004; Carifio and Perla 2008; Miller & Salkind 2002). Ordinalists first view is that Likert scale as an ordinal scale with item-by item Likert response format in which: the individual item is a measure of the overall phenomenon of interest, statistical analysis should be done on separate items, non-parametric analysis approaches assuming ordinal level measurements are only appropriate, parametric analysis approaches assuming interval level measurements are not methodologically and statistically appropriate. However, drawing on Likert's original work in 1932: the phenomenon of interest is measured by the aggregate group of items in the scale, not simply by any one item on its' separate own; the distances between the numbers in the response set were equal and the distances between the categories (e.g., "Strongly agree" to "agree") were equal which statistically suggest an interval level of measurement; the individual items combined via summation or taking the arithmetic mean which is the recommended statistic for interval data. It is evident that Likert scale is a defensible approximation to an interval scale (Likert 1932; Kenny 1986), in which

case the central limit theorem allows treatment of the data as interval data measuring a latent variable (Brase, C.H. & Brase, C.P. 2013). Separating the items in Likert scale conceptually breaks the theoretical measurement properties of the aggregated scale as it was originally developed and discussed above. Therefore, from a statistical and theoretical standpoint, the individual item-by-item rating and non- parametric analytical approach is inappropriate to measure/explore the midwives' collective attitude towards labour pain in this research context. In this research, the Likert scale was aggregated scale, distances between the numbers in the response set and between the five response categories (strongly agree- agree- neutral- disagree- strongly disagree) were equal which suggested an interval level of measurements and the data were normally distributed which means that our use for parametric tests were appropriate (Likert 1932; Gaito 1980). Ordinalists second view is that the conclusions of analysing Likert scale as aggregated rating scale at the group level do not necessarily apply to the individual level. This is problematic as it results in a lack of clarity surrounding the midwives' collective attitude towards labour pain. To avoid this, we made the unit of analysis reflect the unit of inference i.e. the midwives' collective attitude towards labour pain is measured by an aggregated score on a set of items, then that aggregated score used for the analysis and the inference was made with reference to upper and lower limits of aggregated score (table 2, p.184). For example, when analysing the midwives' attitudes towards labour pain, the inferences and conclusions were also at the group of midwives'/women's level, not the individual midwife/woman level unless some sort of multi-level analysis was performed.

Another key point is the inclusion of the "NA" response in the SQM and SQW. The inclusion of "NA" response in survey requires careful consideration in relation to sample size, analysing data, and a follow-up question (Jackson 2016; Bradburn, Sudman & Wansink 2004; Feick 1989). Having a large sample size (data normally distributed) will most likely reduce the impact of including "NA" responses in the data. So, if "NA" responses occur in the data at the time of analysis, then there is a need for these to be presented separately as percentages, not to be calculated with the other items; not to be considered as missing data when a score of zero being assigned to "NA" is not absolute (Jackson 2016; Feick 1989). There is also a need to obtain substantive data from respondents by asking them a follow-up question: e.g., whether they lean towards alternative responses and why (Bradburn, Sudman & Wansink 2004). In other words, follow-up questions help researchers to move from "how many" to "why" questions (the analytical method). To make it explicit, the researcher has to stress whether a score of zero assigned to the "NA" option is absolute or not, taking into consideration the level of analysis (micro or macro analysis) as well as the value of the "NA" response (Jackson 2016). Hence, our scale data is treated as interval data, and so we assigned a score of zero to indicate no answer to the survey statements but not to indicate the absence of the attitude (at both the micro (statement) and macro (overall) levels). So,

zero here is not equal to the property of absolute zero and does not mean the absence of the variable being measured – this does not influence the equality of scale units and intervals (Jackson 2016). In our research, there are no reported "NA" responses in order to consider the above analysis context.

Language is also important issue to discuss in this thesis. Although the official language in Jordanian hospitals is English, the midwives were interviewed in Arabic so as to facilitate reflection, feel comfortable speaking and minimize the potential for linguistic misunderstanding (Tenzer, Pudelko & Harzing 2014). In line with Dahlberg et al. (2008), the researcher must be aware of the lifeworld informants' language. They stressed that language is a vehicle to interpret and understand the meaning of the words as disclosed by the lifeworld informants (midwives and women). Words (particularly when viewed in the new lifeworld context) can mean different things, and be interpreted and understood in different ways. Therefore, Dahlberg et al. clarified that the role of the lifeworld hermeneutic researcher is: to use a research language that conveys meaning that can be relevant to the lifeworld phenomenon.

A remaining point to discuss in this section is the reason for conducting individualized interviews with the midwives instead of a focus group. Valenzuela and Shrivatstava (2010) wrote that face-to-face interviews are very effective in getting the story behind the participant's experience, because the interviewer can pursue more in-depth information on the topic, probe or even ask follow-up questions. Face-to-face discussion will allow certainty and provide room for clarifying what is being said. Also, it will enable the researcher to collect information focusing on midwives' individual experiences of women's pain in labour. Arguably, one might assume that focus groups accomplish this by inviting different groups of midwives to participate on the same topic. The risk of conducting a focus group with midwives is the tendency to censor their experiences, knowledge and attitude in the presence of other midwives who differ from them in length of service, status, position, education, personal attitude, etc. (Creswell 2013). The focus group in this case will not allow the midwives to relax, be open, think critically and reflect on their individualized experience. This will reduce the quality of the data (Creswell 2013; Dahlberg et al. 2008).

## Strengths and limitations of mixed methods research

Mixed methods research is probably a strength when exploring the midwives' collective attitude towards labour pain. The combination of quantitative and qualitative approaches helped in getting comprehensive background for understanding and developing the knowledge about the midwives' collective attitude towards labour pain. The combination provided an opportunity to move with flexibility between three different types of knowledge: 1) broad general knowledge and deep understandings, 2) micro and macro level knowledge, and 3) intentions, meanings and inferences (Foss and Ellefsen 2002). The data collected in quantitative approach was numerical and the data collected in the qualitative approach was textual

and contextual (Queiros, Faria and Almeida 2017) which provided rich data illuminating the midwives' collective attitude towards labour pain. Still, each of these approaches as well as mixed methods has strengths and limitations.

In collecting the quantitative data, SH maintained a detached objective approach by avoiding direct contact at times of data collection with the midwives and the women (Queiros, Faria and Almeida 2017; Carr 1994). This may have minimized biasing the research findings and have ensured objectivity. However, this can be a limitation because this approach dismissed the experiences of the midwives and the women and does not permit SH to have direct contact with the midwives and the women in case something was unclear for them in the surveys. Nevertheless, it is important to remember that the surveys were pilot tested in terms of readability, reliability and validity. As with the quantitative approach, the qualitative approach has a strength regarding the research-subject relationship (Carr 1994). Carr mentioned that the qualitative researcher maintains an interactive relationship with informants and obtains first-hand experiences that provide valuable, meaningful and valid data. But there is a limitation about the possibility of the researcher being immersed with informants and having difficulty separating researcher own experiences/perceptions from informants experiences/perceptions. Dahlberg, Dahlberg & Nystrom (2008) confirms that with the use of life world hermeneutics approach, the researcher maintains awareness of not becoming a participant at times of interview and dismisses own experiences/perceptions which add objectivity to the quality of qualitative approach.

The use of both research approaches demands sample identification which representative of large population (Queiros, Faria and Almeida 2017; Carr1994). The random selection of the midwives' sample from target population increased the likelihood that the research findings are generalizable to the large midwives' population. One could argue that a sample size of 60 midwives and 360 women is not a large sample. However, Brase, C.H. & Brase, C.P. 2013 state that a sample size of more than 30 is large enough. On the other hand, the limitation of the qualitative approach is the use of small selective sample. Carr (1994) and Dahlberg etal. argued that this limitation is strength when the small sample is well defined and the obtained data is deep in nature (as in this research) which allows the generalizability to large population and transferability to other contexts.

In this research, there was a high response rate to the surveys as usual in surveys performed in Jordan and this reduced bias that can be connected with lower survey rates. Such a high rate is helpful in ensuring that the results can be trusted by readers. The results are generalizable according to Creswell (2011), and this is in relation to the ability to draw quantitative and qualitative samples from a sample population so as to aid the interpretation of combined quantitative and qualitative data. In this case, it is important to use a large random sample

size in the quantitative phase and a small sample in the qualitative phase for in-depth understanding of the research question. The same research questions are used in both quantitative and qualitative phases to find out if qualitative interpretations or themes match the statistical results. Both the sets of quantitative and qualitative data have been presented with equal focus in the thesis and the overall research has been evaluated and negotiated with a team of researches and external reviewers.

One threat to the validity of the research findings is that the participants' responses may differ in meaning. The reason for this is the surveys having been administered in English (SQM and in translated English to Arabic language (SQW) instead of using the respondents' native language (Arabic). However, the midwives completed the surveys in English (working language) and participated in interviews in their native language (Arabic) which is a strength. As the interviews were translated from Arabic to English by a certified translator without any changes in meaning. The women's surveys were translated from English to Arabic by a certified translator who maintained the original meaning and the focus groups conducted in Arabic were then translated into English. The research findings revealed comparable responses in both languages (working language and translated language) in terms of accuracy, level, comprehension, and variation. According to Erkut 2010; Roever 2005; Siniscalco & Auriat 2005, accuracy of results depends on the purpose of the survey and interviews; avoidable comprehension problems; generating the same language forms (original and translated) of the same kind of research instrument and interview responses, .i.e., no change in original wording. In our research, the surveys, interviews and focus groups have centered on the same purpose. Comprehension problems were less problematic because midwives possess a working intermediate-to-advanced level of English (with regard to education level). Moreover, the research instruments were written in simple wording.

A limitation of this mixed methods research include skills and familiarity with both qualitative and quantitative methods. However, this limitation was overcome by the fact that SH and her supervisors had an understanding and knowledge of both qualitative and quantitative data analysis and collection techniques. SH (the main researcher) is equipped with literature on mixed methods, advanced courses related to quantitative, qualitative and mixed methods research, a solid grounding skills in employing both qualitative and quantitative research methods. In addition, the help from supervisors and co-supervisors who were well versed in both methods aided in providing a deeper understanding in the conduct and development of mixed methods research. Another limitation is that the mixed methods research required investing extensive efforts, time and finances

## Direction for future research

This research provided a comprehensive prospective on the midwives' collective attitude towards labour pain. There is a need to explore midwives' collective

attitude in other settings and contexts as well as conduct an explanatory sequential mixed methods research to explain midwives' collective neutral attitude. Future aptitude-response-based research in different settings is necessary. Further exploration of other types of collective attitude towards labour pain i.e. very positive, positive, negative and very negative is required.

## Conclusion

This research showed that we could explore midwives' collective attitude towards labour pain via statistically measuring and theoretically interpreting: knowledge and attitudes of midwives, expectations and perceptions of women. The use of mixed methods research and the Reflective Lifeworld Hermeneutics is the basis for this scientific confirmation. The research revealed that the midwives had a neutral collective attitude towards labour pain; the with institution ideology and the uncaring attitude. The women should not suffer from painful labour, neglect during labour, and feeling as victimized due to their midwives' neutral collective attitude towards labour pain. They shall not also encounter negative emotions i.e. fear, guilt, fatigue, misunderstanding, incapability, indecisiveness, discouragement, disappointment, helplessness, powerlessness, and worthlessness during this very special event in their life's in general and at times of labour pain in particular. Optimistic collective attitude towards labour pain is a suggested approach to improve the midwives' collective attitude towards labour pain, quality and safety of health care provided for child birthing women in Jordanian public hospitals. Finally, I say midwives' collective attitude is the measure of all things because it is merely a reflection of midwives and women's experiences. Managing midwives' neutral collective attitude in the target hospital increase probability of institutional success and quality of midwifery care.

# 9. Appendices

## Appendix 1. The References used to construct the survey items

### A) For Appendix 2 (Survey Questionnaire for Midwives (SQM))

#### For knowledge

Items 1, 2, 4, 8, and 12 (Leap & Anderson 2004)
Items 3 and 13 (Walsh 2007; Leap & Anderson 2004)
Item 7 (Walsh 2007)
Items 5, 6, 9, 10, 11, and 14 (Kennedy 2000)

#### For attitudes

Items 2, 3, and10 (Leap & Anderson 2004)
Item 8 (Walsh 2007; Leap & Anderson 2004)
Item 9 (Kennedy 2000)
Items 1, 4, 5, and 6 (Walsh 2007)
Items 7 and 11 (Leap & Anderson 2004; Kennedy 2000)

### B) For Appendix 3 (Survey Questionnaire For Women (SQW))

#### For expectations

The character traits that midwives should strongly possess (Kennedy 2000)
Items 3, 4, and 7 (Kennedy 2000)
Items 1, 2, 5, and 6 (Kennedy 2000; Leap & Anderson 2004; Walsh)
Items 8, 9, and 10 (Leap & Anderson 2004)

#### For perceptions

Items 1 and 2 (Kennedy 2000; Walsh 2007)
Items 3, 4, and 5 (Kennedy 2000)

# Appendix 2. Survey Questionnaire for Midwives (SQM)

### English version

### Survey Questionnaire (For Midwives)

We appreciate your participation in this survey. Kindly answer all questions honestly and completely. We assure you that your identity and the information you will provide will be kept confidential. Your honest answers will greatly help us attain the objectives of this research.

**Instructions:** please rate your extent of agreement or disagreement to the statements below. All questions concern knowledge and attitude towards pain in normal labour.
Part 1 (A. Knowledge & B. Attitude)

## Part 1 (A. Knowledge & B. Attitude)

### A. Knowledge

| | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | NA |
|---|---|---|---|---|---|---|
| 1. To work with pain during normal delivery, i give full support to women to help them cope with pain. | | | | | | |
| 2. To work with pain during normal delivery, i give full encouragement to women to help them cope with the pain. | | | | | | |
| 3. Pain plays an important role in the physiology of normal birth. | | | | | | |
| 4. I work as a partner of women in labour pain. | | | | | | |
| 5. I am vigilant to the needs of women in pain. | | | | | | |
| 6. I am attentive to the needs of women in pain. | | | | | | |
| 7. I can recognize complications related to coping with pain by the way women express their pain. | | | | | | |
| 8. I stay with the woman in pain as she desires. | | | | | | |
| 9. I strictly abide with hospital routine care for women in pain. | | | | | | |
| 10. I provide accurate information based on the woman's needs. | | | | | | |
| 11. I render thorough education according to the woman's needs. | | | | | | |
| 12. I motivate women that normal birth can be medication-free. | | | | | | |
| 13. I let women understand that pain is part of the process in normal birth. | | | | | | |
| 14. I do my best to help address women's needs during labour. | | | | | | |

## B. Attitude

| | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | NA |
|---|---|---|---|---|---|---|
| 1. Labour pain is normal so women can be left alone to manage the pain. | | | | | | |
| 2. The focus of care for women in labour pain is to reduce the pain; so, women must be given pain reliever during intense labour pain even if they do not ask for it. | | | | | | |
| 3. Midwives must provide the essential care and support to give comfort to women in labour pain even if it goes beyond routine practice. | | | | | | |
| 4. Encouraging words-of-advice will reduce women's anxiety. | | | | | | |
| 5. Encouraging words-of-advice will boost women's ability to manage labour pain. | | | | | | |
| 6. It is good practice for midwives to befriend their clients. | | | | | | |
| 7. No woman should suffer the pain of labour; hence, they should be offered pain relief. | | | | | | |
| 8. Women should realize that pain plays an important role in the physiology of normal birth. | | | | | | |
| 9. I believe that routine care for women in labour pain must be strictly followed. | | | | | | |
| 10. Shouting and yelling by women in pain cannot be disturbing to other clients. | | | | | | |
| 11. When a woman in pain desires an assistance of pain relief that is not part of my routine, i don't provide it. | | | | | | |

## Part 2 Demographic Profile

(This information will be treated strictly confidential- kindly provide the complete information asked for)

**Age**

❍ Below 30
❍ 31- 40
❍ 41 - 50
❍ 51 - 60
❍ above 60

**What is your highest midwifery qualification?**

❍ Hospital certificate
❍ Other _____
❍ Master's degree _____
❍ Graduate certificate
❍ Graduate diploma

**Since you first qualified, how many years have you worked as a midwife?**

❍ < 10
❍ 10 - 19
❍ ≥ 20

Thank you very much!

# Appendix 3. Survey Questionnaire for Women (SQW)

### English version

### Survey Questionnaire (For Women)

We appreciate your participation in this survey. Kindly answer all questions honestly and completely. We assure you that your identity and the information you will provide will be kept confidential. Your honest answers will greatly help us attain the objectives of this research.

### Expectations (A & B)

**A. Instructions: of the following character traits, check the top 7 that midwives should strongly possess B.**

1. ❍ Sense of humour
2. ❍ Reassuring and soothing
3. ❍ Approachable
4. ❍ Patient
5. ❍ Intelligent
6. ❍ Compassionate
7. ❍ Nurturing
8. ❍ Gentle
9. ❍ Generous and loving
10. ❍ Non judgmental
11. ❍ Flexible
12. ❍ Calm
13. ❍ Neat and well-groomed
14. ❍ Humble
15. ❍ Trustworthy
16. ❍ Understanding

## B. Instructions: please rate your extent of agreement or disagreement to the statements below

| Midwives should... | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | NA |
|---|---|---|---|---|---|---|
| 1. Utilize a wide range of resources to assist the woman | | | | | | |
| 2. Provide a thorough and ongoing assessment | | | | | | |
| 3. Follow-up on care | | | | | | |
| 4. Timely in clinical actions | | | | | | |
| 5. Provide continuity of care | | | | | | |
| 6. Provide adequate time to meet our needs | | | | | | |
| 7. Listen carefully and respond appropriately to our needs | | | | | | |
| 8. Provide encouragement that we can cope with pain | | | | | | |
| 9. Maintain a supportive presence in labour | | | | | | |
| 10. Assist women in pain to gain confidence | | | | | | |

## C. Perceptions

| | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | NA |
|---|---|---|---|---|---|---|
| 1. I am completely satisfied with the service given to me by my midwife | | | | | | |
| 2. I owe it to my midwife that i got through with my labour pain | | | | | | |
| 3. My midwife was very patient and caring | | | | | | |
| 4. My needs were perfectly addressed by my midwife | | | | | | |
| 5. I liked the way my midwife treated me; i hope that in my next delivery (if ever) she will still be the one to attend to me | | | | | | |

## Other Comments

**1. Towards your midwife** _____

**2. Towards the quality of care you received** _____

Thank you very much!

# Appendix 4.Survey Questionnaire for Women (SQW)

## Arabic version

الاستبيان

(للنساء)

نقدر لك مشاركتك في هذا الاستطلاع. ويرجى الإجابة على جميع الأسئلة بالكامل وبمصداقية تامة، ونؤكد لك أن هويتك والمعلومات التي سترد هنا ستبقى سرية. إجاباتك الصادقة ستلعب دورا هاما في تحقيق أهداف هذه الدراسة.

التوقعات

أ. التعليمات: من بين الصفات الشخصية التالية، ضعي إشارة صح على أكثر سبع صفات ينبغي للقابلات التمتع بها:

١. حس الفكاهة _____
٢. القدرة على الطمأنة والتهدئة _____
٣. سهلة المعشر _____
٤. صبورة _____
٥. تتحلى بالذكاء _____
٦. عطوفة _____
٧. تحرص على الرعاية _____
٨. لطيفة _____
٩. كريمة ومحبة _____
١٠. غير متسرعة في إصدار الأحكام _____
١١. مرنة _____
١٢. هادئة _____
١٣. نظيفة ومهندمة _____
١٤. متواضعة _____
١٥. جديرة بالثقة _____
١٦. متفهمة _____

ب. التعليمات: يرجى تقدير مدى موافقتك أو معارضتك على البيانات التالية:

| يتعين على القابلات..... | أوافق وبشدة | أوافق | محايدة | أعارض | أعارض وبشدة | لا يوجد |
|---|---|---|---|---|---|---|
| ١. استخدام عدة مصادر لمساعدة المرأة | | | | | | |
| ٢. توفير تقييم مفصل بشكل متواصل | | | | | | |
| ٣. متابعة الرعاية | | | | | | |
| ٤. أداء الاجراءات الطبية في أوقاتها الصحيحة. | | | | | | |
| ٥. توفير الرعاية المتواصلة | | | | | | |
| ٦. توفير الوقت الكافي لتلبية احتياجاتنا | | | | | | |
| ٧. الاستماع بعناية والاستجابة بشكل يناسب احتياجاتنا | | | | | | |
| ٨. رفع المعنويات من خلال إقناعنا بأننا قادرات على تجاوز الألم . | | | | | | |
| ٩. مواصلة تقديم الدعم أثناء مرحلة المخاض. | | | | | | |
| ١٠. مساعدة النساء على تجاوز آلام المخاض لاستعادة الثقة. | | | | | | |

2

## رأيك بالرعاية التي تقدمها القابلات

| | أوافق وبشدة | أوافق | محايدة | أعارض | أعارض وبشدة | لا يوجد |
|---|---|---|---|---|---|---|
| ١. أشعر بالرضى التام من الخدمة التي تلقيتها من القابلة. | | | | | | |
| ٢. أدين لقابلتي بكوني اجتزت آلام مرحلة المخاض. | | | | | | |
| ٣. قابلتي كانت في غاية الصبر والود. | | | | | | |
| ٤. قابلتي قامت بتلبية جميع احتياجاتي على نحو تام. | | | | | | |
| ٥. أحببت الطريقة التي عاملتني فيها قابلتي وأتمنى أن تكون هي حاضرة في عملية الولادة التالية (إذا ما حصل ذلك مستقبلا). | | | | | | |

تعليقات أخرى

١. تجاه قابلتي _____

_____

٢. تجاه مستوى الرعاية التي تصلك _____

_____

***شكرا جزيلاً لك!***

هلال أبوغزاله للترجمة والتدقيق اللغوي

3

# Appendix 5.
# Guide questions for focus group

## English version

### Guide questions for focus group

**1. How would you describe the way your midwife went about providing care for you, and are you satisfied with the care given to you?**

**2. Would you consider your midwifery care to be the very best it could have been? If not, what would you have liked that was not present in your care?**

**3. Do you have expectations that were not met by your midwife? If so, what were these?**

### References used for questionnaires:

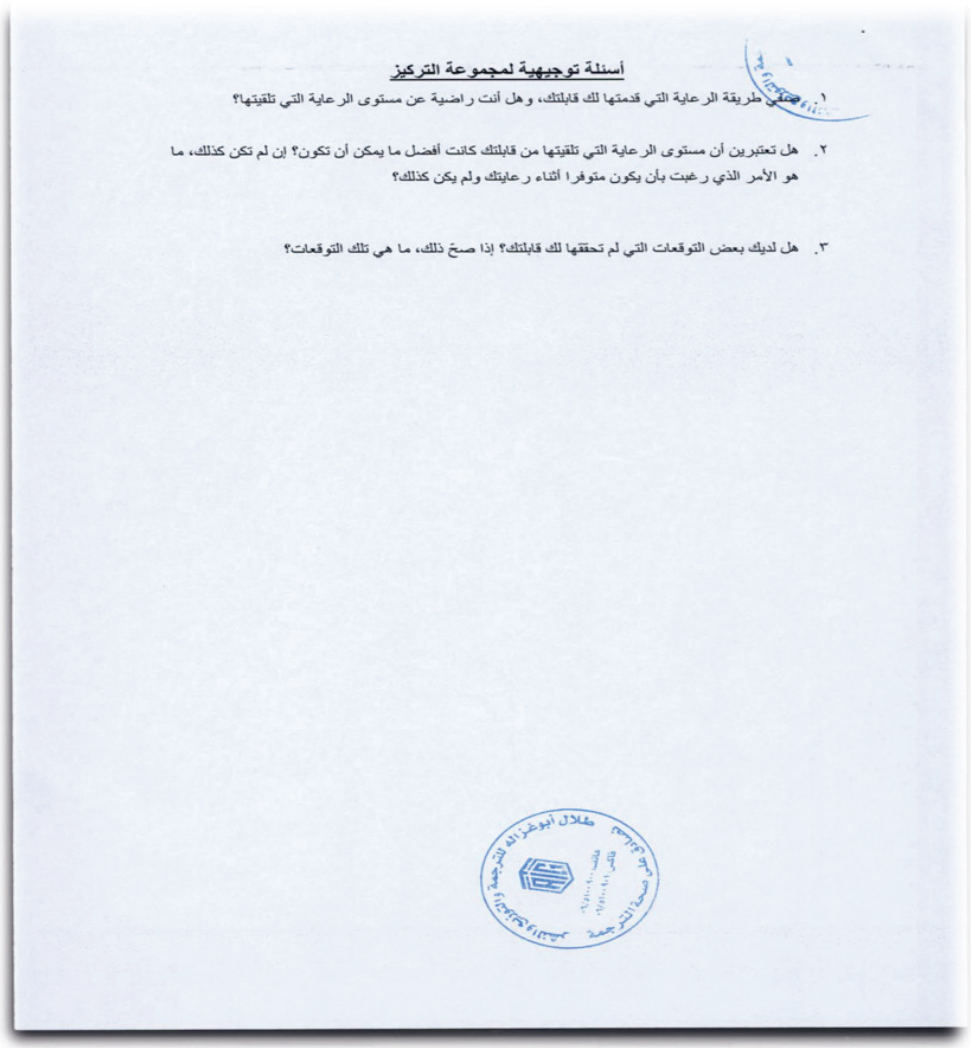
Kennedy, H. P (2000) A Model Of Exemplary Midwifery Practice: Results Of A Delphi Study. Journal Of Midwifery And Women's Health, 45(1): P. 4-19.

Leap, N. & Anderson, T. (2004) The Role Of Pain In Normal Birth And The Empowerment Of Women. In: Downe, S. (2004) (Editor). Normal Childbirth: Evidence And Debate. Edinburgh: Churchill Livingstone, P.25–39.

Walsh, D. (2007) (Editor). Pain And Labour (Chapter:4) In: Evidence-Based Care For Normal Labour And Birth: A Guide For Midwives (1st Edition). Routledge: New York, P.45-65.

# Appendix 6.
# Guide questions for focus group

## Arabic version



أسئلة توجيهية لمجموعة التركيز

١. صفي طريقة الرعاية التي قدمتها لك قابلتك، وهل أنت راضية عن مستوى الرعاية التي تلقيتها؟

٢. هل تعتبرين أن مستوى الرعاية التي تلقيتها من قابلتك كانت أفضل ما يمكن أن تكون؟ إن لم تكن كذلك، ما هو الأمر الذي رغبت بأن يكون متوفرا أثناء رعايتك ولم يكن كذلك؟

٣. هل لديك بعض التوقعات التي لم تحققها لك قابلتك؟ إذا صحّ ذلك، ما هي تلك التوقعات؟

# Appendix 7. Scores for Likert statements for Appendices 2 and 3

## A) For Appendix 2 (Survey Questionnaire for Midwives (SQM))

### For knowledge

**Items 1 to 8; and 10 to 14**

Strongly Agree - 5
Agree - 4
Neutral - 3
Disagree - 2
Strongly Disagree - 1
No Answer -0

**Item 9**

Strongly Agree- 1
Agree- 2
Neutral- 3
Disagree - 4
Strongly Disagree - 5
No Answer - 0

### For attitude

**Items 3, 4, 5, 6, 8, 10**

Strongly Agree - 5
Agree - 4
Neutral - 3
Disagree - 2
Strongly Disagree - 1
No Answer -0

**Items 1, 2, 7, 9, 11**

Strongly Agree - 1
Agree - 2
Neutral - 3
Disagree - 4
Strongly Disagree -5
No Answer - 0

## B) For Appendix 3 (Survey Questionnaire for Women (SQW))

### For Expectations (B)

**Items 1 to 10**

Strongly Agree - 5
Agree - 4
Neutral - 3
Disagree - 2
Strongly Disagree - 1
No Answer - 0

### For Perceptions

**Items 1 to 5**

Strongly Agree - 5
Agree - 4
Neutral - 3
Disagree - 2
Strongly Disagree - 1
No Answer - 0

# Appendix 8. Statistical analysis Survey Questionnaire for Midwives (SQM) – Pilot study

## Midwives' knowledge

### Reliability analysis - scale (A: Knowledge)

| Item Means | Mean | Minimum | Maximum | Range | Max/Min | Variance |
|---|---|---|---|---|---|---|
| | 3.74 | 3.38 | 4.10 | 0.69 | 1.20 | 0.05 |
| Item Variances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.78 | 0.39 | 1.34 | 0.95 | 3.46 | 0.09 |
| Inter-Item Covariances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.33 | -0.07 | 0.83 | 0.91 | -11.67 | 0.03 |
| Inter-Item Correlations | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.43 | -0.08 | 0.86 | 0.93 | -11.30 | 0.03 |
| **Item-Total Statistics** | | | | | | |
| | Scale mean if item deleted | Scale variance if item deleted | Corrected Item total correlation | Squared multiple correlation | Alpha if item deleted | |
| *A1 | 48.34 | 60.66 | 0.59 | 0.79 | 0.91 | |
| A2 | 48.59 | 59.47 | 0.72 | 0.84 | 0.89 | |
| A3 | 48.28 | 62.78 | 0.64 | 0.59 | 0.91 | |
| A4 | 48.83 | 62.43 | 0.56 | 0.74 | 0.91 | |
| A5 | 48.55 | 58.83 | 0.65 | 0.70 | 0.91 | |
| A6 | 48.66 | 56.02 | 0.83 | 0.77 | 0.90 | |
| A7 | 48.72 | 61.92 | 0.52 | 0.45 | 0.91 | |
| A8 | 48.97 | 64.89 | 0.52 | 0.71 | 0.91 | |
| A9 | 48.93 | 64.21 | 0.53 | 0.78 | 0.91 | |
| A10 | 48.52 | 62.12 | 0.70 | 0.78 | 0.90 | |
| A11 | 48.41 | 62.54 | 0.67 | 0.62 | 0.90 | |
| A12 | 48.76 | 63.33 | 0.39 | 0.84 | 0.91 | |
| A13 | 48.49 | 56.48 | 0.73 | 0.83 | 0.90 | |
| A14 | 48.45 | 60.61 | 0.72 | 0.90 | 0.90 | |

N of cases = 29. Reliability coefficients 14 items. Alpha = 0.91, Standardized item alpha = 0.91. *A represents knowledge items.

## Reliability Analysis - scale (B: attitudes)

| Item Means | Mean | Minimum | Maximum | Range | Max/Min | Variance |
|---|---|---|---|---|---|---|
| | 3.65 | 2.93 | 4.21 | 1.28 | 1.44 | 0.20 |
| Item Variances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 1.16 | 0.71 | 1.71 | 1.00 | 2.42 | 0.11 |
| Inter-Item Covariances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.48 | 0.04 | 1.02 | 0.99 | 25.27 | 0 .05 |
| Inter-Item Correlations | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.44 | 0.04 | 0.91 | 0.87 | 24.65 | 0.05 |
| **Item-Total Statistics** | | | | | | |
| | Scale mean if item deleted | Scale variance if item deleted | Corrected item-total correlation | Squared multiple correlation | Alpha if item deleted | |
| *B1 | 37.14 | 55.77 | 0.46 | 0.55 | 0.89 | |
| B2 | 36.69 | 56.00 | 0.57 | 0.56 | 0.88 | |
| B3 | 36.38 | 55.31 | 0.79 | 0 .83 | 0.87 | |
| B4 | 35.93 | 53.35 | 0.80 | 0.94 | 0.87 | |
| B5 | 36.24 | 52.76 | 0.76 | 0.82 | 0.87 | |
| B6 | 36.31 | 57.72 | 0.47 | 0.63 | 0.89 | |
| B7 | 36.83 | 57.07 | 0.47 | 0.62 | 0.89 | |
| B8 | 36.03 | 57.96 | 0.57 | 0.65 | 0.88 | |
| B9 | 36.41 | 51.83 | 0.72 | 0.80 | 0.87 | |
| B10 | 35.89 | 53.38 | 0.81 | 0.94 | 0.87 | |
| B11 | 37.17 | 55.79 | 0.44 | 0.65 | 0.89 | |

N of cases = 29. Reliability coefficients 11 items: Alpha = 0 .89; standardized item alpha = 0 .89; * B represents attitude items

## Correlations

| **Correlations for analysis 1** | | **AR** |
|---|---|---|
| *A | Pearson correlation | 0.94 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | |
| **Correlations for analysis 2** | | **BR** |
| *B | Pearson correlation | 0.87 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | |

| Correlations for analysis 1 | | A |
|---|---|---|
| A1 | Pearson correlation | 0.66 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| A2 | Pearson correlation | 0.77 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| A3 | Pearson correlation | 0.69 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| A4 | Pearson correlation | 0.63 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| A5 | Pearson correlation | 0.72 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| A6 | Pearson correlation | 0.87 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| A7 | Pearson correlation | 0.60 |
| | Sig. (2-tailed) | 0.001 |
| | N | 29 |
| A8 | Pearson correlation | 0.60 |
| | Sig. (2-tailed) | 0.001 |
| | N | 29 |
| A9 | Pearson correlation | 0.59 |
| | Sig. (2-tailed) | 0.001 |
| | N | 29 |
| A10 | Pearson correlation | 0.74 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| A11 | Pearson correlation | 0.71 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| A12 | Pearson correlation | 0.49 |
| | Sig. (2-tailed) | 0.007 |
| | N | 29 |
| A13 | Pearson correlation | 0.79 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| A14 | Pearson correlation | 0.77 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |

**. Correlation is significant at the 0.01 level (2-tailed).

| Correlations for analysis 2 | | B |
|---|---|---|
| B1 | Pearson correlation | 0.58 |
| | Sig. (2-tailed) | 0.001 |
| | N | 29 |
| B2 | Pearson correlation | 0.65 |
| | Sig. (2-tailed) | 0.000 |
| | N | 29 |
| B3 | Pearson correlation | 0.84 |
| | Sig. (2-tailed) | 0.000 |
| | N | 29 |
| B4 | Pearson correlation | 0.84 |
| | Sig. (2-tailed) | 0.000 |
| | N | 29 |
| B5 | Pearson correlation | 0.81 |
| | Sig. (2-tailed) | 0.000 |
| | N | 29 |
| B6 | Pearson correlation | 0.57 |
| | Sig. (2-tailed) | 0.001 |
| | N | 29 |
| B7 | Pearson correlation | 0.57 |
| | Sig. (2-tailed) | 0.001 |
| | N | 29 |
| B8 | Pearson correlation | 0.64 |
| | Sig. (2-tailed) | 0.000 |
| | N | 29 |
| B9 | Pearson correlation | 0.79 |
| | Sig. (2-tailed) | 0.000 |
| | N | 29 |
| B10 | Pearson correlation | 0.86 |
| | Sig. (2-tailed) | 0.000 |
| | N | 29 |
| B11 | Pearson correlation | 0.56 |
| | Sig. (2-tailed) | 0.002 |
| | N | 29 |

**. Correlation is significant at the 0.01 level (2-tailed).

# Appendix 9. Statistical analysis Survey Questionnaire for Women (SQW) – Pilot study

## Women's expectations

### Character traits for midwives

| Items | (0) Unchecked trait | | (1) Checked trait | |
|---|---|---|---|---|
| | Count | % | Count | % |
| *A1 | 21 | 72.4 | 8 | 27.6 |
| A2 | 10 | 34.5 | 19 | 65.5 |
| A3 | 23 | 79.3 | 6 | 20.7 |
| A4 | 7 | 24.1 | 22 | 75.9 |
| A5 | 23 | 79.3 | 6 | 20.7 |
| A6 | 16 | 55.2 | 13 | 44.8 |
| A7 | 11 | 37.9 | 18 | 62.1 |
| A8 | 20 | 69.0 | 9 | 31.0 |
| A9 | 28 | 96.6 | 1 | 3.4 |
| A10 | 11 | 37.9 | 18 | 62.1 |
| A11 | 20 | 69.0 | 9 | 31.0 |
| A12 | 17 | 58.6 | 12 | 41.4 |
| A13 | 21 | 72.4 | 8 | 27.6 |
| A14 | 12 | 41.4 | 17 | 58.6 |
| A15 | 16 | 55.2 | 13 | 44.8 |
| A16 | 5 | 17.2 | 24 | 82.8 |

**Reliability analysis - scale (B: expectations)**

| Item Means | Mean | Minimum | Maximum | Range | Max/Min | Variance |
|---|---|---|---|---|---|---|
| | 4.24 | 3.97 | 4.41 | 0.45 | 1.11 | 0 .024 |
| Item Variances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0 .91 | 0.61 | 1.19 | 0.58 | 1.96 | 0.06 |
| Inter-Item Covariances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.58 | 0.26 | 0 .97 | 0.71 | 3.73 | 0.03 |
| Inter-Item Correlations | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0 .65 | 0 .36 | 0.87 | 0.51 | 2.42 | 0.01 |
| **Item-Total Statistics** | | | | | | |
| | **Scale Mean if item deleted** | **Scale variance if item deleted** | **Corrected Item-total correlation** | **Squared multiple correlation** | **Alpha if item deleted** | |
| *B1 | 38.24 | 48.33 | 0.83 | 0.85 | 0.94 | |
| B2 | 38.41 | 54.82 | 0.54 | 0.43 | 0.95 | |
| B3 | 38.07 | 50.57 | 0 .78 | 0.74 | 0.94 | |
| B4 | 37.97 | 51.75 | 0 .78 | 0.85 | 0.94 | |
| B5 | 38.14 | 49.05 | 0 .75 | 0.75 | 0.95 | |
| B6 | 38.07 | 51.99 | 0.78 | 0.85 | 0.94 | |
| B7 | 38.38 | 49.17 | 0.79 | 0.85 | 0.94 | |
| B8 | 38.10 | 48.17 | 0.84 | 0 .85 | 0.94 | |
| B9 | 38.03 | 47.68 | 0.90 | 0.94 | 0.94 | |
| B10 | 38.00 | 50.93 | 0 .86 | 0.93 | 0.94 | |

N of cases = 29. Reliability coefficients 10 items. Alpha = 0 .95 standardized item alpha = 0.95
*B represents expectations items.

**Reliability analysis - scale ( C: perceptions)**

| Item Means | Mean | Minimum | Maximum | Range | Max/Min | Variance |
|---|---|---|---|---|---|---|
| | 3.44 | 3.28 | 3.55 | 0.28 | 1.08 | 0.01 |
| Item Variances | Mean | Minimum | Maximum | Range | Max/Min Variance | |
| | 1.57 | 1.33 | 1.82 | 0.50 | 1.37 | 0.04 |
| Inter-Item Covariances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 1.22 | 1.04 | 1.38 | 0.34 | 1.33 | 0.01 |
| Inter-Item Correlations | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.78 | 0.70 | 0.84 | 0.15 | 1.21 | 0.003 |
| **Item-Total Statistics** | | | | | | |
| | **Scale Mean If Item Deleted** | **Scale Variance If Item Deleted** | **Corrected Item-Total Correlation** | **Squared Multiple Correlation** | **Alpha If Item Deleted** | |
| | | | | | | |
| *C1 | 13.66 | 21.73 | 0.85 | 0.74 | 0.93 | |
| C2 | 13.79 | 20.10 | 0 .85 | 0.73 | 0.93 | |
| C3 | 13.79 | 20.96 | 0.91 | 0.84 | 0.92 | |
| C4 | 13.93 | 20.57 | 0.86 | 0.77 | 0.93 | |
| C5 | 13.66 | 21.02 | 0.80 | 0.70 | 0.94 | |
| N of cases = 29 | | | | | | |

**Correlations**

| | Correlations for Analysis 1 | B |
|---|---|---|
| B1 | Pearson correlation | 0.87 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| B2 | Pearson correlation | 0.61 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| B3 | Pearson correlation | 0.82 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| B4 | Pearson correlation | 0.82 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| B5 | Pearson correlation | 0.80 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| B6 | Pearson correlation | 0.82 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| B7 | Pearson correlation | 0.84 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| B8 | Pearson correlation | 0.88 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| B9 | Pearson correlation | 0.92 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| B10 | Pearson correlation | 0.89 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |

**. Correlation is significant at the 0.01 level (2-tailed).

| Correlations | | |
|---|---|---|
| | Correlations for analysis 2 | C |
| C1 | Pearson correlation | 0.90 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| C2 | Pearson correlation | 0.91 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| C3 | Pearson correlation | 0.94 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| C4 | Pearson correlation | 0.91 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |
| C5 | Pearson correlation | 0.87 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |

**. Correlation is significant at the 0.01 level (2-tailed).

| Correlations | | |
|---|---|---|
| | Correlations for analysis 1 | Br |
| B | Pearson correlation | 0.97 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |

**. Correlation is significant at the 0.01 level (2-tailed).

| Correlations | | |
|---|---|---|
| | Correlations for analysis 2 | Cr |
| C | Pearson correlation | 0.96 |
| | Sig. (2-tailed) | 0.00 |
| | N | 29 |

**. Correlation is significant at the 0.01 level (2-tailed).

# Appendix 10. Factor analysis of Survey Questionnaire for Midwives (SQM) and Survey Questionnaire for Women (SQW)

## Factor analysis (SQM)

### Communalities (Knowledge)

| | Initial | Extraction |
|---|---|---|
| *A1. To work with pain during normal delivery, i give full support to women to help them cope with pain. | 1.000 | 0.74 |
| A2. To work with pain during normal delivery, i give full encouragement to women to help them cope with the pain. | 1.000 | 0.76 |
| A3. Pain plays an important role in the physiology of normal birth. | 1.000 | 0.73 |
| A4. I work as a partner of women in labour pain. | 1.000 | 0.67 |
| A5. I am vigilant to the needs of women in pain. | 1.000 | 0.79 |
| A6. I am attentive to the needs of women in pain. | 1.000 | 0.70 |
| A7. I can recognize complications related to coping with pain by the way women express their pain. | 1.000 | 0.63 |
| A8. I stay with the woman in pain as she desires. | 1.000 | 0.61 |
| A9. I strictly abide with hospital routine care for women in pain. | 1.000 | 0.67 |
| A10. I provide accurate information based on the woman's needs. | 1.000 | 0.74 |
| A11. I render thorough education according to the woman's needs. | 1.000 | 0.73 |
| A12. I motivate women that normal birth can be medication-free. | 1.000 | 0.50 |
| A13. I let women understand that pain is part of the process in normal birth. | 1.000 | 0.81 |
| A14. I do my best to help address women's needs during labour. | 1.000 | 0.67 |

Extraction method: principal component analysis. *A represents knowledge items with component number.
For example: A1, A represents item one in Knowledge survey. 1 represents component number.

## Total variance explained

| Component | Initial eigenvalues | | | Extraction sums Of squared loadings | | | Rotation sums of squared loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 5.87 | 41.94 | 41.94 | 5.87 | 41.94 | 41.94 | 3.15 | 22.51 | 22.51 |
| 2 | 1.56 | 11.12 | 53.054 | 1.56 | 11.11 | 53.05 | 2.60 | 18.56 | 41.07 |
| 3 | 1.20 | 8.54 | 61.60 | 1.20 | 8.54 | 61.59 | 2.51 | 17.96 | 59.03 |
| 4 | 1.12 | 8.01 | 69.20 | 1.12 | 8.01 | 69.60 | 1.48 | 10.58 | 69.60 |
| 5 | 0.92 | 6.60 | 76.20 | | | | | | |
| 6 | 0.73 | 5.24 | 81.44 | | | | | | |
| 7 | 0.65 | 4.64 | 86.10 | | | | | | |
| 8 | 0.53 | 3.76 | 89.84 | | | | | | |
| 9 | 0.46 | 3.29 | 93.13 | | | | | | |
| 10 | 0.31 | 2.20 | 95.33 | | | | | | |
| 11 | 0.25 | 1.80 | 97.12 | | | | | | |
| 12 | 0.18 | 1.28 | 98.40 | | | | | | |
| 13 | 0.14 | 1.01 | 99.41 | | | | | | |
| 14 | 0.08 | 0.59 | 100.00 | | | | | | |

Extraction method: principal component analysis.

## Component matrix

| Component | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| A2. To work with pain during normal delivery, i give full encouragement to women to help them cope with the pain. | 0.84 | -0.13 | -0.16 | -0.10 |
| A1. To work with pain during normal delivery, i give full support to women to help them cope with pain. | 0.78 | -0.26 | -0.10 | -0.23 |
| A13. I let women understand that pain is part of the process in normal birth. | 0.77 | 0.14 | -0.45 | 0.02 |
| A14. I do my best to help address women's needs during labour. | 0.74 | -0.19 | -0.30 | -0.03 |
| A6. I am attentive to the needs of women in pain. | 0.71 | -0.14 | 0.28 | 0.32 |
| A4. I work as a partner of women in labour pain. | 0.70 | -0.02 | 0.27 | 0.33 |
| A5. I am vigilant to the needs of women in pain. | 0.68 | 0.10 | 0.50 | 0.27 |
| A11. I render thorough education according to the woman's needs. | 0.66 | -0.27 | 0.28 | -0.38 |
| A10. I provide accurate information based on the woman's needs. | 0.62 | -0.02 | 0.32 | -0.50 |
| A3. Pain plays an important role in the physiology of normal birth. | 0.60 | 0.55 | -0.21 | -0.13 |
| A12. I motivate women that normal birth can be medication-free. | 0.57 | 0.34 | -0.13 | -0.18 |
| A7. I can recognize complications related to coping with pain by the way women express their pain. | 0.52 | 0.32 | -0.30 | 0.42 |
| A9. I strictly abide with hospital routine care for women in pain. | 0.16 | 0.72 | 0.35 | 0.05 |
| A8. I stay with the woman in pain as she desires. | 0.42 | -0.52 | -0.07 | 0.39 |

Extraction method: principal component analysis. A 4 components extracted

## Rotated component matrix

| Component | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| A13. I let women understand that pain is part of the process in normal birth. | 0.85 | 0.20 | 0.22 | -0.11 |
| A3. Pain plays an important role in the physiology of normal birth. | 0.73 | 0.07 | 0.21 | 0.39 |
| A7. I can recognize complications related to coping with pain by the way women express their pain. | 0.67 | 0.37 | -0.21 | 0.07 |
| A14. I do my best to help address women's needs during labour. | 0.60 | 0.26 | 0.37 | -0.32 |
| A2. To work with pain during normal delivery, i give full encouragement to women to help them cope with the pain. | 0.60 | 0.33 | 0.51 | -0.20 |
| A12. I motivate women that normal birth can be medication-free. | 0.57 | 0.09 | 0.31 | 0.25 |
| A5. I am vigilant to the needs of women in pain. | 0.14 | 0.79 | 0.30 | 0.25 |
| A6. I am attentive to the needs of women in pain. | 0.22 | 0.75 | 0.27 | -0.07 |
| A4. I work as a partner of women in labour pain. | 0.27 | 0.74 | 0.22 | 0.04 |
| A10. I provide accurate information based on the woman's needs. | 0.16 | 0.17 | 0.81 | 0.17 |
| A11. I render thorough education according to the woman's needs. | 0.12 | 0.29 | 0.79 | -0.08 |
| A1. To work with pain during normal delivery, i give full support to women to help them cope with pain. | 0.46 | 0.27 | 0.62 | -0.28 |
| A9. I strictly abide with hospital routine care for women in pain. | 0.14 | 0.20 | -0.03 | 0.78 |
| A8. I stay with the woman in pain as she desires. | 0.14 | 0.52 | 0.04 | -0.56 |

Extraction method: principal component analysis. Rotation method: varimax with Kaiser normalization. A rotation converged in 8 iterations.

### Component transformation matrix

| Component | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| | | | | |
| 1 | 0.64 | 0.55 | 0.53 | -0.04 |
| 2 | 0.38 | -0.13 | -0.26 | 0.88 |
| 3 | -0.67 | 0.49 | 0.32 | 0.45 |
| 4 | 0.04 | 0.66 | -0.74 | -0.13 |

Extraction method: principal component analysis. Rotation method: varimax with kaiser normalization.

### Cont...Factor analysis

### Communalities

| | Initial | Extraction |
|---|---|---|
| A1. To work with pain during normal delivery, i give full support to women to help them cope with pain. | 1.000 | 0.69 |
| A2. To work with pain during normal delivery, i give full encouragement to women to help them cope with the pain. | 1.000 | 0.75 |
| A3. Pain plays an important role in the physiology of normal birth. | 1.000 | 0.71 |
| A4. I work as a partner of women in labour pain. | 1.000 | 0.56 |
| A5. I am vigilant to the needs of women in pain. | 1.000 | 0.72 |
| A6. I am attentive to the needs of women in pain. | 1.000 | 0.60 |
| A7. I can recognize complications related to coping with pain by the way women express their pain. | 1.000 | 0.46 |
| A8. I stay with the woman in pain as she desires. | 1.000 | 0.45 |
| A9. I strictly abide with hospital routine care for women in pain. | 1.000 | 0.67 |
| A10. I provide accurate information based on the woman's needs. | 1.000 | 0.49 |
| A11. I render thorough education according to the woman's needs. | 1.000 | 0.59 |
| A12. I motivate women that normal birth can be medication-free. | 1.000 | 0.46 |
| A13. I let women understand that pain is part of the process in normal birth. | 1.000 | 0.81 |
| A14. I do my best to help address women's needs during labour. | 1.000 | 0.67 |

Extraction method: principal component analysis.

## Total variance explained

| Component | Initial eigenvalues | | | Extraction sums of squared loadings | | | Rotation sums of squared loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 5.87 | 41.94 | 41.94 | 5.87 | 41.94 | 41.94 | 3.66 | 26.14 | 26.14 |
| 2 | 1.56 | 11.12 | 53.05 | 1.56 | 11.12 | 53.05 | 3.29 | 23.51 | 49.65 |
| 3 | 1.20 | 8.54 | 61.59 | 1.20 | 8.54 | 61.59 | 1.67 | 11.94 | 61.59 |
| 4 | 1.12 | 8.01 | 69.60 | | | | | | |
| 5 | 0.92 | 6.60 | 76.20 | | | | | | |
| 6 | 0.73 | 5.24 | 81.44 | | | | | | |
| 7 | 0.65 | 4.64 | 86.08 | | | | | | |
| 8 | 0.53 | 3.76 | 89.84 | | | | | | |
| 9 | 0.46 | 3.29 | 93.13 | | | | | | |
| 10 | 0.31 | 2.20 | 95.33 | | | | | | |
| 11 | 0.25 | 1.80 | 97.12 | | | | | | |
| 12 | 0.18 | 1.28 | 98.40 | | | | | | |
| 13 | 0.14 | 1.01 | 99.41 | | | | | | |
| 14 | 0.08 | 0.59 | 100.00 | | | | | | |

Extraction method: principal component analysis.

## Component matrix

| Component | 1 | 2 | 3 |
|---|---|---|---|
| A2. To work with pain during normal delivery, i give full encouragement to women to help them cope with the pain | 0.84 | -0.13 | -0.16 |
| A1. To work with pain during normal delivery, i give full support to women to help them cope with pain. | 0.78 | -0.26 | -0.10 |
| A13. I let women understand that pain is part of the process in normal birth. | 0.77 | 0.14 | -0.45 |
| A14. I do my best to help address women's needs during labour. | 0.74 | -0.19 | -0.30 |
| A6. I am attentive to the needs of women in pain. | 0.71 | -0.14 | 0.28 |
| A4. I work as a partner of women in labour pain. | 0.70 | -0.02 | 0.27 |
| A5. I am vigilant to the needs of women in pain. | 0.68 | 0.10 | 0.50 |
| A11. I render thorough education according to the woman's needs. | 0.66 | -0.27 | 0.28 |
| A10. I provide accurate information based on the woman's needs. | 0.62 | -0.02 | 0.32 |
| A3. Pain plays an important role in the physiology of normal birth. | 0.60 | 0.55 | -0.21 |
| A12. I motivate women that normal birth can be medication-free. | 0.57 | 0.34 | -0.13 |
| A7. I can recognize complications related to coping with pain by the way women express their pain. | 0.52 | 0.32 | -0.30 |
| A9. I strictly abide with hospital routine care for women in pain. | 0.16 | 0.72 | 0.35 |
| A8. I stay with the woman in pain as she desires. | 0.42 | -0.52 | -0.074 |

Extraction method: principal component analysis. A 3 components extracted.

## Rotated component matrix

| Component | 1 | 2 | 3 |
|---|---|---|---|
| A5. I am vigilant to the needs of women in pain. | 0.81 | 0.19 | -0.17 |
| A6. I am attentive to the needs of women in pain. | 0.72 | 0.23 | 0.15 |
| A11. I render thorough education according to the woman's needs. | 0.72 | 0.14 | 0.24 |
| A4. I work as a partner of women in labour pain. | 0.69 | 0.29 | 0.03 |
| A10. I provide accurate information based on the woman's needs. | 0.69 | 0.21 | 0.004 |
| A1. To work with pain during normal delivery, i give full support to women to help them cope with pain. | 0.54 | 0.45 | 0.44 |
| A13. I let women understand that pain is part of the process in normal birth. | 0.23 | 0.84 | 0.25 |
| A3. Pain plays an important role in the physiology of normal birth. | 0.20 | 0.78 | -.025 |
| A7. I can recognize complications related to coping with pain by the way women express their pain. | 0.12 | 0.66 | -0.03 |
| A12. I motivate women that normal birth can be medication-free. | 0.27 | 0.61 | -0.12 |
| A2. To work with pain during normal delivery, i give full encouragement to women to help them cope with the pain. | 0.52 | 0.59 | 0.36 |
| A14. I do my best to help address women's needs during labour. | 0.37 | 0.57 | 0.46 |
| A9. I strictly abide with hospital routine care for women in pain. | 0.22 | 0.24 | -0.75 |
| A8. I stay with the woman in pain as she desires. | 0.35 | 0.07 | 0.57 |

Extraction method: principal component analysis. Rotation method: varimax with kaiser normalization. A rotation converged in 5 iterations.

## Component transformation matrix

| Component | 1 | 2 | 3 |
|---|---|---|---|
| 1 | 0.72 | 0.66 | 0.21 |
| 2 | -0.18 | 0.47 | -0.86 |
| 3 | 0.67 | -0.59 | -0.46 |

Extraction method: principal component analysis. Rotation method: varimax with kaiser normalization.

## Factor analysis (SQM)

### Communalities (knowledge)

| | Initial | Extraction |
|---|---|---|
| A1. To work with pain during normal delivery, i give full support to women to help them cope with pain. | 1.000 | 0.68 |
| A2. To work with pain during normal delivery, i give full encouragement to women to help them cope with the pain. | 1.000 | 0.72 |
| A3. Pain plays an important role in the physiology of normal birth. | 1.000 | 0.67 |
| A4. I work as a partner of women in labour pain. | 1.000 | 0.48 |
| A5. I am vigilant to the needs of women in pain. | 1.000 | 0.47 |
| A6. I am attentive to the needs of women in pain. | 1.000 | 0.52 |
| A7. I can recognize complications related to coping with pain by the way women express their pain. | 1.000 | 0.37 |
| A8. I stay with the woman in pain as she desires. | 1.000 | 0.45 |
| A9. I strictly abide with hospital routine care for women in pain. | 1.000 | 0.54 |
| A10. I provide accurate information based on the woman's needs. | 1.000 | 0.39 |
| A11. I render thorough education according to the woman's needs. | 1.000 | 0.51 |
| A12. I motivate women that normal birth can be medication-free. | 1.000 | 0.45 |
| A13. I let women understand that pain is part of the process in normal birth. | 1.000 | 0.61 |
| A14. I do my best to help address women's needs during labour. | 1.000 | 0.58 |

Extraction method: principal component analysis.

## Total variance explained

| Component | Initial eigenvalues | | | Extraction sums of squared loadings | | | Rotation sums of squared loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 5.87 | 41.94 | 41.94 | 5.87 | 41.94 | 41.94 | 4.81 | 34.35 | 34.35 |
| 2 | 1.56 | 11.12 | 53.05 | 1.56 | 11.12 | 53.05 | 2.62 | 18.70 | 53.05 |
| 3 | 1.20 | 8.54 | 61.59 | | | | | | |
| 4 | 1.12 | 8.01 | 69.60 | | | | | | |
| 5 | 0.92 | 6.60 | 76.20 | | | | | | |
| 6 | 0.73 | 5.24 | 81.44 | | | | | | |
| 7 | 0.65 | 4.64 | 86.08 | | | | | | |
| 8 | 0.53 | 3.76 | 89.84 | | | | | | |
| 9 | 0.46 | 3.29 | 93.13 | | | | | | |
| 10 | 0.31 | 2.20 | 95.33 | | | | | | |
| 11 | 0.25 | 1.80 | 97.12 | | | | | | |
| 12 | 0.18 | 1.28 | 98.40 | | | | | | |
| 13 | 0.14 | 1.01 | 99.41 | | | | | | |
| 14 | 0.08 | 0.59 | 100.00 | | | | | | |

Extraction method: principal component analysis.

## Component matrix

| Component | 1 | 2 |
|---|---|---|
| A2. To work with pain during normal delivery, i give full encouragement to women to help them cope with the pain. | 0.84 | -0.13 |
| A1. To work with pain during normal delivery, i give full support to women to help them cope with pain. | 0.78 | -0.26 |
| A13. I let women understand that pain is part of the process in normal birth. | 0.77 | 0.14 |
| A14. I do my best to help address women's needs during labour. | 0.74 | -0.19 |
| A6. I am attentive to the needs of women in pain. | 0.71 | -0.14 |
| A4. I work as a partner of women in labour pain. | 0.70 | -0.02 |
| A5. I am vigilant to the needs of women in pain. | 0.68 | 0.10 |
| A11. I render thorough education according to the woman's needs. | 0.66 | -0.27 |
| A10. I provide accurate information based on the woman's needs. | 0.62 | -0.02 |
| A3. Pain plays an important role in the physiology of normal birth. | 0.60 | 0.55 |
| A12. I motivate women that normal birth can be medication-free. | 0.57 | 0.34 |
| A7. I can recognize complications related to coping with pain by the way women express their pain. | 0.52 | 0.32 |
| A9. I strictly abide with hospital routine care for women in pain. | 0.16 | 0.72 |
| A8. I stay with the woman in pain as she desires. | 0.42 | -0.52 |

Extraction method: principal component analysis. A 2 components extracted.

## Rotated component matrix

| Component | 1 | 2 |
|---|---|---|
| A1. To work with pain during normal delivery, i give full support to women to help them cope with pain. | 0.81 | 0.16 |
| A2. To work with pain during normal delivery, i give full encouragement to women to help them cope with the pain. | 0.79 | 0.31 |
| A14. I do my best to help address women's needs during labour. | 0.74 | 0.21 |
| A11. I render thorough education according to the woman's needs. | 0.71 | 0.10 |
| A6. I am attentive to the needs of women in pain. | 0.68 | 0.23 |
| A8. I stay with the woman in pain as she desires. | 0.62 | -0.25 |
| A4. I work as a partner of women in labour pain. | 0.61 | 0.33 |
| A13. I let women understand that pain is part of the process in normal birth. | 0.60 | 0.50 |
| A10. I provide accurate information based on the woman's needs. | 0.55 | 0.29 |
| A5. I am vigilant to the needs of women in pain. | 0.54 | 0.42 |
| A3. Pain plays an important role in the physiology of normal birth. | 0.25 | 0.78 |
| A9. I strictly abide with hospital routine care for women in pain. | -0.22 | 0.70 |
| A12. I motivate women that normal birth can be medication-free. | 0.33 | 0.58 |
| A7. I can recognize complications related to coping with pain by the way women express their pain. | 0.29 | 0.53 |

Extraction method: principal component analysis. Rotation method: varimax with kaiser normalization. A rotation converged in 3 iterations.

## Component transformation matrix

| Component | 1 | 2 |
|---|---|---|
| 1 | 0.87 | 0.50 |
| 2 | -0.50 | 0.87 |

Extraction method: principal component analysis. Rotation method: varimax with kaiser normalization.

## Factor analysis (SQW)

### Communalities (expectations)

| | Initial | Extraction |
|---|---|---|
| *B1. Utilize a wide range of resources to assist the woman | 1.000 | 0.51 |
| B2. Provide a thorough and ongoing assessment | 1.000 | 0.52 |
| B3. Follow-up on care | 1.000 | 0.55 |
| B4. Timely in clinical actions | 1.000 | 0.51 |
| B5. Provide continuity of care | 1.000 | 0.50 |
| B6. Provide adequate time to meet our needs | 1.000 | 0.56 |
| B7. Listen carefully and respond appropriately to our needs | 1.000 | 0.63 |
| B8. Provide encouragement that we can cope with pain | 1.000 | 0.55 |
| B9. Maintain a supportive presence in labour | 1.000 | 0.55 |
| B10. Assist women in pain to gain confidence | 1.000 | 0.62 |

Extraction method: principal component analysis. * B represents expectation with component number. For example: B1, B represents item one in expectation survey. 1 represents component number.

### Total variance explained

| Component | Initial eigenvalues | | | Extraction sums of squared loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 5.50 | 54.97 | 54.97 | 5.50 | 54.97 | 54.97 |
| 2 | 0.94 | 9.35 | 64.32 | | | |
| 3 | 0.67 | 6.65 | 70.97 | | | |
| 4 | 0.60 | 6.04 | 77.01 | | | |
| 5 | 0.57 | 5.69 | 82.70 | | | |
| 6 | 0.39 | 3.94 | 86.64 | | | |
| 7 | 0.39 | 3.87 | 90.51 | | | |
| 8 | 0.38 | 3.77 | 94.27 | | | |
| 9 | 0.31 | 3.08 | 97.35 | | | |
| 10 | 0.27 | 2.65 | 100.00 | | | |

Extraction method: principal component analysis

### Component matrix

| | Component 1 |
|---|---|
| B1. Utilize a wide range of resources to assist the woman | 0.71 |
| B2. Provide a thorough and ongoing assessment | 0.72 |
| B3. Follow-up on care | 0.74 |
| B4. Timely in clinical actions | 0.71 |
| B5. Provide continuity of care | 0.71 |
| B6. Provide adequate time to meet our needs | 0.72 |
| B7. Listen carefully and respond appropriately to our needs | 0.79 |
| B8. Provide encouragement that we can cope with pain | 0.74 |
| B9. Maintain a supportive presence in labour | 0.74 |
| B10. Assist women in pain to gain confidence | 0.79 |

Extraction method: principal component analysis. A 1 components extracted.

### Communalities (perceptions)

| | Initial | Extraction |
|---|---|---|
| *C1. I am completely satisfied with the service given to me by my midwife. | 1.000 | 0.91 |
| C2. I owe it to my midwife that i got through with my labour pain. | 1.000 | 0.87 |
| C3. My midwife was very patient and caring. | 1.000 | 0.88 |
| C4. My needs were perfectly addressed by my midwife. | 1.000 | 0.89 |
| C5. I liked the way my midwife treated me; i hope that in my next delivery (if ever) she will still be the one to attend to me. | 1.000 | 0.90 |

Extraction method: principal component analysis. C*represents perception items with component number. For example: C1, C represents item one in perception survey. 1 represents component number.

### Total variance explained

| Component | Initial eigenvalues | | | Extraction sums of squared loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 4.45 | 88.98 | 88.80 | 4.45 | 88.98 | 88.98 |
| 2 | 0.19 | 3.78 | 92.76 | | | |
| 3 | 0.15 | 3.08 | 95.84 | | | |
| 4 | 0.12 | 2.36 | 98.20 | | | |
| 5 | 0.09 | 1.80 | 100.00 | | | |
| Extraction method: principal component analysis. | | | | | | |

### Component matrix

| | Component 1 |
|---|---|
| C1. I am completely satisfied with the service given to me by my midwife. | 0.95 |
| C2. I owe it to my midwife that i got through with my labour pain. | 0.93 |
| C3. My midwife was very patient and caring. | 0.94 |
| C4. My needs were perfectly addressed by my midwife. | 0.95 |
| C5. I liked the way my midwife treated me; i hope that in my next delivery (if ever) she will still be the one to attend to me. | 0.95 |
| Extraction method: principal component analysis. A 1 components extracted. | |

## Reliability (SQM)

### Reliability analysis - scale (knowledge)

| Item Means | Mean | Minimum | Maximum | Range | Max/Min | Variance |
|---|---|---|---|---|---|---|
| | 0.164 | 3.82 | 2.63 | 4.20 | 1.57 | 1.60 |
| Item Variances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.03 | 0.72 | 0.45 | 1.05 | 0.60 | 2.35 |
| Inter-Item Covariances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.02 | 0.24 | -0.17 | 0.58 | 0.74 | -3.51 |
| Inter-Item | | | | | | |
| Correlations | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.03 | 0.35 | -0.19 | 0.83 | 1.02 | -4.30 |
| N of cases = 60 | | | | | | |

## Item-total statistics

| | Scale Mean If Item Deleted | Scale Variance If Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Alpha If Item Deleted |
|---|---|---|---|---|---|
| A1 | 49.33 | 46.29 | 0.67 | 0.81 | 0.86 |
| A2 | 49.35 | 45.28 | 0.76 | 0.81 | 0.86 |
| A3 | 49.37 | 46.47 | 0.57 | 0 .66 | 0.87 |
| A4 | 49.90 | 46.36 | 0.64 | 0 .59 | 0 .86 |
| A5 | 49.62 | 45.63 | 0.62 | 0.71 | 0.86 |
| A6 | 49.72 | 46.17 | 0.64 | 0.72 | 0.86 |
| A7 | 49.40 | 49.19 | 0.45 | 0.54 | 0.87 |
| A8 | 50.02 | 49.88 | 0.3127 | 0.40 | 0.88 |
| A9 | 50.85 | 51.15 | 0.14 | 0.28 | 0.89 |
| A10 | 49.50 | 48.29 | 0.54 | 0.63 | 0.87 |
| A11 | 49.65 | 48.64 | 0.56 | 0.69 | 0.87 |
| A12 | 49.67 | 46.12 | 0.51 | 0.57 | 0.87 |
| A13 | 49.28 | 45.60 | 0.70 | 0.73 | 0.86 |
| A14 | 49.63 | 46.07 | 0.64 | 0.64 | 0.86 |
| Reliability coefficients 14 items. Alpha = 0.88 standardized item alpha = 0.88 | | | | | |

## Reliability analysis - scale (attitude)

| Item Means | Mean | Minimum | Maximum | Range | Max/Min | Variance |
|---|---|---|---|---|---|---|
| | 0.29 | 3.67 | 2.78 | 4.40 | 1.62 | 1.58 |
| Item Variances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.24 | 1.22 | 0.68 | 2.03 | 1.35 | 2.99 |
| Inter-item Covariances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.09 | 0.22 | -0.30 | 1.02 | 1.31 | -3.40 |
| Inter-Item Correlations | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.07 | 0.20 | -0.25 | 0.85 | 1.10 | -3.48 |
| N of cases = 60 | | | | | | |

### Item-total statistics

| | Scale Mean If Item Deleted | Scale Variance If Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Alpha If Item Deleted |
|---|---|---|---|---|---|
| B1 | 36.87 | 29.34 | 0.51 | 0.55 | 0.66 |
| B2 | 37.35 | 29.32 | 0.43 | 0.47 | 0.68 |
| B3 | 36.48 | 34.15 | 0.27 | 0.52 | 0.73 |
| B4 | 36.03 | 33.70 | 0.38 | 0.79 | 0.69 |
| B5 | 36.15 | 32.67 | 0.48 | 0.79 | 0.68 |
| B6 | 36.53 | 33.88 | 0.28 | 0.38 | 0.70 |
| B7 | 37.10 | 31.92 | 0.34 | 0.45 | 0.69 |
| B8 | 36.28 | 32.51 | 0.48 | 0.57 | 0.68 |
| B9 | 37.53 | 31.58 | 0.30 | 0.44 | 0.70 |
| B10 | 35.92 | 33.77 | 0.28 | 0.39 | 0.70 |
| B11 | 36.92 | 32.76 | 0.27 | 0.55 | 0.71 |
| Reliability coefficients 11 items. Alpha = 0.71 standardized item alpha = 0.73 | | | | | |

## Reliability (SQW)

### Reliability analysis - scale (expectations)

| Item Means | Mean | Minimum | Maximum | Range | Max/Min | Variance |
|---|---|---|---|---|---|---|
| | 0.01 | 4.52 | 4.40 | 4.60 | 0.20 | 1.05 |
| Item Variances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.004 | 0.36 | 0.27 | 0.46 | 0.19 | 1.70 |
| Inter-Item Covariances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.001 | 0.18 | 0.13 | 0.30 | 0.17 | 2.27 |
| Inter-Item Correlations | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.01 | 0.50 | 0.38 | 0.66 | 0.28 | 1.74 |
| N of cases = 360 | | | | | | |

### Item-total statistics

| | Scale mean If item deleted | Scale variance if item deleted | Corrected item-totalcorrelation | Squared multiple correlation | Alpha if item deleted |
|---|---|---|---|---|---|
| B1 | 40.63 | 16.66 | 0.63 | 0.46 | 0.90 |
| B2 | 40.82 | 16.23 | 0.66 | 0.50 | 0.90 |
| B3 | 40.62 | 16.78 | 0.67 | 0.51 | 0.90 |
| B4 | 40.70 | 16.15 | 0.64 | 0.46 | 0.90 |
| B5 | 40.73 | 16.60 | 0.63 | 0.47 | 0.90 |
| B6 | 40.81 | 15.94 | 0.68 | 0.56 | 0.90 |
| B7 | 40.78 | 15.52 | 0.74 | 0.59 | 0.90 |
| B8 | 40.64 | 16.53 | 0.70 | 0.51 | 0.90 |
| B9 | 40.64 | 16.72 | 0.66 | 0.56 | 0.90 |
| B10 | 40.64 | 15.94 | 0 .72 | 0.57 | 0.90 |
| Reliability coefficients 10 items. Alpha = 0 .91 standardized item Alpha = 0.91 | | | | | |

### Reliability analysis - scale (perceptions)

| Item means | Mean | Minimum | Maximum | Range | Max/Min | Variance |
|---|---|---|---|---|---|---|
| | 0.002 | 3.43 | 3.36 | 3.47 | 0.12 | 1.04 |
| Item Variances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.01 | 1.43 | 1.32 | 1.56 | 0.24 | 1.18 |
| Inter-Item Covariances | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.004 | 1.23 | 1.14 | 1.35 | 0.21 | 1.19 |
| Inter-Item Correlations | Mean | Minimum | Maximum | Range | Max/Min | Variance |
| | 0.0004 | 0.86 | 0.83 | 0.90 | 0.06 | 1.08 |
| N of cases = 360 | | | | | | |

### Item-total statistics

| | Scale Mean If Item Deleted | Scale Variance If Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Alpha If Item Deleted |
|---|---|---|---|---|---|
| C1 | 13.70 | 20.35 | 0.92 | 0.86 | 0 .96 |
| C2 | 13.72 | 21.08 | 0.90 | 0.80 | 0.96 |
| C3 | 13.68 | 20.62 | 0.90 | 0.83 | 0.96 |
| C4 | 13.79 | 20.60 | 0.91 | 0.85 | 0.96 |
| C5 | 13.71 | 20.02 | 0.92 | 0.86 | 0.96 |
| Reliability coefficients 5 items. Alpha = 0.97 standardized item alpha = 0.97 | | | | | |

# Tables

### Table 1. Table of required sample size

| Acceptable margin of error | Population size | | | | | |
|---|---|---|---|---|---|---|
| | Large | 5000 | 2500 | 1000 | 500 | 200 |
| +/- 20% | 24 | 24 | 24 | 23 | 23 | 22 |
| +/- 15% | 43 | 42 | 42 | 41 | 39 | 35 |
| +/- 10% | 96 | 94 | 93 | 88 | 81 | 65 |
| +/- 7.5% | 171 | 165 | 160 | 146 | 127 | 92 |
| +/- 5% | 384 | 357 | 333 | 278 | 217 | 132 |
| +/- 3% | 1067 | 880 | 748 | 516 | 341 | 169 |

Conroy, R. available at: https://beaumontethics.ie/docs/application/samplesizecalculation.pdf.

### Table 2. Interpretation of respondents' scores in the Likert scale

| Upper & lower limits | Scale point | Knowledge about labour pain | Attitude towards labour pain | Women's expectation | Women's perception towards midwives |
|---|---|---|---|---|---|
| 4.51 – 5.00 | 5 | Very High | Very Positive | Very High | Very Positive |
| 3.51 – 4.50 | 4 | High | Positive | High | Positive |
| 2.51 – 3.50 | 3 | *Average | *Neutral | *Average | *Neutral |
| 1.51 – 2.50 | 2 | Low | Negative | Low | Negative |
| 1.00 – 1.50 | 1 | Very Low | Very Negative | Very Low | Very Disloyal |

*Neutral means neither Positive nor Negative. *Average means neither High nor Low

**Table 3. Modifications to the Survey Questionnaire for Midwives (SQM)**

| Changes | Item before review | Item after review |
|---|---|---|
| **Instructions** | Please rate your extent of agreement or disagreement to the statements below | Please rate your extent of agreement or disagreement to the statements below. All questions concern knowledge level and attitude toward labour pain in normal labour. |
| **Knowledge Part A** | 1. To work with pain during normal delivery, i give full support to women to help them cope with pain. | 1. To work with pain during normal delivery, i give full support to women to help them cope with pain.<br>2. To work with pain during normal delivery, i give full encouragement to women to help them cope with the pain. |
| **Knowledge Part A** | 4. I am vigilant and attentive to the needs of women in pain. | 5. I am vigilant to the needs of women in pain.<br>6. I am attentive to the needs of women in pain. |
| **Knowledge Part A** | 5. I can recognize complications by the way women express their pain. | 7. I can recognize complications related to coping with pain by the way women express their pain |
| **Knowledge Part A** | 6. I maintain a supportive presence in labour, staying with the woman in pain as she desires | 8. I stay with the woman in pain as she desires. |
| **Knowledge Part A** | 8. I provide thorough education & accurate information based on the woman's needs | 10. I provide accurate information based on the woman's needs.<br>11. I render thorough education according to the woman's needs. |
| **Knowledge Part A** | 9. I motivate women that normal birth delivery can be medication-free and pain is just part of the normal process | 12. I motivate women that normal birth can be medication-free.<br>13. I let women understand that pain is part of the process in normal birth. |
| **Attitude Part B** | 1. Labour pain is normal; women can manage it so they can be left alone. | 1. Labour pain is normal so women can be left alone to manage the pain. |
| **Attitude Part B** | 2. The focus of care for women in labour pain is to reduce the pain; so, women must be given pain relievers during intense labour pain even if normal delivery is expected. | 2. The focus of care for women in labour pain is to reduce the pain; so, women must be given pain reliever during intense labour pain even if they do not ask for it. |
| **Attitude Part B** | 4.encouraging words-of-advice will reduce women's anxiety and boost their ability to manage labour pain | 4. Encouraging words-of-advice will reduce women's anxiety.<br>5. Encouraging words-of-advice will boost women's ability to manage labour pain. |
| **Attitude Part B** | 10. When assistance desired by a woman in pain is not part of my routine, i don't see the importance of providing it. | 11. When a woman in pain desires an assistance of pain relief that is not part of my routine, i don't provide it. |

**Table 4. Summary of descriptive statistics**

| Variable | N | Minimum | Maximum | Mean | SD |
|---|---|---|---|---|---|
| Midwives' expectations | 360 | 3 | 5 | 4.52 | 0.449 |
| Woman's perceptions | 360 | 1 | 5 | 3.43 | 1.129 |
| Valid n (list wise) | 360 | | | | |

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