

**An exploration of midwives'
approaches to slow progress of
labour in birth centres, using case
study methodology**

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ABSTRACT

Background: Slow progress of labour (SPL) occurs in 3-37% of all labours. It constitutes the main cause of primary caesarean section (CS) and is associated with operative births, maternal and foetal morbidity, and a negative birthing experience. SPL is also the principal reason for the transfers of women from midwife-led units (MLUs) or their home, to hospitals. The current standard medical management of SPL, including intravenous administration of synthetic oxytocin and artificial rupture of membranes (ARM), has been increasingly questioned and the need for alternatives recommended. A midwifery approach to SPL represents a possible important alternative. However, contemporary literature shows a surprising dearth of research concerning midwives' approaches to SPL. Birth centres appear ideal settings for exploring a midwifery approach to SPL, given the strong midwifery philosophy and the relevance of SPL reported in these contexts.

Aim: To explore midwives' approaches to SPL in birth centres, focusing in particular on midwives' understanding of the phenomenon, diagnostic process, clinical management and decision-making.

Methods: A qualitative multiple case study, underpinned by a critical realist perspective. Midwives' approaches to SPL represented the 'case' of interest; an Italian alongside- (AMU) and an English freestanding- (FMU) midwifery units were purposively selected as case-sites. Data was collected between November 2012 and July 2013, after obtaining all necessary ethical approvals. An inductive reasoning, and triangulation logic characterised data collection. Multiple methods were adopted including individual semi-structured interviews, focus groups, observations and document reviews. Practising midwives, midwife managers and two lead obstetricians were included as participants after obtaining written informed consent. Data was analysed at two levels, within-case and cross-case, using a thematic analysis. Findings from the cross-case analysis supported the development

of assertions and final conceptualisation regarding midwives' approaches to SPL in birth centres.

Findings: At the Italian site, midwives identified SPL as *the* problem of their care in the AMU. They perceived the process of recognition of this phenomenon as an engaging challenge and attempted to untangle the main cause amongst the many intertwined ones, in order to tailor their approach. Dealing with SPL represented a struggle; midwives adopted several different interventions and their decisions appeared enabled or constrained by numerous factors, especially the problematic relationship with the hospital staff. At the English site, SPL was not considered an issue, midwives were keen in looking at diagnostic and causal factors of SPL within a bigger picture. Midwives' interventions aimed at giving women the best chance to overcome SPL and give birth in the FMU. The several influential factors were managed by many midwives through experience.

Across cases, midwives' understanding of SPL varied. SPL was acknowledged to result from a complex interaction of causes. Early labour was considered a critical stage for the development of SPL. The process of recognition of SPL appeared a dynamic one and aimed at reaching an objective diagnosis. Distinguishing whether SPL represented a physiological rest or arrest of labour progress represented an emerging dilemma. Midwives tailored interventions to single situations. Some interventions appeared to be fundamental to midwifery care, whilst others depended on various factors. Midwives' relationships with all factors in the context appeared to be pivotal for both performing interventions and decision-making.

Conclusion: This is the first case study exploring midwives' approaches to SPL in birth centres, in both an English and an Italian context. This research outlines midwives' approaches to SPL as a result of a complex and dynamic system. Midwives' understanding, identification, clinical management of SPL and decision-making represents a multifaceted and stratified reality. The individual characteristics of the women, the birth attendants, the

midwife, and colleagues, as well as the relationships occurring in this context, represent the main factors whose variable interactions may result in variable manifestations of the midwifery approach. On the basis of the findings of this research, recommendations are made for midwifery practice, education and research.

“Man’s life consists in the affection that principally sustains him and in which he finds his greatest satisfaction.”

(St.Thomas D’Aquinus)

To

My family;

Carlo;

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GLOSSARY OF TERMS AND ABBREVIATIONS

AMED	Allied and Complementary Medicine Database
AMU	Alongside Midwife-led Unit: a unit that provides labour and birth care led by midwives for women categorised as at low risk. It is a distinct service but proximate to obstetric-led maternity units, most often within the same building (McCourt <i>et al.</i> , 2014, p.xvii)
ARM	Artificial Rupture of Membranes
ASSIA	Applied Social Sciences Index and Abstracts
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CR	Critical Realism
CS	Caesarean Section
CT	Complementary Therapies: treatments given together with conventional treatments that are based on a holistic approach. There are five major types of these therapies: whole medical systems (e.g. naturopathy, traditional Chinese medicine); mind-body medicine (e.g. meditation, prayer); biologically based practices (e.g., vitamins, herbal products, nutritional supplements); manipulative and body-based practices (e.g., massage, chiropractic); and energy medicine (e.g., reiki, qi gong)(National Center for Complementary and Alternative Medicine, 2015).
EMBASE	Excerpta Medica Database
FMU	Freestanding Midwife-led Unit: a unit that provides labour and birth care led by midwives for women categorised as at low risk. It provides a distinct service, on a separate site from obstetric-led maternity units, such that if transfers are required, it

would be by car or ambulance. Midwifery units on the same site as community hospitals or clinics without an OU are categorised as free-standing (McCourt *et al.*, 2014, p.xvii).

MEDLINE	Medical Literature Analysis and Retrieval System Online
MeSH	Medical Subject Headings
MLU	Midwife-led Unit or Midwifery Unit: a unit where midwives take the primary professional responsibility for labour care. Midwifery units offer care to women with straightforward pregnancies (McCourt <i>et al.</i> , 2014, p.xvii). The term midwifery-led unit is used interchangeably with the most common term birth centre.
NHS	National Health System
OU	A labour ward within a hospital that provides obstetric services (facilities and doctors including obstetricians and anaesthetists) as well as antenatal and postnatal care. The ward for labour and birth is more commonly referred to as a 'labour ward', 'delivery suite' or 'hospital birth centre'. Obstetric care is led at consultant level. A woman developing complications during labour or birth in an OU would not normally require transfer elsewhere, except in rare cases of more specialist maternal or neonatal care being required. Individual women who are 'low-risk' may receive care led by midwives within an OU, particularly those requiring epidural anaesthesia (McCourt <i>et al.</i> , 2014, p.xvii).
SSN	Sistema Sanitario Nazionale (National Health System in Italian language)
SPL	Slow Progress of Labour
TCM	Traditional Chinese Medicine

WHO

World Health Organization

1 INTRODUCTION

This thesis is the result of a doctoral project aimed at exploring midwives' approaches to SPL in birth centres. This research was developed from a strong midwifery perspective with the main object of the exploration being the midwifery approach and the principal explorer being a midwife (the researcher). This study undertook data collection in two different MLUs² in two different countries (Italy and England). It involved the participation of practising midwives, as well as managers and a few doctors, and entailed the management of an overwhelming amount of data and work that, in different ways, occupied the time of four academic years.

The ultimate objective of this work was to offer a better understanding of the approaches actually used by midwives when dealing with SPL in their everyday practice, given the great relevance of this problem for maternal and public health, but also considering its impact on organisations and midwifery care. The features of the midwifery approach which have emerged in this exploration have helped to identify current challenges, areas for further research and improvement in education so as to delineate recommendations for the future.

The following sections will illustrate the researcher's personal motivation for venturing into such an exploration, the relevance of SPL in a global scenario, and an overview of the structure of the thesis. The overview will function as a conclusion of the introduction and leave the reader to enter into the heart of the exploration in the following chapters.

1.1 SPL in birth centres: a personal problem

Providing a personal perspective while referring to yourself impersonally as a 'researcher' can be challenging, though not impossible; for this reason,

² The terms 'birth centres' and 'MLUs' are used as synonyms in the current work.

the choice here is to abandon for a moment, the academic style employed for this doctoral thesis and provide some initial personal reflections through the 'I' voice. My interest in the topic of this thesis originated mainly from my experience as a midwife and my personal curiosity and desire to know more about the characteristics and the meaning underpinning the reality before me. After years of practice in community and hospital settings, I had the privilege of working at the Margherita Birth Centre in Florence, one of the few MLUs currently existing in Italy (Iannuzzi and Morano, 2015). From my experience in the Margherita I became aware of all of the problems connected to a woman's slowing/arrest of labour progress, awareness that seemed to be forced by the relatively frequent transfers of women to the alongside host unit because of dystocia and in particular of functional dystocia. The approaches adopted by my colleagues and I seemed to be helpful in many cases but not sufficient in 'controlling' and overcoming the problem. Moreover, that problem seemed to be so able to bring out the best and the worst of childbirth, to disempower and empower women and attendants. It managed to generate frustration when women had to change the birth place and the model of care they had chosen to give birth, or the incredible sense of reward when after struggles and suffering faced together, the baby was finally welcomed by midwives, women and partners in the birth centre. My ultimate questions were 'why is dystocia so frequent? Why are the approaches we use not effective? What more can we do or even what can we do differently? Is there any other way or 'midwifery trick' that I can take from other midwives' experience?'. The present research originated from the search for answers to those questions and to the multiple others that came up after working on the literature and discovering that what had seemed to be relevant to me was actually relevant for midwifery worldwide.

1.2 The relevance of the topic

According to Kjaergaard *et al.* (2009, p.402), the ‘study of the epidemiology of dystocia³’ is highly important both ‘from a public health and a clinical perspective’. Dystocia is, indeed, considered to be ‘one of the most vexing, complex and unpredictable complications in labour’ (Simkin and Ancheta, 2011, p.3). This phenomenon appears to be complicated by the existing lack of *consensus* around its definition, diagnosis and management (Ness *et al.*, 2005; Kjaergaard *et al.*, 2009; Karaçam *et al.*, 2014). Given these flaws, it is hard to attain a quantification of the real scale of the problem, nevertheless the variable rates suggest that dystocia occurs frequently worldwide. Authors have indeed reported incidences from 3-8% (Algovik and Lagercrantz, 1999) to about 20%-37% (Neilson *et al.*, 2003; Zhu *et al.*, 2006; Kjaergaard *et al.*, 2009) of all births. According to Kjaergaard *et al.* (2009), the rates are generally higher among nulliparous compared to multiparous women. *Nulliparae* are also more likely to face both forms of dystocia (i.e. mechanical and functional⁴), while *multiparae* deal with a mechanical dystocia in most cases (Zhu *et al.*, 2006).

One of the main impacts of SPL on women’s health is the increased risk of caesarean section (CS). In fact, worldwide dystocia represents the primary cause of CS, especially among nulliparous women (Gifford *et al.*, 2000; ACOG, 2003; Ness *et al.*, 2005; Bugg *et al.*, 2011; Boyle *et al.*, 2013; Cahill and Tuuli, 2013; Caughey, 2014). For this reason, authors have indicated the surveillance of the phenomenon of SPL as being crucial in order to achieve the goal of a global reduction of CS rates (Boyle *et al.*, 2013). The high risk of CS has been partly justified by the presence of maternal risk factors, but also with the cascade of medical (inappropriate) interventions that

³ Dystocia is used by many authors as synonym of SPL.

⁴ As summarised by Karaçam *et al.* (2014), mechanical dystocia indicates any form connected to an obstruction while functional dystocia indicates any slowing of labour progress due to problems with the uterine activity.

generally follows the diagnosis of dystocia (Zhang *et al.*, 2002; Page and McCandlish, 2006; Simkin and Ancheta, 2011).

SPL has also been associated with high maternal and neonatal morbidity, instrumental deliveries (Cluett *et al.*, 2004; Bugg *et al.*, 2006; Selin *et al.*, 2009) and negative birth experiences for women (Waldenström *et al.*, 2004; Nystedt *et al.*, 2005, 2008; Nystedt and Hildingsson, 2014).

Additionally, SPL represents a primary cause of intrapartum transfer of women to OUs (OUs) in non-hospital settings (Hollowell *et al.*, 2011; Shazly *et al.*, 2014). Amongst the out-of-hospital contexts, the issue appears to be more relevant in MLUs compared to home settings (Hollowell *et al.*, 2011).

1.3 Structure of the thesis

After the introduction to the relevance of the topic provided in this chapter, **Chapter 2** outlines the issues connected to midwives' approaches to SPL which have emerged from the literature review. The chapter considers in particular, the debates around the definition, aetiology, recognition and management of SPL. It also offers a historical perspective aimed at highlighting the way the phenomenon was presented to, and approached by midwives and how this has changed throughout time. The chapter continues by outlining the dearth of research on midwives' approaches to SPL, the need for an investigation in this area and the identification of birth centres as the ideal setting for conducting an exploration of the phenomenon. The chapter concludes with a description of the aim of the research and research questions on which the research is predicated.

Chapter 3 explains the methodological choices and philosophical assumptions underpinning the research. In particular, the rationale for adopting a qualitative approach and conducting a multiple case study within a critical realist perspective. The reader can find a detailed description here of the methods utilised for the data collection and data analysis. The chapter concludes with some final ethical considerations.

The research findings are illustrated in the manuscript throughout the next three chapters: Chapter 4, 5 and 6. **Chapter 4** illustrates the results from the exploration of the case at the Italian site, whilst **Chapter 5** displays what emerged from the English site. Both chapters provide a description of the local and broader context of the exploration, of the sources adopted and the themes identified in each within-case analysis. **Chapter 6** outlines the similarities and differences which have emerged from the cross-case analysis and offers general assertions regarding the midwifery approach to SPL in birth centres grounded on the study results.

Chapter 7 discusses the findings and conceptualisation of the approaches adopted by midwives to SPL in relation to the literature. A reflexive account of the research and the researcher's journey is outlined within this discussion to enrich the considerations provided.

Chapter 8 presents the conclusion of this work and offers recommendations for practice, research and education based on the current research.

2 LITERATURE REVIEW

This chapter will firstly illustrate the literature review strategy adopted in the current work. It will then provide background information regarding the phenomenon of SPL and its standard (medical) management before focusing on the literature related to the midwifery approaches to SPL. A historical perspective will be next offered in order to provide an overview of the changes of the concept of prolonged labour and the related midwifery care that has occurred throughout the last seven decades. Finally, a summary of the chapter will be presented and will serve as an introduction to the research aim and questions.

2.1 The literature review strategy

The aim of the literature review was to seek evidence and information concerning midwives' approaches to SPL. However, a dearth of studies on the specific topic immediately emerged, and consequently the search was broadened. This broader exploration allowed for a background of knowledge concerning SPL to be explored, and illuminated the possible challenges and resources of a midwifery approach to this problem in everyday practice.

The literature review was conducted between October 2011 and May 2012. Auto-alerts were set within databases in order to receive regular updates of relevant material throughout the entire PhD journey. The examined databases included: THE COCHRANE LIBRARY; CINHAL; MEDLINE (OVID 1950); AMED; MATERNITY AND INFANT CARE; EMBASE; and ASSIA. Both Medical Subject Heading (MeSH) terms and free-text keywords were utilised (see Appendix 1 for the search terms used). The only limits applied to the databases were the English or Italian language. Relevant books, professional journals and magazines, PhD theses, abstracts and conference proceedings were also searched and examined as part of the literature review.

2.2 Definition of SPL

One of the first features of SPL emerging from the literature search was the absence of an unequivocal definition of the phenomenon. The difficulty in finding a definition universally accepted seems related to the diversity and ambiguity in professionals' interpretations on what really constitutes a SPL (Zhang *et al.*, 2002; Cunningham *et al.*, 2010; Neal and Lowe, 2012). Although the definition of SPL could appear self-evident, indicating a circumstance where a woman's progress of labour is slow, problems arise when questions such as 'slow compared to what?' are posed. This illuminates the absolute connection between discourses on normal labour length and progress and the definition of SPL.

2.2.1 Definition of normal labour length: the influence of Friedman's curves

Friedman's studies (Friedman, 1954, 1955, 1956; Friedman and Kroll, 1969; Friedman, 1978) and the introduction of the partogram of Philpott and Castle (1972) certainly produced an authoritative knowledge⁵ (Jordan, 1993; Davis-Floyd and Sargent, 1997) imposing standards of normal length of labour and criteria for the recognition of SPL for decades (Downe and Dykes, 2009; Simkin and Ancheta, 2011; Walsh, 2012a). In his first work, Friedman observed labour progress in a small, non-homogenous sample of the population measuring the progression of women's cervical dilatation over time, through rectal examinations performed approximately hourly. The findings were used to create a curve –the Friedman's curve – that aimed at representing the average/standard labour progress in women (Friedman, 1954). Friedman's curves soon became the authoritative guidance for defining a 'normal' labour progress in most countries; a cervical dilatation of 1.2 cm/h in nulliparas and 1.5 cm/h in multiparas in

⁵ According to Davis-Floyd and Sargent (1997, p.238) the authoritative knowledge is the knowledge that counts, 'on the basis of which decisions are made and actions taken'.

active labour was stated as the pattern of normality (Friedman, 1955). Any deviation from those patterns, including slower rates of cervical dilatation, was assumed to be indicative of abnormality, thus instances which required medical interventions.

From Friedman's studies developed the partogram. This is a tool for professionals where features of cervical dilatation and foetal head descent progress can be plotted and other relevant information in labour (i.e. woman's pulse, temperature) recorded (Philpott and Castle, 1972). The key function of the partogram is to enable early detection of anomalies in labour progress by comparing a woman's labour progress with the standard 'normal' baseline (based on Friedman's work) provided in the tool (Enkin *et al.*, 2000).

The partogram of Philpott and Castle (1972), subsequently adapted by Studd (1973), is one of the most widely adopted models in Western healthcare (Duff, 2005). The authors' intention was to offer an additional aid for professionals' decision-making by creating a graph, the 'partograph', within which 'alert' and 'action' lines were introduced to delineate sharp boundaries between normal and abnormal labour. The underpinning of a normal cervical dilatation rate was defined by a mean of 1 cm/h (Walsh, 2000). This became the accepted standard for establishing the normality of labour progress. Subsequently, slow labour was labelled as such when the dilatation of the cervix was below this trend or when the recording of a woman's cervical dilatation passed the alert line and 'crossed' the action line in the partogram.

2.2.2 Critiques to Friedman's studies and questions on the use of partogram

The assessment of labour progress based on Friedman's curves and the adoption of the partogram have been increasingly called into question (Downe and Dykes, 2009; Walsh, 2012a) and Friedman's original study judged as ethically and methodologically questionable (Duff, 2005).

Critiques of Friedman's curves include their non-representativeness of the real progress and length of physiological labours (Albers, 1999; Zhang *et al.*, 2002; Lavender *et al.*, 2005). Friedman's criteria has also been described as restrictive and disrespectful of the physiology of birth (Zhang *et al.*, 2002; Neal *et al.*, 2010). Moreover, authors view the traditional curves and partograms as expression of a dominant bio-medical paradigm (Downe and Dykes, 2009) opposed to a social model of care (Walsh and Newburn, 2002; Kirkham, 2003; MacKenzie Bryers and van Teijlingen, 2010; Walsh, 2012a). Bio-medical models of childbirth adopt an industrialised and linear concept of time for assessing labour and tend to force the individual variability of a women's labour into pre-set standards. These standards also depend on hospital needs or even professionals' convenience (McCourt, 2009; Cheyne *et al.*, 2013). Although the partogram has been widely accepted by professionals in various countries and ethnic groups, its undifferentiated adoption in different socio-cultural contexts and systems of care has appeared inappropriate (Groeschel and Glover, 2001, Lavender *et al.*, 2012).

The use of the partogram as a tool has been particularly questioned by a recent Cochrane review (Lavender *et al.*, 2012). The review aimed at determining the effects of the use of partogram and of its different designs on outcomes of women with spontaneous labour at term. The authors' conclusions outlined that the routine use of partogram is not supported by evidence. Nevertheless, the partogram remains widely implemented in maternity services and decision on its adoption left to local discussions pending further research.

For many authors, the general assumption underpinning partograms –i.e. that all women should labour in accordance to set standards, leads to misinterpretations of normal progress, thus of SPL. As a result, unjustified and potentially harmful interventions are routinely performed to women (Saunders *et al.*, 1992; Walraven, 1994; Downe and Dykes, 2009, p.71; Wiberg-Itzel *et al.*, 2010; Lavender *et al.*, 2012).

Attempts have been made to offer alternatives to Friedman's curves and to partograms. In particular, based on a large observational study, Zhang and colleagues (2002) developed an original 'step-like' model of labour progress. According to this model, professionals should not consider a labour as established before 5-6 cm of cervical dilatation and different criteria should characterise the identification of SPL before or after this point of reference (Walsh, 2012b).

Neal and Lowe (2012) has proposed a new model of partogram based on Zhang's curves. The authors claimed the creation of a 'physiological evidence-based' alternative for low risk women to the partogram of Philpott and Castle. In this partogram the alert and action lines are replaced with a 'dystocia line' which is used to suggest interventions in case of SPL. According to this model, SPL is identified by the presence of a delay of 4 hours in the cervical dilatation once the active phase of labour has started (after a dilatation equal/above 5 cm). This partogram has immediately appeared less restrictive than the Philpott and Castles model, although it still suggests a 'standard' progress for the whole population of women. The adoption of this tool needs further investigation and testing in order to make sound assertions on its merit and value as an alternative to the partograms currently in use.

According to Downe and Dykes (2009), some midwives are seeking models that might reflect the individual complexity of labour progress and in doing so have moved from the adoption of medical models (e.g. the use of partogram) back to fundamental midwifery skills in assessing the labour progress. These fundamental skills include the use of 'visual' signs and 'intuitive' knowledge (Winter and Duff, 2009).

2.2.3 Wording for SPL

Clarity on the definition of SPL is hard to attain, considering not only the criteria adopted, but also the variable terminology in use. In fact, according to Friedman (1978), there are approximately 65 different terms adopted to

indicate the same phenomenon of abnormal progress of labour. This lack of clarity likely reflects the absence of *consensus* around the topic. The problem of dealing with the *plethora* of different terminologies appears fundamentally unsolved over time (Simkin and Ancheta, 2011).

This *plethora* of terminologies seems to be divided along two main categories: one collects definitions based on the possible causes of SPL. The other gathers terminologies that outline the deviation of labour progress from set patterns of normality.

The first category includes common expressions such as ‘uterine inertia’ (Stålhammar and Boström, 2008), ‘inefficient uterine action’ (Jeffcoate *et al.*, 1952) and ‘dysfunctional labour’ (Hinshaw *et al.*, 2008), that refer more to the role played by uterine contractions. Additionally, terms such as ‘obstructed labour’ (Neilson *et al.*, 2003), ‘mechanical dystocia’ (Zhu *et al.*, 2006) ‘cephalopelvic disproportion’ (O’Driscoll *et al.*, 1984), ‘feto-pelvic disproportion’ (Friedman, 1955) relate more to problems between the baby and the maternal pelvis. Finally, terms such as ‘emotional dystocia’, ‘iatrogenic dystocia’ (Simkin and Ancheta, 2011) or ‘organisational dystocia’ (Anderson, 2004) outline more complex risk factors.

The second more general category includes definitions such as the popular ‘dystocia’ (ACOG, 2003; Algovik *et al.*, 2004) ‘failure to progress’ (Sheiner *et al.*, 2002), ‘poor progress’ (El-Hamamy and Arulkumaran, 2005) ‘delayed labour’ (Mori and Tokumasu, 2011) or ‘prolonged labour’ (Dencker *et al.*, 2009). Such terms appear influenced by discourses around (ab)normality of labour progress and length (see Davis-Floyd and Sargent, 1997; McCourt, 2009). As patterns of normal labour have been increasingly questioned and reconsidered over time (see 2.8), these terms are likely to account for different meanings dependent on the time they were used, even if as labels they might appear unchanged.

Within the above-mentioned plethora of definitions, the one considered more appropriate for the current work was ‘SPL’ as the shortest version of the Cluett *et al.*’s concept of ‘slower than expected labour’ (2004). This

terminology, despite clearly being influenced by the discourse and expectation of normal labour length, allows for the possibility of deviations from the standard to be an expression of normality – something not expressed in terms such as ‘failure to progress’. Such language resonates with the bio-social model of care in midwifery which underpins the present work. Within such a model, differences from standards are seen more as expressions of the individual and the flexible nature of childbirth, rather than anomalies or defects of a sort of mechanical /industrial process as in the bio-medical model (Walsh and Newburn, 2002). Ultimately, this terminology is less restricting and directing than others, and thus provides a broader platform for open and flexible explorations.

2.3 The complex aetiology of SPL

Research on the aetiology of SPL has not identified yet – and probably never could- a single comprehensive mechanism able to explain the phenomenon. Many different factors seem to play a role and contribute singularly or together to slowing a woman’s labour progress. As discussed previously, some terminologies around SPL contain in themselves an indication about the causes. This is certainly the case of the terms ‘mechanical’ and ‘functional’ dystocia, commonly adopted to classify slow progress.

According to Simkin and Ancheta (2011), the causes of SPL can be divided into two main categories: intrinsic and the extrinsic. The intrinsic category consists of foetal and maternal factors commonly considered as the ‘5 Ps’ of labour – the power, passage, passenger, pain and psyche (Lowe, 2007; Simkin and Ancheta, 2011, p.xvii). The most common foetal causes in the literature are malposition, asynclitism, a deflexion and/or lack of engagement of the foetal head and a disproportion of the foetus with the pelvis (Simkin and Ancheta, 2011).

Maternal factors associated with SPL include: a maternal age above 35 years (Sheiner *et al.*, 2002; Treacy *et al.*, 2006; Greenberg *et al.*, 2007); primiparity (ACOG, 2003; Rickles *et al.*, 2007; Kjaergaard *et al.*, 2009); obesity (Zhang *et*

al., 2007; Cedergren, 2009; Lowe and Corwin, 2011); and a maternal height below 150 cm (McGuinness and Trivedi, 1999; Lowe, 2007). Additional risk factors include: a pre-labour rupture of membranes; labour induction; the presence of hypertensive or metabolic disorders; a thick or tense cervix; a dilatation inferior to 4-5 cm of women at admission to labour-wards; a full bladder or rectum; and the use of epidural analgesia (Sheiner *et al.*, 2002; Cluett *et al.*, 2004; Kjaergaard *et al.*, 2008; Selin *et al.*, 2008; Dencker *et al.*, 2009; Simkin and Ancheta, 2011).

Alongside the macroscopic and visible factors associated with SPL suggested above, research has also focused on microscopic and invisible causes. The search for such factors has led to fascinating insights into the uterus (see Wray, 2007). For example, the study of cytokines and inflammatory mediators, have led to the discovery of relationships between chorioamniotitis and SPL (Satin *et al.*, 1992; Mark *et al.*, 2000; Abramov *et al.*, 2004; Duff, 2005). Moreover, Leptin was found to be an inhibitor of uterine contractility in vitro, thus indicating a possible explanation to the association of SPL and obesity (Moynihan *et al.*, 2006). Knight *et al.* (2005) found an association between the abnormal plasma concentrations of the proteolytic enzyme MMP9, involved in remodelling the connective component of the cervix, with SPL related to 'cervical dystocia' (Simkin and Ancheta, 2011, p.24).

There is also evidence of a genetic cause to SPL (Varner *et al.*, 1996; Berg-Lekås *et al.*, 1998; Algovik and Lagercrantz, 1999; Algovik *et al.*, 2004). According to Algovik *et al.* (2004, p.836) alongside a genetic familiarity, a 'psychological inheritance', described as the influence of relatives' experience of SPL on women, might negatively impact a labour progression. Authors also reported a relationship between uterine muscle acidosis, dysfunctional labour and unsuccessful oxytocin administrations (Quenby *et al.*, 2004; Akerud *et al.*, 2009; Wiberg-Itzel *et al.*, 2010; Quenby *et al.*, 2011). Wiberg-Itzel, Pettersson *et al.* (2010) suggested a lactate concentration in the amniotic fluid > 10.1 mmol/l as predictive for SPL and related clinical outcomes.

The hormone catecholamine has also been investigated in the aetiology of SPL (Dencker *et al.*, 2009; Lowe and Corwin, 2011; Simkin and Ancheta, 2011). Relationships between catecholamine, maternal stress and dysfunctional labour first appeared in the 1960's (Lowe, 2007). However, renewed attention on catecholamine was evident following Michel Odent's studies on the neuro-endocrine components of labour (Odent, 1986, 1991).

There are numerous extrinsic causes and risk factors of SPL including elements associated with: birth environment; ethno-cultural characteristics of women; and hospital and caregiver policies. Moreover, Lowe (2007) underlined the role of professionals' beliefs, attitudes, knowledge and skills behind decision-making in the aetiology of SPL. The socio-political environment, including medico-legal influences, and the attitude of women and their families towards childbirth were also included in Lowe's model (2007).

Despite the relative abundance of research as highlighted, it is nevertheless, generally acknowledged that the causes of SPL remain unknown (Dencker *et al.*, 2009).

2.4 The standard (medical) management of SPL

The traditional management of SPL is represented by the intravenous administration of oxytocin and/or the ARM (or amniotomy) and the adoption of the 'active management' as a preventive strategy (Simkin and Ancheta, 2011). The primary goal of SPL management is to accelerate uterine contractions and increase the chance of a vaginal birth, thus reducing the chances of the need for CS due to SPL (Bugg *et al.*, 2006; Shobeiri *et al.*, 2007).

Clark and colleagues (2009) defined the current routine use of chemical oxytocin within maternity services as concerning, given the emerging evidence of adverse perinatal outcomes (e.g. foetal distress) associated with its use. However, such evidence has led authors to question these traditional approaches. For example, Mori and colleagues, (2011) reported

that high doses of oxytocin were effective in shortening labours, increasing the possibility of a vaginal birth and reducing CS rates when compared to low dosages. However, concerns emerged regarding the quality of the related studies and their lack of consideration of women's experience of this kind of care. As a consequence, authors concluded that no firm recommendation can actually be made. In contrast, Bugg *et al.*, (2011) found no differences in CS rates when intravenous oxytocin administration was compared to an expectant management of SPL. The only difference between the two groups was a reduction of two hours in the labour length under the oxytocic regimen, but this was not associated with any advantage in maternal or neonatal outcome. Similarly, Wei *et al.* (2009) evaluated the effectiveness of a policy of early oxytocin administration and early ARM, in the remit of active management of labour; findings showed a mild shortening of labour length and a modest reduction in the rates of CS.

Even the sole use of ARM for shortening labour has been questioned by Smyth and colleagues (2006); the authors did not recommend its routine use and suggested that this management should be considered just as a base for discussion with women.

There is a growing consensus of an 'injudicious over-use' of labour-accelerative interventions that give exposure to unnecessary risks in women and their babies (Neal *et al.*, 2010, p.361). According to Neal *et al.*, these risky interventions are justified in most cases by unrealistic expectations of cervical dilatation. Midwives' approaches to SPL may offer not just an alternative in terms of practices to the accelerative-interventions, but a different framework of care, grounded in a bio-social model of childbirth.

2.5 Between medical and midwifery approaches: the use of intravenous hydration

Dehydration in labour has been mentioned as a cause of SPL (Simkin and Ancheta, 2011) and the policy of 'nil by mouth' is not considered evidence

based intrapartum care (Kenyon *et al.*, 2007). Hydration as a treatment of SPL gained credibility through evidence generated from RCTs in the last decade (Garite *et al.*, 2000; Eslamian *et al.*, 2006; Coco *et al.*, 2010; Kavitha *et al.*, 2012). Intravenous hydration was investigated as a substitute or complementary to oral fluid intake, for the enhancement of uterine activity. Given the lack of evidence, the volume of liquid to administer and evaluate was initially calculated from studies in relation to sporting activity, equating labour to a high muscular performance or prolonged exercise (Garite *et al.*, 2000; Coco *et al.*, 2010; Kavitha *et al.*, 2012). In a small trial comparing the effect of an intravenous administration of 250 ml/h versus 125 ml/h of Ringer Lactate, Garite and colleagues (2000) found that women with higher doses of intravenous fluid had a lower incidence of SPL. No differences emerged between groups regarding the rate of CS, operative births, epidural use and maternal and neonatal complications. Such findings were replicated by Eslamian, Marsoosi *et al.* (2006), who underlined the importance of hydration in labour, whilst also supporting policies of restriction in oral fluid intake for women. However, Coco *et al.* (2010) reported no differences in reduction of labour length and incidence of SPL where, besides the intravenous administration, whatever the quantity, oral fluid intake was unrestricted. It was concluded that it was not the intravenous administration, but the fluid intake that was beneficial. They also highlighted the importance of avoiding policies of 'nil by mouth' in labour. However, due to the small sample, replication of such findings is vital before conclusions can be drawn. Kavitha *et al.* (2012) conducted an RCT whereby 299 women were allocated to receive either an unrestricted oral intake or the 'traditional' intravenous administration of Ringer at 125 ml/h and 250 ml/h. Interestingly, the only statistically significant result was a higher incidence of vomiting in the group who took liquid by mouth, with no differences observed in SPL, CS or maternal and foetal outcomes. Besides the apparent need for further research, the importance of these recent studies lies in their focus on hydration as an aid for SPL. Interventions in contrast to policies of fluid restriction are born primarily around fear of anaesthetic problems in hospital units. However, the intravenous

administration of fluids might resonate with the policies adopted in traditional labour wards, while unrestricted oral intake of fluid for women seems to more closely reflect the midwifery approach to care (Simkin and Ancheta, 2011).

2.6 Midwives' approaches to SPL

2.6.1 Water immersion

Water immersion has become an important element of midwifery practice with psychological, physiological and therapeutic benefits for women (Walsh, 2012b). A small RCT conducted by Cluett *et al.* (2004) compared the effect of water immersion in labour to standard augmentation with oxytocin on nulliparas with SPL. Water immersion resulted in a reduction of the pain rate of an epidural and an increased satisfaction. However, no differences were observed in labour length and operative births. Water immersion did however result in an increased likelihood of babies being admitted to neonatal units. However, similar Apgar scores and umbilical pHs to the newborns of mothers with oxytocin administration were reported. A review by Cluett and Burns (2009) on the use of water during the first stage of labour confirmed the effectiveness of water immersion in reducing pain and epidural requests with no adverse maternal or neonatal outcomes. The shortening effect of water immersion on labour length has been supported in other studies (Zanetti-Dällenbach *et al.*, 2006).

2.6.2 Continuous support and one-to-one-care

The work of midwives has been conceptualised as a 'being with' rather than 'doing to' labouring women (Walsh, 2012a). However, the advent of the hospitalisation of births in the past century has made the midwife's continuous presence for labouring women and of one-to one-care more an exception, than a rule in maternity services worldwide (Hodnett *et al.*, 2012). Many elements reported by Hodnett *et al.* (2012) are central in these approaches, such as the emotional support, the therapeutic touch or

massage, the possibility of constant information on labour progress and a coping strategy for pain, are also considered useful strategies for SPL (Simkin and Ancheta, 2011). The general advantages of continuous support compared to the 'usual care'⁶ are: a reduction in labour length; less recourse to analgesia; reduced chance of CS and operative births; positive Apgar scores and an improvement in women's experience (Hodnett *et al.*, 2012). Interestingly, the continuity of support might not necessarily be provided by midwives; an increased effectiveness was shown when support was provided by non-health care professionals, especially in highly-medicalised settings. These findings opened new debates around the role of partners and doulas in supporting labouring women and reducing medical interventions (Page and McCandlish, 2006; Simkin and Ancheta, 2011; Walsh, 2012b). If continuous support might be seen as continuity of care, the one-to-one approach has certainly been defined as a continuity of carer (Page and McCandlish, 2006; McLachlan *et al.*, 2008) even if these concepts often appear overlapping.

According to Simkin and Ancheta (2011) one-to-one care, that resonates with the midwifery caseload model, might play a key function both in prevention and treatment of SPL. Although Kenyon *et al.* (2007) reported a reduced likelihood for women of CS and operative birth when one-to-one care is offered compared to a non-one to one approach, further studies are necessary in order to understand the specific role of one-to-one care in SPL.

2.6.3 Mobility and positions in labour

Women's freedom of movement, mobilisation and use of specific positions have been considered crucial in promoting normal labour, supporting a humanisation of childbirth and providing women-centred care (Regalia *et al.*, 2004; Simkin and Ancheta, 2011). Numerous trials examining the effects

⁶ Authors outlined the presence of different concepts of usual care in trials. However, for the purpose of the review, usual care represented any care that did not involve continuous support.

of mobility during labour were analysed in a Cochrane review (Lawrence *et al.*, 2009). Walking and the use of the upright position had a significant effect on reducing the length of the 1st stage of labour compared to semi-recumbent positions, with no apparent increase in medical interventions. However, rather than the use of a single position, mobility per se and the frequent change in posture for women appear beneficial in labour progress (Regalia *et al.*, 2004; Simkin and Ancheta, 2011; Walsh, 2012a).

2.6.4 Breast/nipple stimulation

Breast or nipple stimulation has been used for centuries in midwifery care as a technique for augmenting uterine contractions in case of SPL (Curtis, 1999; Simkin and Ancheta, 2011). However, evidence supporting this practice appeared controversial. Relationships between nipple stimulation and uterine contractility are generally offered by studies regarding labour induction. Kavanagh *et al.* (2005) investigated breast stimulation as a strategy for induction of labour and reported an increased uterine contractility and chance of spontaneous labour onset for women undergoing breast stimulation compared with no treatments. There is a lack of evidence for the effectiveness of nipple stimulation for enhancing labour progress with just one study comparing breast stimulation with oxytocin augmentation (Curtis *et al.*, 1999). This case-control study showed no differences in labour length between nulliparas who had a manual or pump nipple stimulation and the group under oxytocic regimen. However, more spontaneous births and less medical interventions were reported in the nipple-stimulated group. Though encouraging, the results of this single study provide weak evidence in support of this practice, leaving the need for further research.

2.6.5 Complementary therapies

Despite a paucity of evidence evaluating complementary therapies (CT), there is increasing use of such practices in midwifery (Allaire *et al.*, 2000; Mitchell *et al.*, 2006; Harding and Foureur, 2009; Fahimi *et al.*, 2011;

Münstedt *et al.*, 2011). According to Hall *et al.* (2011) between 65% and 100% of midwives endorse and suggest these remedies for childbirth. The reasons underpinning this increased use includes a reduced need for medical interventions (Harding and Foureur, 2009) aligning more towards the holistic approach. This resonates with the midwifery model of care (Mitchell *et al.*, 2006; Williams and Mitchell, 2007; Shual and Gross, 2008; Samuels *et al.*, 2010), and increased autonomy for women and midwives (Adams, 2006; Mitchell *et al.*, 2006; Tiran, 2010; Hall *et al.*, 2011). Many surveys reported acupuncture and acupressure as grounded practices (Harding and Foureur, 2009; Münstedt *et al.*, 2009; Mårtensson *et al.*, 2011) and unlike others, these approaches seem increasingly supported by evidence. However, no systematic reviews are available investigating the direct use of acupuncture or acupressure for SPL, and positive impacts on outcomes such as maternal distress are mainly deduced from studies regarding the effectiveness of these practices in reducing pain (Skilnand *et al.*, 2002) and in the induction of labour (Smith and Crowther, 2004; Betts, 2009).

An American case-control study (Citkovitz *et al.*, 2009) found no difference in the need for augmentation in women in labour treated with acupuncture compared with the usual care. However, they reported that acupuncture led to a significant reduction in CS rates. Moreover, an RCT in Korea (Lee *et al.*, 2004) showed that acupressure on particular acupoints, resulted in decreased pain and labour length when compared to simple touching in the same area.

SPL appears, together with pain management, the primary motive for the use of herbalism, aromatherapy, and homeopathy (Bayles, 2007; Harding and Foureur, 2009). According to Hall and colleagues (2011) the most used herbs to augment uterine contractions in labour were raspberry leaf and blue and black cohosh, in addition or as an alternative to other remedies such as castor oil. However, despite numerous approaches being reported within cross sectional research, the majority have not been tested with RCTs. A review conducted by Anderson and Johnson (2005) examining 54

RCTs relating to the use of CTies antenatally, in labour and postnatally, demonstrated the clear need for more robust evidence with regards to SPL, as the majority of the RCTs in the review investigated the effect on pain relief.

2.6.6 Midwives' decision-making in the context of SPL

There is a clear absence of research specifically focused on midwives' decisions when working with women who experience SPL. As a result, insights into how midwives deal with this phenomenon had to be developed from the broader literature on midwifery decision-making. According to Davis-Floyd (1994), as childbirth represents a phenomenon between biological and cultural processes, its management has to be considered as indicative of the core cultural values of a context. Cheyne *et al.* (2006) assert that the real difficulties in decision-making for midwives is in management strategies rather than diagnoses. The process of decision-making, as Raynor *et al.* (2005, p.71) stated, appears as a 'multi-dimensional activity' influenced by diverse factors such as clinical experience, research evidence, individual preference and available resources. It has been suggested that some midwives feel forced in their decision to intervene in labour by medical guidelines (Everly, 2012). Therefore, there is still a need for the investigation of the impact of protocols and guidelines in midwifery care (Bick *et al.*, 2009). Everly (2012) highlights the importance of trust in influencing decisions, such as midwives' trust in women's bodies and trust in the team or in the environment.

Organisational features (e.g. the presence of a hierarchical system), and of the support of senior midwives and managers (Keating and Fleming, 2009) on midwives' practices have also been reported as influential. Other authors (Segaar *et al.*, 2007), describe midwives' decisions as more likely to be influenced by professionals' personal awareness and motivational factors, rather than by organisational features. According to Deery (2010), midwives' ability to deconstruct medicalisations around childbirth may make the difference in decision-making and can be influenced by birth

settings centred on a midwifery model of care, such as MLUs. As such, it seems that there is the potential for idiosyncratic midwifery decision-making in cases of SPL in these contexts. The main features of these settings are illustrated below.

2.7 The midwifery model of birth centres

Birth centres, or MLUs, have been described as safe models of care aimed at promoting normal births through architectural and attitudinal components (Deery *et al.*, 2010). Depending on the proximity to hospitals, birth centres are classified as 'alongside' or 'freestanding'. The first model constitutes MLUs in 'the same building or on the same geographical site' of an obstetrics unit, whilst the second is on 'a separate geographical site' from the referential hospital (Hollowell *et al.*, 2011, p.32). Within these models healthy women are more likely to have normal births, positive birth experiences and fewer interventions compared to traditional labour-wards/OUTs (Hodnett *et al.*, 2010; Hollowell *et al.*, 2011; Walsh, 2012a). A core element of midwives' attitudes in birth centres is a focus on the 'psychosocial dimension' of childbirth (Kirkham, 2003; Deery *et al.*, 2010; Walsh and Devane, 2012). According to Kirkham (2003) a midwifery philosophy is at the heart of these settings.

In birth centres midwives work autonomously except for situations where the onset of risk factors or emergency requires their interface with doctors and hospital units (or host unit); the presence of risk factors may result in women's transfers to a host unit and are most likely to occur in the intrapartum period (Kirkham, 2003; Hollowell *et al.*, 2011). As mentioned, according to Hollowell *et al.*, (2011) the primary cause of intrapartum transfers from MLUs to host units is SPL. The interface with hospital staff, particularly evident in the case of women's transfers, represents one of the challenging dimensions of these midwife-led models (Walsh, 2012a).

2.8 A historical perspective on SPL and its care

Previous sections have highlighted the influence of dominant discourses around normal labour length on the definitions of SPL. Education may represent the first environment where dominant discourses, the authoritative knowledge, are spread and manifest their potential to inform practice. In the light of this consideration, part of the literature review was dedicated to a historical search aimed at exploring the topic of SPL within midwifery texts of the 20th and 21st century. Hence, all the accessible editions of 'two milestones of midwifery education in UK, the Mayes and Myles' textbooks for midwives, were examined. The search was conducted in the Greenfield Medical Library of the University of Nottingham and in the Wellcome Library in London. The focus of the search was on definitions of SPL and its care, but also connected topics, such as discourses on normal labour length and progress. Where possible, comparisons of terminologies, views and types of management were made both among the several editions of the same book and between Mayes and Myles' textbooks.

2.8.1 Through Mayes and Myles' eyes: general considerations

Fourteen different editions of the Mayes' and fifteen of the Myles' textbooks for midwives were published up to the academic year 2011-2012, when the search was conducted. However, not all were accessible; Table 1 provides a summary of the available editions examined. Unexpectedly, an introductory book for midwives dated 1930, the progenitor of the Mayes' first edition of 1937, was found at the Wellcome Library and was included in the review. Myles published 'A textbook for midwives' for the first time almost 20 years later (Myles, 1953) when the fourth edition of Mayes' handbook came out.

As the earliest accessible edition of Mayes' textbook for midwives was the sixth, of which Mayes was personally no longer the author, the introductory book of 1930 was crucial for gathering some information about the author's personal style and views around midwifery in general and SPL in particular.

The possibility of reading the first editions of Myles' textbook facilitated an understanding of the development of the author's thinking over the years.

Year	Mayes' textbook		Myles' textbook	
	Edition published (n)	Edition available	Edition published (n)	Edition available
1930	Introductory textbook	X		
1937	1 st			
1938	2 nd			
1941	3 rd			
1953	4 th		1 st	X
1955	5 th			
1956			2 nd	X
1958			3 rd	
1959	6 th	X		
1961			4 th	X
1964			5 th	
1967	7 th			
1968			6 th	
1971			7 th	X
1972	8 th	X		
1975			8 th	X
1976	9 th	X		
1981			9 th	X
1984	10 th			
1985			10 th	
1988	11 th			
1989			11 th	
1993			12 th	
1997	12 th	X		
1999			13 th	
2003			14 th	X
2004	13 th	X		
2009			15 th	
2011	14 th	X		

Table 1 - Editions of the Mayes and Myles' textbooks for midwives until 2012⁷.

⁷ The accessible copies reviewed are indicated in bold and marked with 'X'.

Interestingly, unlike Mayes, Myles, in many of the editions examined, deliberately avoided using references for the topics discussed. The author justified the decision as an action aimed at avoiding the confusion that having many references would have generated in student midwives. Myles, hence, presented herself as the necessary authoritative voice, highlighting her personal skills, nursing training, and years of successful collaboration with doctors. However, links with potential influential authors on Myles' work were possible by considering the relevant literature at that time. Considering these general reflections, it might be argued that Mayes and Myles, through their different communication styles and authorial choices, seemed to highlight two different aspects of midwifery care and midwives' skills. The first seemed to emphasise qualities such as passion, kindness, and empathy as core aspects of midwifery care. Whilst the second appeared to underline the importance of diligence in study and efficiency in practice, often referring to nursing and medical models of care.

2.8.2 SPL in Mayes and Myles' textbooks for midwives

In Mayes' 'An Introduction to Midwifery' (1930), the phenomenon of SPL was not considered as relevant and complex as it is currently. The attention was mainly focused on obstructed labour, though the topic was briefly discussed, perhaps given the introductory nature of the book itself. The possibility of facing inefficient uterine contractions in labour, named 'uterine inertia' (Mayes, 1930, p.10), was barely mentioned and no definitions or distinctions between functional and mechanical dystocia were explicitly made. However, some considerations on different abnormal uterine patterns characterising obstructed labour (e.g. the presence of an excessive increase of contractions) and uterine inertia (e.g. a sensible reduction of the previous uterine contractility) seemed to start delineating two faces of SPL. Negative maternal and foetal outcomes were associated with the abnormal mechanisms underpinning these anomalies of labour progress, rather than with labour length. In the 1930's in fact, labour length appeared to be rarely considered as important and no time-boundaries

between normal and abnormal progress were traced by the author. Mayes' book seemed to reflect the reported 'general tendency in care [...] to await delivery, however long it took' typical of that time (Rhodes, 1995, p.92) with the midwifery approach appearing flexible to the rhythms of pregnancy and birth (McCourt, 2009).

Unlike SPL, puerperal fever, toxemia and post-partum haemorrhage emerged as the most important midwifery challenges. The importance given to these conditions in the manuscript resonates with the debates on the connected high maternal mortality rates, typical of that time (Rhodes, 1995; McIntosh, 2012).

The 1950's, a time of a socio-cultural and medical change, saw the sixth edition of Mayes' handbook and the first two editions of Myles' textbook for midwives published. Many of the changes in the 1950s were apparent in Mayes' handbook that, for instance, discussed the advance in medicine after the Second World War and the increasing trend of women to move from houses to hospitals to give birth. The division of labour into three stages appeared to be an accepted concept by this time; the beginning of the first stage was not marked by a set cervical dilatation, rather by a commencing of dilatation together with the presence of the 'show' and of regular painful uterine contractions. Normal labour was defined as 'the delivery of a living child by the natural forces within reasonable time, vertex presenting, without injury to mother or child' (Thomas, 1953, p.174). What constituted the 'reasonable time' was not clearly stated, but some limits on labour length, though flexible, started to be introduced.

SPL was not a term adopted, but the topic seemed to have gained importance over time. Indeed, an entire chapter of the book was dedicated to discuss the mechanical obstacles to labour progression, resulting in obstructed labour. As well as problems connected to anomalies of contractions classified as 'hypotonic uterine action or primary uterine inertia', 'secondary inertia' and 'inco-ordinate uterine action' (Thomas, 1953, p.247). Primary inertia identified a condition, most common among

primigravidae, of weak uterine contractions, generally due to minor mechanical obstacles (e.g. foetal malposition or distended bladder) or psychological causes (e.g. woman's anxiety), leading to a prolongation of labour length but not necessarily to a hindrance of normal labour. In contrast, secondary inertia, the presence of inefficient contractions after a period of strong uterine contractility, indicated an exhausted uterus. Thus a more threatening condition for both the mother and the baby (Thomas, 1953). Therefore, at this point the multifaceted nature of SPL started to become apparent.

Even though midwives were taught to 'regard a labour lasting more than 24 hours as abnormal' and 'harmful' (Thomas, 1953, p.248), prolonged labour was defined once 48 hours of established labour were exceeded. A highly flexible time was still considered acceptable in the context of maternal and foetal wellbeing.

In terms of management, the approaches suggested to midwives mainly included: ensuring a woman had sufficient sleep, the aid of drugs if necessary; nourishment; hydration -especially sugary drinks or fluids; avoiding urine retention -eventually by means of catheterisation; and using enemas to overcome eventual mechanical obstructions or colonic distension connected to a full bowel. The importance of women's comfort and wellbeing in labour was highlighted by guidance, such as helping women with their personal hygiene or combing their hair. A sense of professional rigour and attention to ethical behaviours was implied through the asserted necessity of keeping regular and detailed records of the labour progress not only in hospitals but also at home, communicating constantly and effectively with doctors, and avoiding inappropriate interventions. For instance, the assessment of labour progress through repeated vaginal and rectal examinations was suggested to be used as infrequently as possible (Thomas, 1953). In general, no interventions seemed to be justified if their performance could result in the detriment of a woman's psychophysical integrity. The centrality of the woman and a symmetrical midwife-woman relationship seemed to be expressed in several parts of the handbook, with

the author affirming that 'a woman ending labour with her self- respect intact is as much a credit to the midwife as to herself' (Thomas, 1959, p. 180).

The image of midwifery which emerged from Myles' first two editions of the same period was slightly different. As in Mayes' book, the woman had a central role, but -as previously mentioned- the real keyword in the text seemed to be the midwife's 'efficiency'. Unlike Mayes, Myles seemed to start sectioning areas of midwifery care by distinguishing psychological, educational, medical and obstetric aspects of childbirth. Labour was segmented not only into three stages, as in Mayes', but also in three factors: the 'powers', the 'passages' and the 'passenger'. They subsequently became popular as the three 'Ps' of labour. Normal labour length was here clearly stated as a maximum of 18 hours for *primiparae* and of 12 for *multiparae*, according to the medical research of that period. Myles also dedicated a part of her book to 'abnormal labour', which included specific chapters about foetal malposition, abnormal uterine actions and obstructed labour, and prolonged labour. The complex aetiology of SPL and the need for further research was already acknowledged, with the author underlining how:

Many theories have been propounded regarding the causation of disordered uterine action, such as endocrine imbalance, muscular weakness and emotional disturbance, but none provides a satisfactory solution. (Myles, 1953, p.390).

In Myles' textbook, primary uterine inertia and the uterine exhaustion (labelled as secondary inertia in Mayes') were both included as a manifestation of a hypotonic uterine action. Different characteristics of the uterus, contractions, pain, woman and foetus were compared to help student midwives in differentiating a situation of hypotonic uterine action from an incoordinate or hypertonic one.

An important development was the introduction of the theme of prevention of uterine inertia or exhaustion, thus of slow progress. Approaches suggested for this 'prophylaxis' were to start during pregnancy, such as by

'building-up' the woman's self-confidence. Also to continue this during labour by allowing the woman a proper rest, considering the use of castor oil, enemas, 'small, light and nourishing meals', emptying the bladder, a warm bath and adopting a firm binder (Myles, 1953, p.392).

Prolonged labour was defined as a labour lasting more than 24 hours, although this parameter was more restrictive than the 48 hours stated in the contemporary Mayes' edition, labour length was still not considered a problem per se unless the lengthening was produced by an obstruction (Myles, 1953, p.408). Midwives' approaches were similar to the ones mentioned in Mayes' book but seemed presented within a different professional identity; interestingly the author talked about a 'nursing care' of prolonged labour. This nursing perspective was visible throughout the text and whereas, for instance, tending to a woman's needs appeared in Mayes as a caring practice, here it became a task to perform within set intervals of time (Myles, 1953, p.409). Maternal and foetal distress was discussed at length as dangerous consequences of a prolonged labour.

All the information provided in the first edition of Myles' concerning normal labour length and SPL (a term not adopted by the author) were fundamentally confirmed in the second edition. However, a sense of the quick advance in research emerged, evident through updates such as the introduction of the concept of 'uterine neuro-muscular disharmony' in addition to a hormonal imbalance as a cause of abnormal progress. Some challenges in the conceptualisation of slow progress emerged from the continuous amendments of the classification of abnormal uterine actions. Uterine exhaustion, in fact, was no longer presented as part of hypotonic uterine disorders, but became again a separate phenomenon. The term primary inertia -still present in the contemporary Mayes' book- was replaced by the expression 'hypotonic inertia' (Myles, 1956, p.387).

In this period, the midwifery management of SPL looked fundamentally unchanged, but CS started to dominate the practice, though at that point this was not identified as a worrying phenomenon.

Some changes characterising the 1960's were identifiable in the fourth edition of Myles' textbook (Myles, 1961). Probably due to the impact of Friedman's studies on Obstetrics and Midwifery, small but significant amendments to previous messages around labour progress were made. The parameters of normal labour length were reduced by approximately 3 hours for *primigravidae* and 2 hours for *multigravidae* from the previous publications. The increased use of sedation and relaxation was argued as the explanation for such significant shortening of labour lengths in just two decades (Myles, 1961, p.240). Even if prolonged labour was still defined as a labour lasting more than 24 hours, student midwives were now warned to start considering abnormal labour after 12-18 hours of weak contractions. The boundaries between normal and abnormal appeared to be less flexible and professionals' clocks increasingly powerful in imposing a time to childbirth. Discussions about the restriction of food in labour, the opportunity of earlier admission of women to hospitals and the necessity of asking for medical aid after 12 hours seemed to mirror an increasing medical dominance in midwifery care.

This substantial influence of obstetric research and model of care was even more apparent in Myles and Mayes' textbooks of the 1970's. For instance, in Mayes' eighth and ninth editions (Bailey, 1972; Mayes and Bailey, 1976) the idea of normality of labour as a retrospective judgment was introduced, moving maybe unconsciously- the professionals' focus from physiology to pathology. The important contribution of the studies of Alvarez and Caldeyro-Barcia (1960; 1979) on the physiology of uterine contractility and of Friedman on labour progress was acknowledged in both the handbooks. The partogram was now present as a key tool to assess labour progress and the length of normal labour was further reduced. However, interestingly the two textbooks still proposed different parameters of normality. For example, a labour lasting up to 15-16 hours in *primiparae* was still considered normal according to Mayes' definition (Mayes and Bailey, 1976) whilst abnormal according to Myles' (Myles, 1975). In general, it seemed that a student midwife trained with the Mayes' handbook would have

considered more time for labour progress than a colleague who trained with the Myles' book of the same period.

Concerning prolonged labour, not only was it apparent that there were different definitions between the different authors (with Bailey asserting that prolonged labour was defined as labours lasting more than 36 hours compared to 24 hours stated by Myles), but there was also cultural change clearly expressed through Myles' voice. In the last edition of Myles' handbook, the author presented prolonged labour as a 'situation [...] not permitted to occur or persist in modern obstetric practice' (Myles, 1975, p.362). Facing a slower -thus longer- than expected labour seemed now to represent a failure of 'good' midwifery care and little room appeared left for variations from standards as expressions of the individual process of childbirth. In terms of management, some basic approaches, such as food intake, considered to be helpful in the previous two decades were now identified as potentially dangerous and were progressively replaced by hospital practices such as the intravenous administration of fluids (see Myles, 1971). Doctors gained importance in the context of women's labour and especially in case of slow progress; the era of active management and oxytocin infusion as unquestioned key treatments of SPL definitively began.

The ninth edition of Myles' (Myles, 1981) was the only available picture of the 1980's. Whilst important changes in the general obstetrics and midwifery practice were reported (e.g. the introduction of ultrasound in pregnancy, the increased performance of epidurals, the attention paid to maternal psychological and emotional aspects in labour and to the new notion of bonding), no evident modifications to the concepts around SPL were found. Importantly, the discourses on normal labour length were still the same, however, discourses around the assessment of labour progress evolved. The onset of labour was defined by the presence of standard characteristics that have informed midwifery and obstetric practice for decades; having regular contractions in 10 minutes and 3 cm of cervical dilatation became the rule. Though there was not a specific model of partogram of reference, the adoption of this tool became an unquestioned

part of care and the information to include in the chart become increasingly detailed. Vaginal examinations as the means to assess labour progress were far and away from being used 'as infrequently as possible' as in the late '50s: on the contrary, two-hourly assessments became a synonym of good practice. Hence, the view of labour as a physiological process seemed to have not been undermined at this stage by further reductions of the 'normal labour length', but by the increase of iatrogenic interference. Fundamentally, each labour seemed to be considered potentially dystocic rather than dystocia being considered as just a potential occurrence of labour. It is of little surprise then that intrapartum midwifery skills seemed to be almost limited to the ability of interpreting the partogram and early identification of (highly expected) anomalies in order to refer them immediately to doctors. Hence, midwives' approaches started to increasingly look as ancillary practices to medical interventions.

The twelfth edition of Mayes (Sweet and Tiran, 1997) was the first, among the examined, to be edited by more than one author. The international style of the book reinforced this image of a plurality of voices. Key words of this edition included 'individualized care', 'partnership' and 'evidence based practice', with an open account of the influence played by the contemporary 'Changing Childbirth' report (Department of Health, 1993). Some editorial novelties, such as the room given to communication issues, counselling or CTies, seemed to stress the necessity for a more holistic and social model of care. Nevertheless, the struggle in distancing from medical models was apparent looking at some conflicting messages that emerged from the different authors/chapters and sometimes even within one chapter itself. Regarding SPL for instance, on the one hand, the imposition of arbitrary standards for normal labour length was questioned in the chapter relating to the first stage of labour. On the other hand, in the chapter regarding prolonged labour, 12 hours of active labour, though acknowledged as an arbitrary time, was justified as a cut-off to differentiate normal from abnormal progress, adopting a (medical) lens that suggested 'the longer the labour, the greater the hazard'. Again, in the same chapter while the

necessity of a holistic assessment was stated, the adoption of a 2-hour partogram was presented to be imperative for identifying the need for oxytocic augmentation of labour. Though obstructed labour was presented as a key cause of prolonged labours, the room given in the textbook to mechanisms influencing uterine activity suggested an increasing attention being paid to the 'functional' area. For the first time concerning the management of SPL, together with more known non-invasive practices such as ambulation, nutrition/hydration and psychosocial support, other 'alternative' approaches such as nipple stimulation, massage of acupoints (e.g. BL 67) and herbal remedies (e.g. blue cohosh) were introduced. However, such information was dispersed throughout the different chapters of this edition, making it difficult for a reader of this time to obtain a comprehensive picture.

Another change of concept of SPL and the model of care became apparent in the 13th edition of Mayes' (Henderson and Macdonald, 2004). In this edition emphasis was given to the impact of the environment on women's labour progress and to the positive outcome of a social model of care. Authors outlined the necessity of seeing labour as a continuous process rather than a stage-framed one, the inappropriateness of judging labour progress with industrial time parameters, and the need for clarity about the definition of delay in labour. Nevertheless, the partogram emerged as an important tool in practice and authors affirmed its value also from a didactic and legal perspective. Labour was considered to be normal where it lasted approximately 12 hours, and still stated as prolonged after 24 hours from its onset. The presence of conflicting discourse on normal labour in practice appeared to be reflected by the competing messages in the text. With regards to the care of SPL, a novel emphasis was placed on the so called 'alternative' management, such as the use of water and relaxation; the potential of CTies was re-affirmed in this edition, though the reader was warned about the necessity of adequate training, cautious use of these approaches and the need for further research.

In the last examined version of Mayes' handbook (Macdonald, 2011) there was a clear intention to support evidence-based practice and to underline the contribution made by midwifery research in the last decades. Additionally, new areas of interest emerged including the influence of social media and the economic crisis on women's health and care. One key element of the midwifery contribution to the wider research and academic community seemed to be the emphasis on the complexity of the birth event. Much appeared developed around the interaction of the physical, emotional, and social elements characterising the process of childbirth. A too simplistic reduction to the processes of labour was here strongly questioned; the 'didactic' fragmentation of labour in components adopted for ages was presented to be the origin of a devaluation of the process. A real understanding of the phenomenon was indicated as possible only by placing the dissected factors within a comprehensive whole. In this edition, clear time limits for normal labour length and for the definition of prolonged labour could not be found. Readers were invited to look for precise guidance in updated guidelines, while the textbook appeared to be considered useful in terms of transmission of the midwifery ethos.

2.8.3 Summary of the historical review

The work on the accessible editions of Mayes and Myles' textbooks for midwives highlighted the scientific, socio-cultural and clinical changes related to labour progress in general and to the approaches to SPL in particular, from the perspectives of midwifery authors. The identification of a standard normal labour length and the modifications of these standards looked more arbitrary than based on objective reasons. Figure 1, illustrates how normal labour length was presented over the years in the textbooks, and demonstrates at some level how controversial the discourses about normal progress have always been in history.

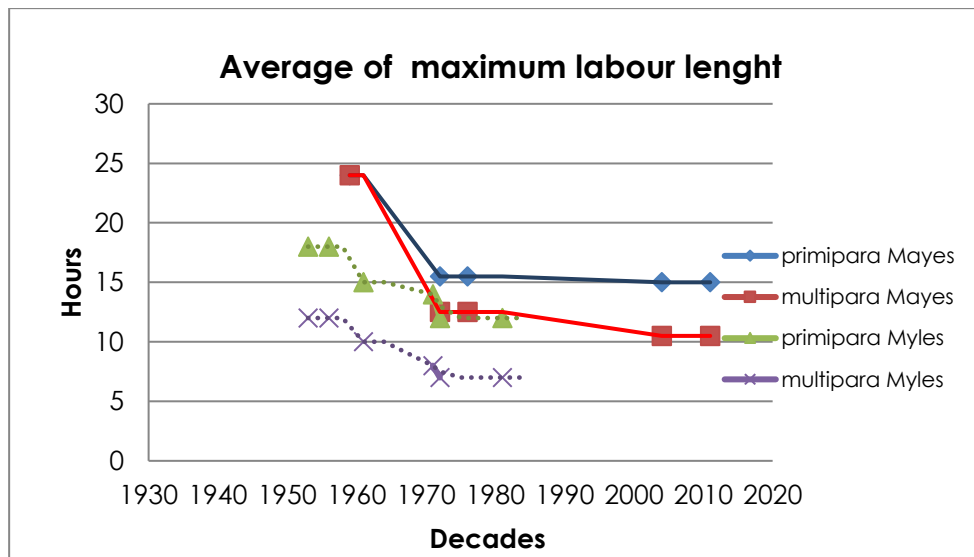


Figure 1 - Average of the longer yet normal labour length as presented in several editions of Mayes and Myles' textbooks for midwives. The averages are separated between nulliparous and multiparous women.

Midwives' management of SPL also appeared to change over time moving backwards and forwards in a *continuum* between women-centred and medical models.

2.9 Summary of literature review and research questions

SPL emerged as a complex phenomenon whose definition was clearly linked to the dominant discourses on normal labour progress and length. In this sense, the chapter reported the importance of Friedman's studies for the development of clear-cut boundaries between normal and abnormal progress. The extensive use of interventions, such as augmentation of labours with oxytocin and ARM, presented as the standard management of SPL, appeared to be a consequence of the adoption of those biomedical paradigms. However, the literature also showed an increasing questioning of the often detrimental medical model and management of SPL. Alternatively, single approaches, such as continuous the support of women in labour, mobility or water immersion, were illustrated as possible midwifery' interventions in cases of SPL. However, the literature search also revealed a dearth of specific and comprehensive information regarding the

midwifery approach to SPL. Thus presenting a gap in the research and knowledge on this topic. Birth centres emerged in the literature as potentially the ideal settings for an investigation of midwives' approaches to SPL, given both the relevance of this phenomenon and the presence of the strong midwifery philosophy in these settings.

In light of the gaps in research and evidence highlighted by the literature review, the aim of the current study is to explore the approach of midwives in relation to the SPL. The research questions are:

1. What are midwives' approaches to SPL?
2. How do midwives understand the phenomenon?
3. Why do midwives use certain interventions rather than others?
4. What is the role of personal, organisational and socio-cultural factors in midwives' decision-making?

3 METHODOLOGY AND METHODS

This chapter will begin by outlining and justifying the use of a qualitative multiple case study approach in order to address the research questions and objectives. A critical realist lens will then be described and its application as an underpinning philosophy in this empirical enquiry will be discussed. The methods used to collect and analyse the data will be explicated. The chapter will conclude by discussing the ethical considerations in relation to the research process.

3.1 A qualitative approach

Research approaches are broadly situated within the qualitative paradigm, quantitative paradigm (Guba and Lincoln, 1994), or can combine elements from both, such as mixed-methods (Sale *et al.*, 2002). The term 'qualitative' is predominantly used to characterise approaches which aim to make sense of human actions and social phenomena. This is mainly achieved by collecting, organising and interpreting textual material derived from interviewing or observing subjects of interest (Malterud, 2001; Schwandt, 2001 cited in Carter and Little, 2007). According to Carter and Little (2007, p.1316), to achieve such an understanding, the phenomenon of interest is considered in its natural context, avoiding 'setting out [phenomena] to test predetermined hypotheses'. This contrasts with positivist, quantitative approaches, where 'objects of inquiry can be isolated and manipulated' to create knowledge (Ackermann, 1982, p.431). Instead, social phenomena are interpreted, constructed and observed only in points of space and time, influenced by contextual factors (Kaplan and Duchon, 1988). Flyvbjerg summarised this epistemic assumption of qualitative research by arguing that:

In the study of human affairs, there appears to exist only context-dependent knowledge. (Flyvbjerg, 2006, p.221).

However, the selection of the approach to inquiry is debated extensively within the literature, with some academics professing the superiority of research from one paradigm over another. For the purpose of this thesis a detailed account of these arguments is not relevant, as the selection of the research approach for this study was guided by Silverman's stance (Silverman, 2000, p.93) who states:

No research method is intrinsically better than any other; everything will depend upon one's research objectives.

The adoption of a quantitative approach for use in this study appeared incongruent with the research questions. The objective of the current work was not to quantify the frequency of the use of certain interventions used during SPL, nor was it to assess the effectiveness of midwives' approaches. Instead this study aimed to undertake an in-depth exploration of midwives' approaches to SPL which included their experiences and decision-making processes. Informed from the literature, as well as personal observations and insights, the phenomena under investigation in this study appeared to be complex and multifaceted. Therefore, a qualitative approach appeared most appropriate in achieving the endeavours of exploring and understanding complex phenomena in healthcare settings (Feagin *et al.*, 1991; Tellis, 1997; Sim and Mcsp, 1998). Furthermore, another objective of this study was to use a data driven method to develop a conceptualisation of the midwives' approaches to SPL. This aligns to induction or inductive reasoning as new hypotheses, concepts or theories are generated from the data (Pope, 1995). Inductive reasoning has been recognised as a distinctive component of qualitative inquiries (Burns, 1989; Thorne, 2000) and therefore further builds the rationale for the research strategy employed in this study being situated within the qualitative paradigm.

3.2 A case study methodology

There are a wide range of methodologies that are situated within the qualitative paradigm, that mainly include ethnography, phenomenology,

grounded theory, and case study (Sharan B. Merriam, 1998; Sandelowski, 2000; Goulding, 2005; Neergaard *et al.*, 2009). Among these possible qualitative approaches, case study appeared the most appropriate to answering the research questions for this study. According to Yin (2009), case study methodology resonates with exploratory and explanatory research, addressing not just the *what* but also the *why* and *how* questions. Furthermore, this approach is considered ideal when holistic, in-depth investigation is needed (Benbasat *et al.*, 1987; Gibbert *et al.*, 2008; Swanborn, 2010). This is particularly important when wanting to explore phenomena that involve both actors and the context of their action (Creswell *et al.*, 2007). Other authors define case study as the 'examination of an instance in action' (Laws and McLeod, 2004, p.6) where by focusing on a single entity (the case) the interplay between factors that are indicative of the phenomenon can be uncovered. Although it is evident that ethnographic approaches comprehend context, this remains at describing a culture in a particular setting. In contrast, case study aims to understand a bounded and specific phenomenon in relation to its context (Creswell *et al.*, 2007). Therefore, by adopting a case study methodology in this study, the phenomenon of midwives' approaches to SPL could be investigated in real-life contexts (e.g. birth centres) allowing for the complex factors and influences to be explored and understood.

Furthermore, according to Creswell and colleagues (2007), the focus of case study relates to 'issues' rather than 'individuals' which appeared to have greater congruence with the objectives of this study. The focus of this study was on midwives' approaches to SPL as an entity or issue, as opposed to individuals. Saying that, it must be recognised that individuals' stories and experiences are fundamental in case study. However, they do not necessarily represent the core of the inquiry, unlike approaches such as phenomenology.

The case study approach is characterised by a triangulation strategy which involves the use of multiple -approaches, -sources of data and -perspectives to investigate relationships between influential factors and to illuminate

converging and diverging evidence (Stake, 1995; Darke *et al.*, 1998; Baxter and Jack, 2008; Yin, 2009). According to Yin (2009), the primary sources of evidence in case studies are interviews, observation, archival records, documentation and physical artefacts. It is recommended that the researcher considers as many sources as relevant to the study, acknowledging the strengths and weaknesses of each of them. No single source is, thus, considered sufficient for the research purpose, but complementary to the others (Swanborn, 2010). Triangulation is also one of the key components used to enhance and evaluate rigour in case study together with other elements, such as a detailed description of the case, and a reflexive and transparent account of the methods for data collection and analysis (Merriam, 1998; Gibbert *et al.*, 2008; Swanborn, 2010).

As highlighted by Yin (1999) the main shortcoming attributed to case study methodology is the difficulty in generalising from its findings. This critique appears common in qualitative research (see Ritchie and Lewis, 2003). However, according to Stake (2006) the reader has a greater responsibility of making generalisations from case study research than the researcher, as the reader is most familiar with their own context in which the findings will be applied.

It is evident that case study methodology is an approach that comprehends the complexity of the context-bound phenomena under investigation. However, there are a number of different philosophies that can underpin case study methodology. The specific ontological and epistemic assumptions underpinning this study will now be outlined.

3.3 The underpinning philosophical assumptions of critical realism

Carter and Little (2007) highlight the importance of the decisions around the underpinning epistemology of an inquiry, warning the reader of the existence of incommensurability between some epistemologies and research methodologies (Carter and Little, 2007, p.1325). In this light,

different philosophical approaches, including pragmatism, feminism, constructionism, and CR were examined while developing the current case study. Ultimately, the ontological and epistemological assumptions of CR appeared most congruent with the researcher's perspective, the study purpose and remit.

The core ontological assumption of CR is the existence of the world 'out-there' as an entity that can be known, though it does not depend entirely on our knowledge or beliefs about it (Benton and Craib, 2011). From a realist standpoint, the world emerges in all its complexity, and is characterised by a stratified ontology formed by three domains: 'the empirical', the 'actual' and 'the real' (Bhaskar, 1998). The empirical aspect of reality consists of what can be experienced through our senses, the perception of what is happening. The actual describes those elements that might not be confined just to the 'observable' and might exist independently from the presence of an observer. Finally 'the real' indicates structures or systems (e.g. physical, psychological, or socio-cultural) underneath appearances that might not be visible per se, but might generate the visible phenomena, (Sobh and Perry, 2006). According to Dyson and Brown (2005) it is this 'realm of the real' that constitutes the very distinctive element of CR.

From an epistemic point of view, critical realists affirm the possibility of knowing the world out-there. According to Sayer (2000), this principle led authors to accuse realists to claim to 'know better' which illustrates a tendency to a fundamentalist approach to knowledge. The response offered to this critique is based on the ontological independence of the real from human minds. There is the recognition of a fallibility of knowledge which is the awareness that the investigator might never exhaustively know the reality investigated (Easton, 2010). This does not advocate for an ultimate impossibility of knowing a phenomenon, rather for the possibility of reaching knowledge in progress, constantly working against misleading or superficial appearances (Benton and Craib, 2011). Knowledge is achieved by means of an interpretive understanding, an inductive work of conceptualisation and abstraction of data and no claims of better or more

authoritative interpretations can be made. The findings of an inquiry underpinned by realist philosophies have to be considered as an enriching 'surplus' to the current knowledge not as a definitive representation of the phenomenon of interest (Sayer, 2000; Niiniluoto, 2002).

The methods by which achieving knowledge depends upon the nature of the object of inquiry represents another key epistemic assumption of CR (Sayer, 2000; Sobh and Perry, 2006). Sayer (2000, p.19) clarified this principle by arguing that:

Compared to positivism and interpretivism, critical realism endorses or is compatible with a relatively wide range of research methods, but it implies that the particular choices should depend on the nature of the object of study and what one wants to learn about it.

To use the words of Giussani (1997, p.5), within a realist perspective the method 'must be imposed by the object'. From a critical realist standpoint, then, the adoption of an eclectic approach combining different methods, such as interview observations, use of artefacts, might be justified by the complexity of the object. Here the connection with core hallmarks of case study methodology, such as the triangulation logic, becomes apparent (Easton, 2010).

While reflecting on possible philosophical standpoints to embrace, social constructivism, pragmatism and feminism were the philosophies that most challenged the decisions on CR as an underpinning approach to this research. Indeed, many components of the phenomenon of interest seemed to be best represented within a social constructivist paradigm, such as the recognition of SPL based on medicalised models of care. Nevertheless, other elements such as the visible absence of contractions, or the results of midwives' interventions, appeared not to be justifiable merely as 'mind-dependent' products of 'human agency' (see Houston, 2001; Mir and Watson, 2001). Following careful reflection, SPL, as well as midwives' approaches to it, seemed a 'real' entity, in critical realist terms. For instance, specific interventions, such as water immersion or nipple stimulation, could

be considered as part of the 'empirical domain'. However, behind these interventions, there may be more to investigate- the 'actual'- such as the midwives' views on labour progress in order to understand what was observable. Finally, the attempts to gain a deeper knowledge might fail unless seeking insights of the 'real' component of the phenomenon, the underpinning layer in which the others are rooted. Elements such as culture in its multiple meaning (e.g. personal, social, organisational) might represent this stratum.

It was the interest in all these 'layers' of reality that contributed to excluding pragmatism as the underpinning philosophy of this work. On the one hand, the narrow focus on 'what works' and 'what does not' typical of pragmatic inquiries (Peirce and Turrisi, 1997; Benton and Craib, 2011) might have been beneficial for addressing research questions related to practical aspects of midwives' approaches to SPL. However, on the other hand it would have restricted the depth of the inquiry, as elements of SPL would not have been considered. Moreover, the consideration of the gendered nature of this enquiry, 'specifically women's lived experience as a source of knowledge' (Campbell and Wasco, 2000, p.775), and the potential role that gendered power-dynamics (Marecek, 1989; Rooney, 1993) have in the diagnosis and treatment of SLP point to the relevance of adopting a feminist lens for the study. Some feminist discourses challenge the essentialist elements of realist ontology (Parr, 2013) so it was decided not to adopt this lens.

Therefore, the multilevel perspective of CR seemed the most appropriate philosophy to underpin the approach to exploring and understanding the complex phenomenon of midwives' approaches to SPL. Having outlined the methodology and underpinning philosophy, the design of this study will now be discussed.

3.4 A multiple case study design

3.4.1 The identification of the case and the selection of the sites

The definition of the 'case' is considered the most difficult, yet essential, element in case study (Laws and McLeod, 2004; Swanborn, 2010; Thomas, 2011; Yin, 2009). In this study the 'case' was identified as the phenomenon of midwives' approaches to SPL. In operationalising the definition of the case, midwives represented individuals enacting those approaches. However, they were not single cases in their own right, but merely components that composed and informed the case and provided insight into the phenomenon as a whole.

According to Stake (1995), the investigation of a collective, not isolated, phenomenon may justify the need for multiple case studies. Yin (2009) supports this point by arguing that if a choice is possible, a multiple case study is preferable to a single case, as it increases the likelihood of offering results and theories. This stance is affirmed when cases are intentionally selected for their contrasting situations, as findings might contribute to the strengthening of theories by distinguishing relevant cross-case features (Yin, 2009; Swanborn, 2010; Thomas 2011). For this reason, according to Yin (2009) and Swanborn, (2010) where possible, two cases are preferable to one, and three to two. These arguments informed the decision of designing a multiple case study for the present research.

The sites chosen for this study were MLUs or birth centres. Deery (2010, p.1) asserts, that despite theoretical similarities, birth centres are 'defined and organised differently in different places', the exploration of midwives' approaches in different societies and systems of care appeared beneficial. Therefore, two sites were selected for investigation that varied in context and organisation and included: an English FMU; and an Italian birth centre alongside. Braithwaite *et al.* (2010), identify that investigations across workplace settings and cross-countries allow for comparisons to be made, resulting in a greater understanding of the phenomenon. Therefore, by

conducting the research in birth centres with different models of organisation and in different countries this would allow for insights into the influence of socio-cultural or organisational factors on the phenomenon to be illuminated. Furthermore, through the collection of data in structures with different proximities to OUs and immersed in societies with some differences in maternity and midwifery systems of care, insights on the underpinning mechanisms, such as the influence of medical models, had a greater potential to emerge.

Pragmatic reasons (mainly related to access) informed the selection of the two specific case-sites. The Italian FMU, located in Central Italy, was familiar to the researcher and was considered a MLU, a point of excellence and reference in the country at the time of the study. The English FMU, situated in the North West of England, was primarily identified by the PhD supervisors, and was also recognised as an outstanding FMU at a national level. Hence, both the organisational features and the accessibility of these settings played an inherent role in the decision.

3.4.2 The pre-study period and first access to sites

Given their seniority as midwives and their positions within the organisations, the midwifery managers at both birth centres were considered gatekeepers and local collaborators of the study. These managers were contacted whilst planning the study in order to assess their willingness to participate and to address any concerns or obstacles to conducting the research at the sites. An informal meeting was held with each manager prior to entering the case-sites to present, discuss and gain feedback on the study. Informal visits to the birth centres were parts of these initial contacts with the gatekeepers and represented the first access to the settings.

In addition to engaging with key persons within each site, the pre-study period also involved the researcher gaining an insight into the UK (specifically maternity) health service. As an Italian midwife the researcher

had not previously worked in a UK setting and therefore was unfamiliar with the system, processes, and professional language/colloquialisms. This issue was addressed by undertaking a period of volunteer attendance in the MLU at a large tertiary teaching hospital in the East Midlands of England. After the necessary permissions, a period of 3 weeks between September and October 2012 was spent in shadowing midwives mainly on day shifts, including weekends, supervised by the local midwife coordinator. The pre-study period was particularly useful in allowing the researcher to become familiarised with the local professional language and practices within the English system. Considerations included anticipated challenges of conducting the research in a non-native English language and understanding the use of local midwifery jargon. In fact, whilst this represented less of an issue with respect to the Italian site as the researcher was a native Italian midwife, it was considered at length with regards to the English site. Within the pre-study period, the researcher also had the opportunity to discuss the research project and receive comments from midwives on the research tools. This was useful in informing the preparation of the fieldwork. Collectively, this pre-study activity represented a fundamental training period prior to data collection. It allowed for the exposure and learning of 'the language, perspectives, routines, and practical considerations to determine "how" people do things and "what" they actually do' (Altheide and Schneider, 2012, p.75). The subscription to a midwifery forum, where clinical and academic topics were discussed in the English language constituted an additional support, together with support provided by the research supervisors.

3.4.3 Sampling strategy

As stated by Carter and Little (2007, p.1318):

[In] qualitative research [...] samples are selected to serve an investigative purpose rather than to be statistically representative of a population.

Therefore, congruent with this stance, a purposive sampling approach was adopted for the selection of participants within each case-site. Purposive sampling is a form of a non-probability sampling approach characterised by a deliberate effort to include certain participants. This is achieved through the researcher selecting the sample group members based on their own judgements (Oliver and Jupp, 2006).

Midwives were considered the core participants given the main objective of this research. Managers of midwives were also included due to their dual role as both midwives and managers, which could provide insights into wider organisational and cultural factors of interest. However, in light of the focus of the study, mothers-to be and their partners were not involved as participants in the study. Although it was acknowledged that SPL was inextricably linked to women, and potentially their families, their experiences and views may not have been explicitly related to midwives' approaches to SPL.

The research also included obstetricians as heads of the OUs to which the birth centres transferred their women if needed. The rationale was to enable some insights into the local medical culture faced by midwives and in particular to explore elements, in triangulation logic, connected to women's transfers and the interface of midwives from the birth centres with the host units. The doctors' role was considered, in all likelihood, a critical influence upon inter-professional dynamics in the settings.

The following were adopted as the inclusion criteria for the study:

- registered midwives working in Italian AMU or English FMU or
- manager of midwives working in Italian AMU or English FMU or
- obstetric lead of the host unit of reference (host unit) for Italian AMU or English FMU;
- able to give informed consent to participation.

Conversely, all the Italian and English midwives, managers and doctors who did not meet the above listed inclusion criteria were excluded from this research.

From the data reported on midwifery staffing levels in the birth centre (Redshaw and Rowe, 2011) and the researcher's experience as a practising midwife in a MLU, it was proposed that the study would aim to recruit 10 midwives per site to participate in individual interviews. This purposive sample of 10 midwives appeared likely to reflect the different levels of expertise and backgrounds of a midwifery team in that setting. One midwifery manager and one obstetric lead of the host units were selected per case-site in order to reflect the uniqueness of the role played by these professionals in their context. Collectively, it was anticipated that a total of 12 individual semi-structured interviews would be conducted in each site, with 24 overall. Furthermore, four-eight midwife-participants per case-site would be included in focus groups, as this is reported to be the ideal group size (Kitzinger, 1995). To give midwives the opportunity to participate in the study, priority of participation in the focus group was given to midwives who were not involved in individual interviews.

Information sheets and informed consent forms were designed for the different groups of participants. All the research material was written and was made available in both Italian and the English language (Appendices 5-7).

3.5 Recruitment, data collection, and methods

Data collection occurred between November 2012 and July 2013 following ethical and governance approvals being obtained. The study was conducted by collecting data sequentially and systematically, in the Italian setting first and the English setting secondly; this order was motivated by practical and pragmatic reasons (such as negotiating access).

In accordance with the features of case study methodology and of a critical realist approach, the case was investigated by using different methods

aimed at exploring different aspects of the phenomenon. Within each site, data was collected through semi-structured interviews, focus groups, direct observations, documentary analysis, field notes and personal reflections maintained in a research diary. Data collection was conducted using an inductive reasoning and triangulation logic. A pictorial representation of the study design and its methods is provided in Figure 2.

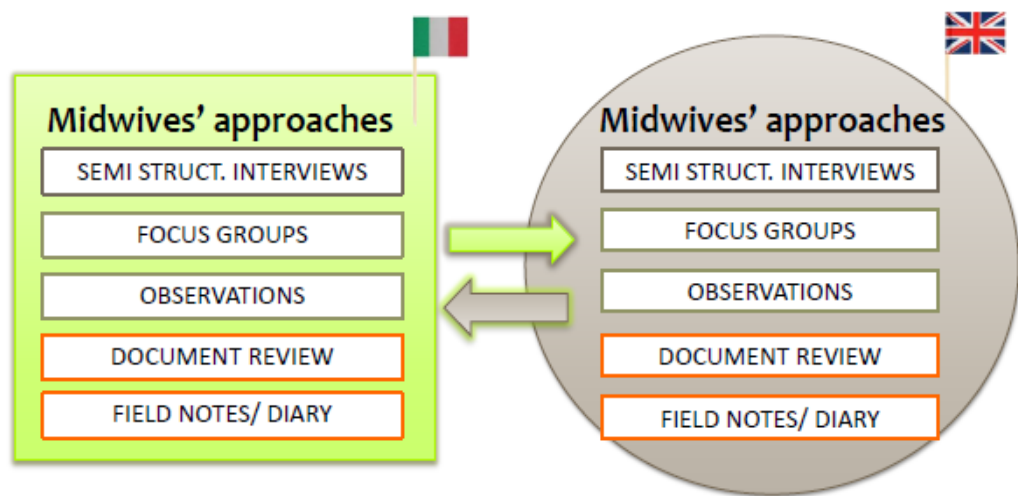


Figure 2 - Representation of the study design: multiple case study involving two sites with different organisational features and in different countries*

* The squared shape indicates the Italian AMU; the round one the English FMU.

As documented in the protocol (see Appendix 2), the study design anticipated an average period of 2 months prior to entering each case-site for data collection preparation. The period between September and November 2012 was dedicated to preparation for the fieldwork in the Italian birth centre, conducted predominantly between December and February 2013. A longer period, between the end of February and April 2013, preceded the fieldwork in the English site which was undertaken between May and July 2013. This, longer than anticipated preparation, was mainly due to the temporary unavailability of the English gatekeeper and also time spent conducting the preliminary analysis of data collected in the Italian site. An equal process of interim and preliminary analysis occurred

with regards to the English site. The following sections will discuss the features of the data collection.

3.5.1 Recruitment of study participants

An introductory presentation of the study was offered at each case-site. During the presentation, topics such as the research aim and methods and the positioning of the researcher were discussed. Generally, the presentation was attended by clinical midwives, midwifery managers and the lead obstetricians. Posters were disseminated within the birth centres in order to inform all the professionals and the users (women and their family) of the study with the related dates of the fieldwork specified. The researcher's contact details were also included in the posters for readers to seek clarification or express any concerns directly with the researcher.

Participant recruitment followed these presentations and continued throughout the study period. With the aid of the gatekeepers and other midwives in the sites, the researcher approached eligible professionals to consider being involved in the study. Information sheets were given to potential participants, in accordance with the protocol, to ensure that they were informed prior to consenting to being involved.

3.5.2 Semi-structured Interviews

According to Yin (2009, p.106) interviews represent 'one of the most important data sources in case study'; they allow an understanding of a phenomenon from the standpoint of the participants within an 'interactional dialogue' with the researcher (Bick *et al.*, 2009; Keating and Fleming, 2009; Everly, 2012).

Semi-structured interviews were the preferred approach, as opposed to structured or unstructured, as they allow for the focus to be kept on the phenomenon of interest but also allow for other areas to be explored dictated by the participants (Gillham, 2000; Longhurst, 2003; Whiting,

2008). All the interviews were conducted by the researcher in the participant's language (either Italian or English). An interview guide was created, informed by the literature (as outlined in Chapter 2), as an aid to structure the interview. Key topics in the guide included: understanding and recognising SPL; the midwives' practical approaches to SPL; factors influencing midwives' decision-making; and the role of the host unit in SPL.

The times and settings for the interviews were agreed with each participant in advance to ensure convenience and confidentiality. However, careful attention was paid on the location of the interviews, as this was considered as a 'micro-geography' in which 'the relationships of the researcher with the interview participant, the participant with the site, and the site within a broader sociocultural context that affects both researcher and participant' was reflected (Elwood and Martin, 2000, p.650).

Interviews were planned to last approximately 45-60 minutes. Each interview started by asking the interviewee their personal motivation for becoming a midwife (or manager, or doctor, depending on the participant). A brief overview of the professional career and key facts or people that mostly influenced the latter were described. This information was helpful to contextualise the interview (Herod, 1999; Carter and Henderson, 2005). However, it was also identified that an 'ice-breaker' enabled a greater rapport with the interviewee, thus enhancing a more natural flow to the conversation. Each interview then moved to the theme of SPL covering points identified in the interview schedule. Throughout the interviews the researcher provided a summary of the key points that emerged through the discussion as a form of member-checking. This confirmed whether the researchers understanding of what the interviewer had said was appropriate and gave the participant the opportunity to clarify if this was not the case. Each interview was audio recorded. The audio-files were handled, in accordance with the Code of the University of Nottingham (University of Nottingham, 2010).

3.5.3 Focus groups

Two semi-structured focus groups, one per case-site, were conducted. These were undertaken to gain insights into the dynamics of professionals at the birth centres and provide the opportunity to discuss initial themes that emerged from the preliminary analysis of the individual interviews. According to Kitzinger (1995, p.299) focus groups help in exploring and clarifying views in 'ways that would be less easily accessible in a one to one interviews'. This is attributed to the possibility for 'dissonant' or 'silent' voices to emerge within a group discussion (Kitzinger, 1994; Silverman, 2009). In order to explore concepts that emerged from the one to one interviews, focus groups in both sites were conducted close to the end of the data collection.

The objective of understanding 'the social dynamic and interaction between the participants' is typically attained 'through the collection of verbal and observational data' (Redmond and Curtis, 2009, p.57). Each focus group was audio-recorded, following the same principles adopted for the individual interviews (outlined above), and conducted in the presence of an external observer. The researcher functioned as a facilitator, whilst an Italian psychologist, previously known by the researcher and with expertise in focus groups, was asked to adopt the role of observer of the group interaction. The Italian observer participated in the focus group ran in each country and provided personal notes for the data analysis. A short meeting between the facilitator and the observer preceded each focus group; the aim was to provide some background and contextual information, though limited to minimise the influence of the researcher's view on the collaborator.

The location and the timing of the focus groups were chosen after consultation with midwives and their managers. Both focus groups occurred in the workplace, in a room chosen by the participants. The chosen location appeared appropriate in terms of guaranteeing confidentiality and enabling a welcoming and friendly environment.

In each site, the focus group opened with the participants' introducing themselves. A topic guide, that included key topics of interest and initial themes that related to interim data analysis, was used to facilitate the discussion.

3.5.4 Documentary collection, review and analysis

The primary objective of the review of documents (documentary analysis) was to gather information about the organisation and its context, as well as to specifically investigate midwives' approaches to SPL through the 'voice' of the organisation.

The collection of the documentary data occurred simultaneously with the use of the other sources. The types of documentation of interest were listed in the protocol and notes were created during the preparation as a *memorandum* of the material to seek. Similar to the use of documentary analysis by McCourt *et al.*, (2011) in the case study component of the Birth place study, the collection, review and analysis of documents in both case-sites was guided iteratively by the information gathered during the fieldwork. This documentary analysis supplemented and cross-validated data from other sources in accordance with the triangulation strategy (see Appleton and Cowley, 1997; Anon, 2008; McCourt *et al.*, 2011).

Sources such as protocols, guidelines, procedures, forms, minutes of meetings, which related at any level to the case were part of the materials collected. Relevant minutes of meetings, organisational communications, and informal memos were also investigated to achieve further insights into the local organisational and professional culture. While some sets of documentation such as minutes of meetings and internal communication records were more prevalent in the Italian site compared to the English one, the latter offered a larger amount of protocols with specific topics of interest (e.g. on women's transfers or abnormal progress). The access to sources was facilitated by midwifery managers. The researchers' familiarity with the Italian birth centre enabled obtainment of the material of interest,

with positive effects on time management. Where an electronic version of the documents was available a copy was secured. In cases where this was not possible, or information was sensitive, paper copies, photographs or researcher's notes were used. All the data was managed and handled ensuring security and privacy of the information and under observance of the protocol.

3.5.5 Observations

Direct observations were included to gain an understanding of aspects that were not 'evident to the subjects themselves and which interviews and focus groups struggle to reveal' (Allen, 2010, p.369). As outlined by Jordan (1993), the processes connected to births are inherently complex. Therefore, it may be necessary to add an outsider to an insider perspective, 'for an adequate understanding of how a system works' as people can 'know *how* to do without necessarily being able to talk about the details of *what* they do' (Jordan, 1993, p.11).

Stake (1995) suggests that only observations that appear to be pertinent to the issue/case should be considered. However, dimensions that are recognised as important in qualitative research involve space, actors, activities, objects, acts, events, time, goals and feelings (Spradley, 1980; Silverman, 2009; Allen, 2010; Holloway and Wheeler, 2013). Therefore, participant observations were used to gain an insight into these dimensions in relation to SPL by: developing a general understanding of the context; the culture within it; the influence of the physical environment on phenomena; and the social dynamics (see Mulhall, 2003). The rationale for adopting this method also included the possibility to identify eventual differences between rhetoric and the reality of midwives' approaches in daily practice.

The phenomena of interest (midwives' approaches to SPL) were observed from common areas or public spaces; the position of the researcher was purposively identified in each case-site. The location, the level of the researcher's participation, the structure, and the length of the observations

varied depending on the objective and object of interest. In no case was the researcher involved directly in clinical care, but participated in other ways (e.g. housekeeping or administrative tasks). In the light of previous case study research (see McCourt *et al.*, 2011), a wide range of shifts were captured, following the framework given to midwives' rota within each organisation (e.g. mornings or 'early' shifts, afternoons or 'late', all day, night shifts, weekends and holidays). Handovers, meetings of midwives, and multidisciplinary meetings represented the episodes identified as particularly helpful in understanding midwives' decision-making and inter-professional dynamics (Mccourt *et al.*, 2011). Observations of meetings were generally more structured and time limited. Longer observations were conducted during an occurrence of SPL. These observations included midwives, but were conducted outside the women's labour rooms. They represented an indirect observation in real-time of the approaches used by the participants. The option of observing eventual cases of SPL inside labour-rooms appeared to be neither beneficial nor ethical. Firstly, the approaches used by midwives could have been influenced by the presence of the researcher in the room. Secondly, the presence of the researcher could have interfered with a woman's labour progress that was already complicated or disturbed.

To some extent the researcher maintained an 'observational attitude' also beyond the set moments identified to observe. Ultimately, to be flexible and open-minded to any unplanned event related to the case was considered paramount. According to Stake (1995, p.55), 'most researchers find that they do their best work by being thoroughly prepared to concentrate on a few things, yet ready for unanticipated happenings that reveal the nature of the case'. In the majority of cases, data was gathered only after obtaining the participants' written and/or verbal consent. However, due to logistical and practical reasons (such as being in a public corridor with high traffic) for some observations people were involved that did not directly give their consent to be observed. Therefore, to ensure ethical rigour, only data

gathered from the consenting participants was analysed and used in the study.

3.5.6 Field notes and personal diary

As advocated by Gillham (2000) and Mulhall (2003), field notes were created to record data collected during interviews and observations. Notes included contextual information such as structural and organisational features of the case-sites, as well as the researcher's thoughts. Both a notebook and the researcher's iPad were used to record data. The iPad also functioned as an audio recorder, and housed an application that enabled the researcher to create drawings and texts connected to specific moments of the audio files. Some examples of the products of this application are provided as a screenshot of notes in Figure 3.

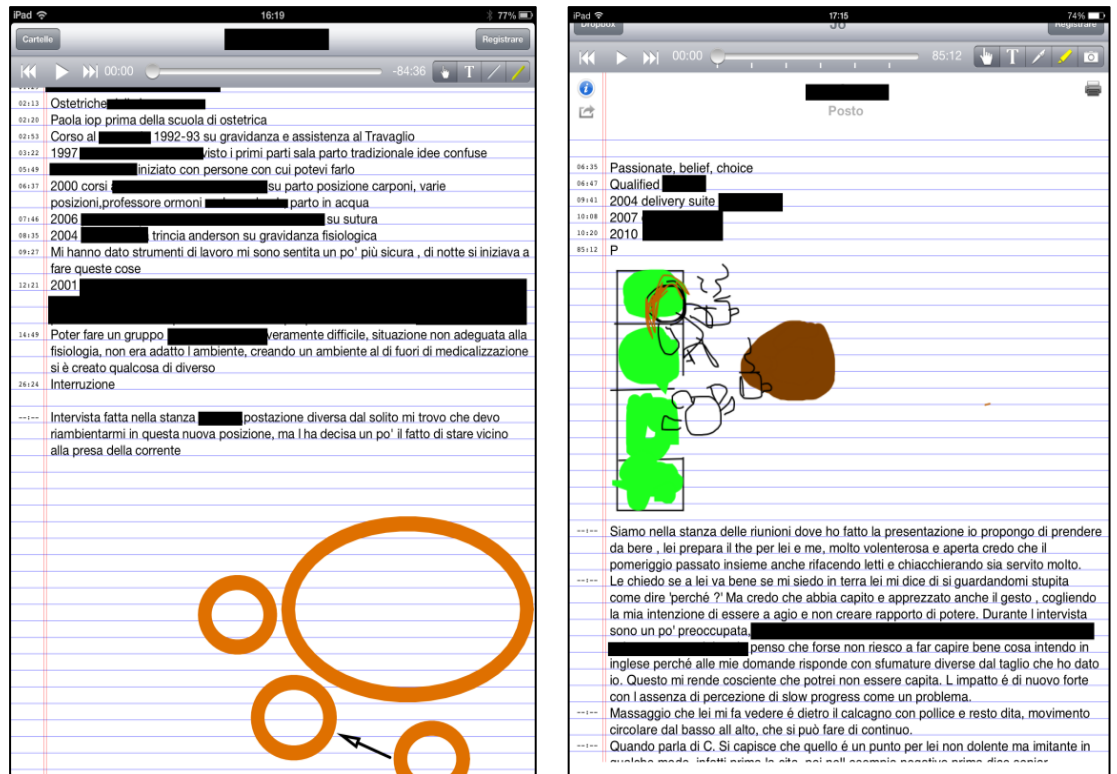


Figure 3 - Screenshot of some notes taken by the researcher with the aid of an application for iPads. ⁸

The researcher's personal thoughts, impressions and reflections were recorded in a research diary providing insights on the researcher's journey 'inside' and 'outside' the field. The combination of a rational approach, with an 'awareness and intelligent use of emotions', as defined by Gilbert (2001), was seen as beneficial for the research process. The reflexive accounts also helped in maintaining a temporal chain of the events and of the development of the researcher's thinking, as indicated by Swanborn (2010). Furthermore, the diary became crucial in enhancing the quality of the study, from the early stages to the data analysis stage, through the use of reflexivity a fundamental component of qualitative inquiries (Mauthner and Doucet, 2003). By maintaining the research diary, the issue of 'too little

⁸ On the left: example from an individual interview at the Italian site; on the right: example from an individual interview at the English site.

attention [...] given to documenting the process of carrying out research' denounced by Kinard (1996, p.69) seemed to be addressed. The availability of transparent accounts of the researcher's reflections was seen, as authors stated, as a contribution to the validity and the rigour of the research methods (Mason, 2002; Cho and Trent, 2006; Koro-Ljungberg, 2008).

3.6 Leaving the field and planning to return

The issues related to leaving the field have been faced by several authors and reported as one of the challenges of qualitative research (Burr, 1995; Higgins, 1998; Hubbard *et al.*, 2001; Hartley, 2004). Like the access, the researchers' exit from the field was negotiated primarily with the manager of midwives in each case-site. At the Italian site, the manager was keen to organise a small 'good-bye' party, which was arranged in the birth centre and opened to all the professionals in the structure. This event marked the end of the data collection in the first site, while in the English one the conclusion of the fieldwork happened in a less visible way, it was stated by a researcher's email to the group of midwives as agreed with the local manager. In both the contexts, gratitude was expressed to the participants, the overall group of professionals and the organisations for the help and support provided to the study. The researcher ensured the midwives from both case-sites were aware of her intent to return to present the findings from this study.

3.7 Data analysis

According to Walker and Myrick (2006, p.549), 'qualitative data analysis seeks to organise and reduce the data gathered into themes or essences, which, in turn, can be fed into descriptions, models, or theories.' Stake also highlights how the analysis process can be seen as a 'a matter of giving meaning to first impressions as well as to final compilations' (Stake, 1995, p.71). In the current work, the final conceptualisation of the 'case' derived from a thematic analysis of the data. Deliberately, a set framework for the thematic analysis was not used, but the latter was driven by principles

indicated by grounded theorists and case study researchers (Strauss and Corbin, 1990; Boyatzis, 1998; Dey, 2003; Hartley, 2004; Stake, 2006; Walker and Myrick, 2006; Saldana, 2013). This choice is not unusual; in their paper, Laws and McLeod (2004, p.17) illustrated the advantages of a combined case study/grounded theory approach, both in terms of flexibility of research process and the richness of data. Moreover, an eclectic and flexible methodology appeared congruent with a critical realist standpoint. The analysis involved different steps at different stages of the research, as summarised in Figure 4, though overall it represented a process of constant and flexible interaction-comparison between the researcher and the data (Pope *et al.*, 2000).

3.7.1 Within-case analysis

As shown in Figure 4, the process started for each case with an *interim* and preliminary analysis of the data gathered. In the present work, the term *interim* is used to qualify the type of analysis performed over the course of the data collection, while the analysis described as 'preliminary' relates to that started at the conclusion of the fieldwork. Conducting *interim* analysis appeared congruent with the inductive reasoning applied in the study (see Silverman, 2009) and in general with the feature of case study methodology (Yin, 2009). Pope *et al.*, (2000) described this sequential-*interim* analysis as frequent in qualitative research and advantageous as it allows 'the researcher to go back and refine questions, develop hypotheses, and pursue emerging avenues of inquiry in further depth'. Furthermore, the authors affirmed the impossibility for the researcher to avoid thinking about, and informally analysing, data whilst conducting the fieldwork (Pope *et al.*, 2000, p.114).

The first steps of the data analysis informed the researcher's initial impressions about the case, based on the listening of the interviews and on preliminary perusals of any textual material (e.g. documents, field notes) obtained. To facilitate the process, the audio-files of interviews and focus groups started to be transcribed during the fieldwork. The second step of

the analysis began only after a methodical organisation of all the data collected and was performed on the material in a systematic manner.

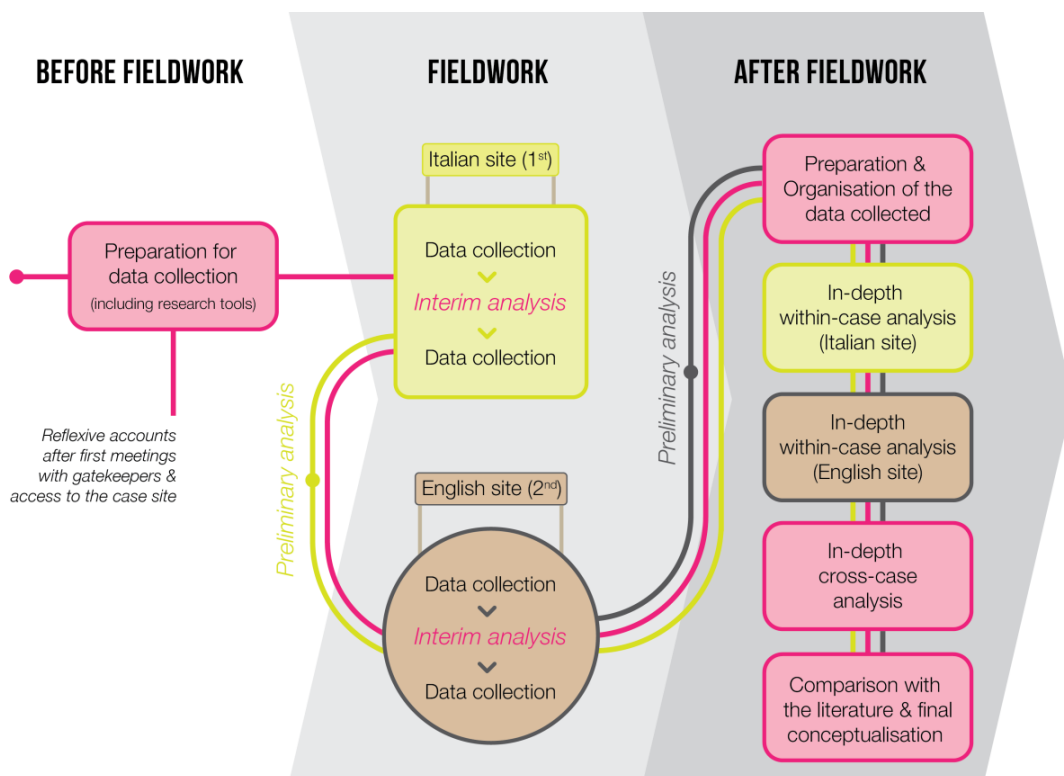


Figure 4 - Representation of the main stages of data analysis. Key moments of analysis are highlighted in the colour red.

The *verbatim* transcription of all the audio-files related to the interviews (to individuals or groups) was completed before starting the systematic analysis. The transcripts together with the field notes, documents and personal reflexive accounts, constituted the textual material to analyse. Audio-files in Italian were transcribed fully first and were then translated in English. In a few cases, where the audio and the jargon appeared more challenging, the researcher sought the aid of professional transcribers and the research supervisors to complete the transcription. This pertained to records in the English language only. The analysis was always performed by the researcher on the transcripts in their original language. This represented an attempt to look at the phenomena (represented through the

data) as originally presented by the participants, and to be open to the potential for multifaceted meanings in the participant's native language.

From the textual data, thematic analysis was undertaken which involved systematic coding and categorisation of the data into themes. Codes were created on a line-by-line basis and manually annotated on the transcripts. From the coding, data was further organised into themes and subthemes. The process fundamentally sought those particular themes that were emerging as important to the description of the phenomenon of interest (Daly *et al.*, 1997). Data was organised and categories were built around the main areas of interest delineated by the research questions (see Hartley, 2004). The findings emerging from the transcripts were triangulated with the analysis on the observations, field notes, reflexive accounts and documentation, looking for convergent and divergent points. Data was further examined to see whether they indicated the appropriateness of the created categories or the need for new ones. This data reduction activity might be summarised as a demanding process of 'selecting, simplifying, abstracting and transforming the raw case data' (Miles and Huberman; A. M., 1984, pp.21-23).

3.7.2 Cross-case analysis

Once the individual analyses of both the cases were concluded, a cross-case analysis was performed (Stake, 2006). Links between categories in each case and cross-case were sought and verified against the data with a particular interest in the identification of similarities and differences between the cases, in order to achieve a knowledge of midwives' approaches to SPL in birth centres, beyond the situational characteristics of the single cases. The overarching 'umbrella' of midwifery approach to SPL in birth centre, under which single cases could lay, represented the '*quintain*' (Stake, 2006) of the current multiple case study.

The cross-case analytical process was primarily guided by Stake's principles for multiple case studies, but it did not adhere perfectly to the set

framework for it. Indeed, tools, such as the worksheets for researchers, provided by Stake looked inspirational, but none appeared to be fully applicable for the needs of this study and its original data. In other words, the analysis proceeded within the framework of qualitative case study research, but resulted in flexible use of the tools which were adapted for this study. A first level of understanding of the quintain originated from grouping the themes from both cases whilst maintaining their situationality. This process was similar to what Stake indicates as 'Track I' for the analysis of multiple case studies (Stake, 2006, pp.50–58). Findings were compared and contrasted looking for commonalities, but also for counter evidence. Pivotal in endeavouring to make persuasive assertions on midwives' approaches to SPL in birth centres 'based on evidence' (Stake, 2006, p.41), appeared to be the constant employment of a 'case-quintain dialectic'. This represents 'a rhetorical, adversarial procedure wherein attention to the local situations and attention to the [...] phenomenon as a whole' is taken (Stake, 2006, p.46). Notes were taken along the process to help keep in mind the complexity of the findings; a fundamental element in multiple case study. The analysis was supported by the use of electronic files, data sheets and components of the Nvivo software, mainly for the organisation of data, as well by creative processes and tools such as the researcher's pictorial representations/drawings of concepts. The latter aimed particularly to facilitate the understanding of the relationships between the emerging findings through visual aids.

However, the identification of cross-case themes, resulting in general assertions regarding midwives' approaches to SPL in birth centres, did not represent the end of the analytical process. In fact, by looking at data, it seemed necessary to push the analysis further as not only cross-case themes, but also cross-case and cross-theme factors, appeared to emerge. These factors showed the potential for significantly influencing midwives' approaches to SPL in birth centres beyond the single cases examined. This next level of analysis was achieved by merging, sorting and ranking factors, in order to draw some tentative final assertions. This procedure benefitted

from a process similar to what is described by Stake as 'Track III' (Stake, 2006, pp.64–72). This process represented the foundation for the further conceptualisation of the phenomenon investigated (Darke *et al.*, 1998). In developing a conceptualisation of the explored midwives' approaches to SPL, it was endeavoured, hence, 'to provide not only a sense of the particular circumstances of the case but also what is of more general relevance and interest' (Hartley, 2004, p.324). A further comparison of the research findings with the literature and with the researcher's personal reflections aimed at checking evidence and alternative explanations of the data. The final interpretations and conceptualisation of the case represented those appearing as the most correspondent to the 'facts' investigated (Yin, 1994; Gillham, 2000).

3.8 Ethical considerations

Guillemin and Gillam (2004, p.263) talk about two main dimensions of ethics in research:

The "procedural ethics", which usually involves seeking approval from a relevant ethics committee to undertake research involving humans and "ethics in practice" or the everyday ethical issues that arise in the doing of research.

Therefore, this section will discuss the procedural and the practical aspects of ethics in relation to this study.

3.8.1 Procedural ethics

With regards to the first dimension, this study was sponsored by the University of Nottingham with all necessary research ethics and governance approvals obtained prior to data collection being undertaken. This involved approvals from: the Ethics committee of the Faculty of Medicine and Health

Science of the University of Nottingham⁹; the Research & Development office of the English NHS Trust; the protocol of the local Italian Ethics committee ('comitato etico locale'); and the directors of the Italian hospital Trust. Furthermore, the research was conducted in adherence to the University of Nottingham Code of Research Conduct and Research Ethics (University of Nottingham, 2010), the Research Governance Framework for Health and Social Care (Department of Health, 2005), Principles of Good Clinical Practice (ICH Harmonised Tripartite Guideline, 1996) and of the Declaration of Helsinki (World Medical Association, 2008). Subsequently, with regards to the 'in practice' dimension, the research was guided by fundamental ethical principles, such as non-maleficence, beneficence, respect for autonomy and justice (Gillon, 1994; Orb *et al.*, 2001; Beauchamp *et al.*, 2007). The researcher also endeavoured to ensure confidentiality and anonymity of the people/settings involved at all stages up till the presentation of the findings. As stated in the research protocol, the participation in the study was entirely voluntary and the possibility to withdraw participation at any time was emphasised.

3.8.2 Practical ethics

Though ethical principles appeared clear in their definition, potential challenges in their practical application were anticipated prior to the commencement of the fieldwork. For instance, no physical harm to participants or presence of 'sensitive topics' (see Corbin and Morse, 2003) could be predicted; nevertheless, the study appeared far from being a 'no-impact' research both for the participants and the researcher. Although the position of the researcher was intended to be clarified to participants from the beginning and efforts were made to ensure as much as possible a natural relationship with people and the environment, power-related issues seemed to be unavoidable. According to Karnieli-Miller *et al.*, (2009, p.282)

⁹ 12106, ref C18102012 SNMP 12106

is 'the developmental nature of the research process [that] leads to changes in power relation'. In addition, the authors identified in the recruitment of participants, data collection, data analysis and production of the research report, validation and publications of the material, the key areas where changes in power relations pose specific ethical issues (Karnieli-Miller *et al.*, 2009, p.282). Linguistic barriers (Cotterill, 1992), the presence/absence of familiarity with the settings or relationships with eligible individuals prior to the fieldwork were just some of the other elements that were considered to be likely to generate asymmetric researcher-participants power relationships. The debates on positionality, subjectivity, power-relations and use of reflexivity in qualitative research were particularly scoped during the preparation of the study (Chiseri-strater, 1996; Hubbard *et al.*, 2001; Guillemin and Gillam, 2004; Kvale, 2006; Dickson-Swift *et al.*, 2007; Ellis, 2007; Karnieli-Miller *et al.*, 2009; Burns *et al.*, 2012). It was noticed that from the researcher's background and the new role in the study a dilemma on the 'insider/outsider' status could develop (Burns *et al.*, 2012). In fact, if on the one hand being a midwife by background could qualify the researcher as an 'insider', on the other, by approaching midwifery settings not as an internal clinical professional but as an external investigator there seemed to be an 'outsider' status as well. Furthermore, the previous familiarity with the Italian midwifery system, the specific Italian site and the people in it, appeared to give to the researcher an 'insider' perspective. Conversely, the naïve approach to the English system, site and people seemed to confer an 'outsider' standpoint (see Sultana, 2007). Fundamentally, it was acknowledged soon that the positioning of the researcher would have moved flexibly in the *continuum* between the extremes of being a total insider or total outsider (see Woodward, 2008).

On the request of the Ethics Committee of the Faculty of Medicine and Health Sciences of the University of Nottingham, a strategic plan was developed for the possibility of the researcher encountering poor practice during data collection. The proposed plan was to discuss with the academic

supervisors any case of bad practice encountered and to identify together the appropriate person(s) to refer to if needed per each study setting.

Other challenges, not strictly ethical by definition rather methodological, were anticipated. Some, such as the issues relating to language, were illustrated earlier in this chapter. Others included considerations on the influence of the fieldwork from the first case-site upon the second one. In fact, if on one hand the first part of the data collection was planned to inform and refine at some level the subsequent, on the other it was considered paramount to maintain an inductive reasoning throughout all the research. It was therefore necessary to limit the eventual 'deductive inputs' from the first phase of the study on the second and to keep as naïve and an open approach to the second case as possible. The scheduled period of preparation between the data collection in Italy and the one in England seemed to offer, in addition to the opportunity of refining the research methods, a beneficial temporal separation of the two phases of the study. This, together with the use of reflexive accounts and exposure of the research process to challenge and debate with the academic supervisors and peers, represented a way to maintain awareness and to control the issue. Although intuitive, the impossibility of anticipating all of the possible events and challenges was part of the anticipations made.

Before displaying the findings of this research in the next chapters, it might be worth acknowledging here that 'there is no standard format for reporting a case study research' (Merriam, 1998, p.193), and that the task of reporting a case study is considered difficult *per se* (Darke *et al.*, 1998, p.274). Although authors commonly attribute the hardship to the process of 'collapsing' the volume of qualitative evidence generated in case study research (Eisenhardt, 1989; Hartley, 2004), for Flyvbjerg (2006, p.241) 'the problems in summarizing case studies' are often due to 'the properties of the reality studied than to the case study as a research method'. As this issue arose also in the current work some of the strategies suggested by various authors to deal with the problem appeared particularly valuable. For instance, narrative accounts were organised around the 'substantive topics'

of the case study and evidence from different data elements integrated as much as possible (Yin, 1981). The substantive topics were, hence, built predominantly around the research questions. According to Yin (1981), in a multiple case study 'there may be no need for any single-case report' and individual cases may be briefly summarised prior to reporting the results of the cross-cases analysis. However, it seemed that by supplying a description of both the individual cases first, the process that led to the final conceptualisation of midwives' approaches to SPL in birth centres could be clearer. Eisenhardt (1989) highlights the importance of enabling readers to formulate their own assessments on the congruence of a theory by providing sufficient evidence for each construct.

3.9 Summary of the chapter

This chapter has illustrated the rationale for designing and conducting a qualitative, multiple case study. CR as an underpinning philosophy has been outlined and how it has applied in relation to this inquiry has been discussed. The methods used to collect and analyse data have been outlined with pertinent ethical and methodological considerations postulated. The next three chapters will present the analysis (within- and cross-case) of the data collected from this study.

4 THE CASE IN THE ITALIAN SITE

This chapter presents the findings from the Italian case-site. Firstly, it will provide information on the data collection and the analysis performed. Secondly, it will describe the context that bound the case. This will involve outlining the contextual elements that set the case in 'space and time' and will provide a platform to situate the subsequent data analysis. Thirdly, it will present key themes, subthemes and categories that, together with the contextual elements, illuminated features of midwives' approaches to SPL. Lastly, the chapter will provide conclusions around the case at this site.

4.1 Data sources and their contribution to the analysis

This section provides an overview of the material which served the current within-case analysis report. In accordance with the case study methodology, findings were informed by the triangulation of the data collected either through different routes or from different sources (see Chapter 3). The number and types of sources utilised are summarised in Table 2. The latter illustrates also the contribution of each source to the overall material considered.

Participants involved in the individual interviews differed, in some cases, from those included in the focus group. This was due to a purposive selection of those midwives who demonstrated interest in participating in the study. Selection occurred in accordance with the principles anticipated in the study protocol and illustrated in Chapter 3.

DATA (MAIN SOURCE)	COMPONENTS	N	HOURS
INDIVIDUAL INTERVIEW (TRANSCRIPTS N=12)	SENIOR MIDWIVES (<i>Manila; Giorgia; Lisa; Samantha</i>)	4	5
	JUNIOR MIDWIVES (<i>Anna; Marzia; Chiara; Paola; Sandra; Grazia</i>)	6	8
	MIDWIFE MANAGER (<i>Barbara</i>)	1	2
	LEAD DOCTOR OF THE HOST UNIT (<i>Carla</i>)	1	1
Total		12	16
FOCUS GROUP (TRANSCRIPT N=1)	SENIOR MIDWIVES (<i>Manila; Kelly; Lisa; Giorgia</i>)	4	
	JUNIOR MIDWIVES (<i>Marzia; Sara; Grazia; Chiara</i>)	4	
Total		8	3
OBSERVATIONS OF DIFFERENT EPISODES	WEEKLY MEETINGS	8	25
	INTERDISCIPLINARY MEETINGS	3	10
	HANDOVERS	10	7
	TRAINING COURSE	4	36
	CLINICAL SHIFTS -DAYS	15	90
	CLINICAL SHIFTS- NIGHTS/WEEKENDS	5	44
	CLINICAL SHIFTS WITH SPL	3	19
	SOCIAL MOMENTS	3	9
Total		51	240
DOCUMENT REVIEW	PROTOCOLS	5	
	GUIDELINES	2	
	MINUTES OF MEETINGS (folders)	2	
	OTHER IN SITE-MATERIAL (e.g. POSTERS, LEAFLETS, BOOKLETS, INFORMAL MESSAGES)	5	
	REPORTS	3	
	COMMUNICATION/TRANSFERS DIARY	3	
	FIELDNOTES/PERSONAL JOURNAL (diary)	1	
	ORGANISATIONAL DOCUMENTS	4	
Total		25	

Table 2 - Summary of the main sources of data collected and analysed at the Italian site.

The source of the material reported within the chapter will be referred by a code. For interviews and focus groups, codes were formed by the related participants' pseudonyms, an abbreviation of their professional roles and of the case-site (IT). Excerpts from textual material will indicate source, a progressive number and the abbreviation of the case-site. The following codes are used: IT= Italian case-site; SM= senior midwife; JM= junior midwife; M= midwife manager; LDr= lead doctor of the host unit.

Section 4.3 outlines the contribution of each main source to the identification of the themes, subthemes and patterns discussed.

4.2 Situating the case

In order to comprehend the potential complexity of the phenomenon, it appeared necessary to explore broader, as well as local systems in which the case was situated. Therefore, a brief overview of the Italian maternity system will precede the description of the organisational features of the birth centre representing the case-site.

4.2.1 The Italian maternity system

In Italy, maternity care is guaranteed as free and provided as part of the National Health System (NHS) called 'Sistema Sanitario Nazionale' (SSN). Founded in 1978 and based on the model of the English NHS (France *et al.*, 2005), the SSN ensures care mostly through public facilities. Although services can be provided by the private sector within or besides the SSN.

Maternal and infant health reporting is a key element of the Italian public health system. Firstly, because antenatal, intrapartum and postnatal care represent the main causes of women's admissions to hospitals (Italian Health Policy Brief, 2013). Secondly, because the promotion of healthy behaviours during childbirth is perceived to positively impact the wellbeing of society (Lauria *et al.*, 2012).

Births in Italy fluctuate around 514,000 per year, which is a lower birth rate than other European countries (ISTAT, 2014). Conversely, the national rate of CSs - around 37% - represents the highest in Europe and one of the highest in the world (Basili *et al.*, 2014). There are apparent geographical differences, with the highest rates recorded in the south of the country and especially in the private sector. Areas with higher CS rates are characterised by a prevalence of hospital-centred medical models with a dearth of community-based and midwifery models of care (Lauria *et al.*, 2012, p.10).

Midwife-led care appears to be promoted within contemporary policies, but poorly supported in practice within the system (Lauria *et al.*, 2012). Midwives are recognised by law, in their professional profile, as lead

professionals in women's care and autonomous in the context of the physiology of pregnancy, the birth and the postnatal period. The stated areas of practice extend beyond childbirth and include health and sexual education for the community and screening of gynaecological cancers (DM n 740/94, 1995). However, it has been reported that only 2.7% of women in Italy are cared for by a midwife during pregnancy, against 85.9% assisted by a gynaecologist/obstetrician (Lauria *et al.*, 2012). According to the National Institute of Health, these percentages reflect the Italian highly-medicalised birth culture. The extensive involvement of doctors instead of midwives in the care of healthy childbearing women is reported as scientifically unjustified. However, obstetric-led care appears to be culturally rooted and widely accepted by women, with the majority of them satisfied by the quality of care and information in pregnancy provided by doctors (Lauria *et al.*, 2012).

Most midwives work in hospitals or, depending on geographical regions, provide care within community facilities called 'consultori familiari'. Community midwives are usually involved in cervical cancer screening programmes, sexual education, counselling for teenagers and vulnerable groups, antenatal classes and domiciliary postnatal care autonomously or in multidisciplinary teams (Fasan *et al.*, 2012; Spina, 2014). Independent midwives represent approximately 2% of all midwives in Italy (Lauria *et al.*, 2012).

National statistics indicate a very low rate of homebirths at around 0.05% with 88% of babies born in public facilities and 11.9% within the private sector. Hospitals represent the birth setting for 90% of babies (Basili *et al.*, 2014). However, it is impossible to identify from this data which birthplaces are obstetric-led units or midwife-led. This is due to the lack of detailed mapping of the Italian birth settings that are generally categorised by number of births per year¹⁰ with no distinction of organisational models.

¹⁰ Categories are generally <500 births, 500-1,000, >1,000 births per year.

Despite not being recognised in national statistics, it was estimated that five MLUs exist in Italy (Sulli, 2011; Iannuzzi and Morano, 2015). Data presented at the first Meeting of the Italian Midwifery Unit Network confirmed the presence of 5 AMUs currently active and the recent closure of 1 birth centre in the public system (Scapparino *et al.*, 2016). There seems to be also a number, not precisely identified, of private maternity homes in the country. The birth centre selected as case-site for the current study represented one of those few MLUs; its key organisational features will be illustrated in the next section.

4.2.2 Geographical and spatial configuration of the service

The Italian birth centre was located in a central region of the country and was mentioned, both in the internal and the external communications of the service, as a point of reference at the national, regional and metropolitan level. It is embedded in a large urban area and is accessible to different population groups. These can vary, for instance, in their educational attainment, social status, citizenship, yet they have equal access to the birth centre, providing the women meet its health status and language criteria.

The birth centre was established several years before the current study, alongside a tertiary university hospital to which it was connected by a corridor. From personal observation, that corridor seemed both a point of 'safe connection' with the host unit and of 'safe separation' from the medical model (Fieldnotes#1-IT).

The building was configured on two floors: antenatal clinics and education classes were held on the ground floor that also housed a swimming pool and a conference room. On the first floor, at the same level of the host unit (the hospital labour ward), there was the birthing unit. Its layout was composed of two concentric communicating circles: an external one accessible to all and an internal area reserved for only midwives and users. The external circle was defined by a large corridor with seats surrounding and facing all the birthing rooms. Part of this outer space was planned as a play-zone for

siblings to enjoy their stay or visit. The midwife-manager was based in a meeting room, at one edge of this corridor. In the internal circle there was a core open space with the central midwives' work station to aimed to provide sight of all areas of activity, including five large birthing rooms, a kitchen, a room for outpatient clinics/counselling/other assessments, a neonatal area (for emergency and special care only), a small rest area for midwives and an area of connection with the external entrance. Each room had an *en-suite* bathroom, home-like furniture and all the facilities for mothers and babies. All rooms, except one, contained a birthing pool and a double-bed in order to allow the partner/family to stay. The only room without a birthing pool was furnished with two single beds and used in a flexible manner, for example by women and their babies close to discharge. Overall, the unit appeared a warm, welcoming, family-friendly space that facilitated social interaction.

4.2.3 The birth centre ethos

The birth centre ethos emerged predominantly from external and internal service communication sources, such as leaflets, the Trust-website and protocols describing the characteristics of the unit, participants' accounts and observations of midwives' talks during courses and informational meetings for external audiences. 'Innovation, organisational experimentation and a strong community/territorial value' (website-IT) appeared to be the keywords of the service from the point of view of the Trust.

From all sources, the birth centre was presented as a model offered by the Trust to 'bring back the woman at the centre of the birth event'. The need for giving women a central role was justified by the gradual women and partners' 'loss of the role of protagonist' and 'unnecessary medicalisation of childbirth' (Service-leaflet-IT). Key features of the philosophy of the model included the 'consciousness of birth primarily as a natural event' (Protocol#1-IT) and of the necessity of reconsidering the social, relational and emotional aspects of birth. The focus on providing safe, appropriate and

evidence-based midwifery care and the importance of the connection and collaboration with multidisciplinary teams operating in the hospital was also emphasised.

The midwifery-led model was extensively proposed for healthy childbearing women as an alternative to the actual medical model, characterised by an inappropriate 'overuse of technology' (Poster-IT). The autonomy of midwives' practice within the birth centre represented another 'alternative' features of the service compared to obstetric-led units. The autonomous work was presented by some midwives as a fundamental difference with other models of care and a value to defend:

I believe that for us, midwives, it's of great value to work autonomously and take full responsibility of what with do. This value has to be defended [...] Maybe this [autonomy] is what makes us different, or perceived as different, from midwives in the labour ward.(Manila-SM-IT)

4.2.4 The clinical pathway

The Trust offered this MLU as a public 'opt-in' service for women with a straightforward/low-risk pregnancy. To access the clinical pathway, women were first asked to book an antenatal appointment around 36 weeks of pregnancy with a doctor and a midwife. During this visit, women and their partners, if present, were provided with detailed information concerning the service with a particular focus on its safety, the team-provision of continuity of care, and the possibility of being transferred in case of altered maternal/foetal health conditions. Once choice and eligibility for the birth centre was established, women, and their partners, were asked to sign a consent form. This consent, which could be withdrawn at any time, served to document their choice for this alternative pathway. After this first visit, women were supposed to receive only midwife-led care, both antenatally, intrapartum and postnatally, unless new health conditions emerged requiring medical assessment. The neonatologist was the only

doctor involved routinely at the point of a new-born's discharge. Women and babies were normally discharged two to three days after birth¹¹. Partners and siblings, though officially not in-patients, could remain at the women and babies' sides for the entire stay. Visits were generally permitted at any time. However, restrictions were sometimes imposed during labour and the first two post-partum hours, to reduce external interferences on birth processes. Midwives' facilitation of normal birth included the promotion of women's mobility, use of water for labour and birth, continuity of care in labour and CTies, in particular techniques of Traditional Chinese Medicine (TCM). Women were given support regarding breastfeeding, and breastfeeding counselling was also provided to women not involved in the birth centre pathway.

4.2.5 The internal organisation of the birthing unit

The birthing unit provided a number of services that included antenatal clinics at term of pregnancy, intrapartum and postnatal care of mother and baby up till discharge, on-site and telephone triage, counselling activities, tutoring and mentoring of student midwives. As well as the support of other maternity wards' activity (mainly the labour ward) in case of emergency and/or need.

Midwives performed all these tasks supported by the 'Operatore Socio Sanitario' (OSS¹²) a maternity health care assistant involved mainly in the basic health care of the mother and baby and responsible for domestic duties. At the time of the study, there was a core staff of twelve midwives covering the service 24/7 and distributed in six teams. Additionally, there were two OSS during the day and one on-call OSS in the labour-ward during the night. Each midwifery-team was composed of two midwives; a senior midwife ('ostetrica senior') and a junior ('ostetrica junior'). Seniority was

¹¹ This policy is described as 'early discharge' for the Italian and local system.

¹² OSS stands for 'Operatore Socio Sanitario', the literal meaning being, 'social health worker'.

not related to the local banding system, but to the professional's expertise in the midwife-led model of care. The junior midwife was considered under training for at least one year of supervision by her senior midwife-partner. According to the manager and the majority of senior midwives, the stable presence of a group of senior midwives in the centre was pivotal to maintain and transmit the ethos of the model.

Midwives were selected on a motivational basis after an agreement between the head of midwives of the labour ward and the midwife manager of the birth centre. There was a programme of periodic rotation between the birth centre and the labour ward both to maintain the midwives' skills in high-risk and emergency care and to facilitate training, integration and collaboration between the two units.

Labour progress was recorded on a local modified version of the WHO partogram with a 4-hour action line; the chart was a two-sided document where the second side reported information such as hydration, nutrition, positions adopted by the mother-to-be, use of water, timings (see Figure 5). Transfers were recorded in a specific diary; in cases of intrapartum transfer, the midwife on duty accompanied the woman to the host unit and helped her settle into the new setting. However, the midwife could rarely continue the one-to-one care by staying with the woman outside the birth centre, as staffing and skill-mix precluded this.

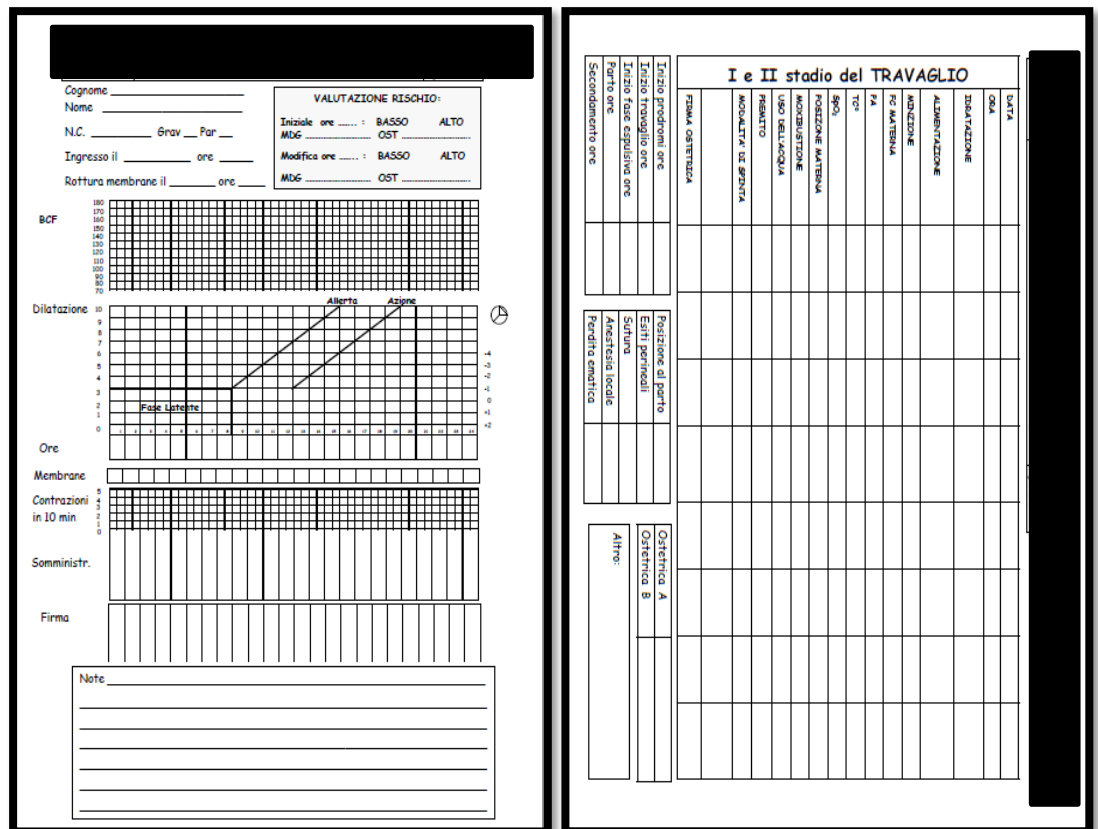


Figure 5 - Partogram in use in the Italian birth centre.

The relationship between the MLU and the host unit appeared tense and could be characterised by a lack of dialogue. There was an apparent ‘us and them’ culture, with *intra*- and *inter*-professional conflicts driven by the different models of care. Frictions seemed to originate primarily from the host unit’s perception of the birth centre as a privileged place for privileged women, where midwives benefitted from more relaxing working conditions. In addition, transfers were seen as increasing the workload of doctors and midwives on the labour ward. On the other hand, midwives of the birth centre tended to look at their colleagues of the host unit as not very knowledgeable with regards to normal labour care. In both units, prejudices appeared a fundamental lens through which interactions were judged.

4.2.6 Statistics of the birth centre

The birth centre used an established system of data collection, analysis and reporting. Reports were used inside and outside the unit for assessment purposes. The users' views were obtained by different means, including a diary for parents' comments, a Facebook page created by one of the -fathers and the use of anonymous questionnaires for customer satisfaction. The collection of this data was perceived by the midwives as paramount, not only to evaluate and improve the quality of the service, but also to 'protect the birth centre from external and internal attacks' (Fieldnotes#3-IT),

The available database and reports showed an increasing use of the service since its establishment, with users coming from different local, regional, national and even international areas. Within the fieldwork at this site, 684 women accessed the midwife-led pathway. Births at the birth centre were 389 against the approximately 3,000 births occurring at the host unit in the same period. Over 90% of women admitted to the birth centre had a spontaneous vaginal birth (even after transfer), 5.6% of women ended with a CS, while 3.5% of births occurred with the use of ventouse¹³. The episiotomy rate was around 0.8%, with one third degree tear reported against a 93.5% of intact perineum/I degree tear. Data also reported the women's use of different positions for labour and birth with approximately 15% of water births.

Most of the transfers occurred in the intrapartum period (18.3%). SPL, and in particular functional dystocia, was recorded as the main/most frequent cause of intrapartum transfers, followed by non-reassuring foetal monitoring, meconium stained liquor, woman's-requests (mainly for epidural) and other causes.

¹³ In Italy, unlike ventouse, the use of forceps for instrumental births is generally out of practice.

4.3 Overview of the themes, subthemes and patterns of the case at the Italian site

Rowley (2002, p.24) reports that 'writing the case study report can be a daunting task, because at this point the researcher needs to discriminate between what is to be included and the wealth of evidence that will not appear in the report, but stays in the case study database'. Behind each case report of the current research, there was the difficult work of the selection of themes. Selection occurred primarily by following authors' suggestions to 'tell the story' of the case and address propositions maintaining the focus on the research questions (Baxter and Jack, 2008, p.555).

The final themes, subthemes and patterns selected will be discussed in the next sections and are summarised in Table 3. In order to provide transparency, the 'contestable empirical claims' (Moravcsik, 2014, p.50) made will be supported by evidence, arguments and, where possible, challenged by counter-arguments.

Themes	Sub-themes	Patterns	
1. SPL as 'the' problem	SPL as key cause of transfers	<ul style="list-style-type: none"> • Dominant issue 	<ul style="list-style-type: none"> • Problematic interface
	SPL as stressful enigma	<ul style="list-style-type: none"> • Hard to define • Challenging to manage 	<ul style="list-style-type: none"> • Context-dependent phenomenon
2. Recognition as engaging challenge	Sensing SPL	<ul style="list-style-type: none"> • Having a 'sentore' /suspect • Observing a change 	<ul style="list-style-type: none"> • The betrayed expectations
	Questioning/scrutinising	<ul style="list-style-type: none"> • Looking at the bigger picture • Is she really in labour? 	<ul style="list-style-type: none"> • Rest or arrest?
	Strategies for confirmation	<ul style="list-style-type: none"> • Stay with the woman! • Seeking objectivity 	<ul style="list-style-type: none"> • Acknowledging the fallibility of methods
3. Untangling intertwined causes	The baby's role	<ul style="list-style-type: none"> • Foetal malposition as key cause 	<ul style="list-style-type: none"> • Foetal malposition as irrelevant
	The maternal factors	<ul style="list-style-type: none"> • Getting mentally exhausted (the early labour stage) • Getting physically exhausted 	<ul style="list-style-type: none"> • Fearful restlessness • Personal influential attitudes
	External hindering actors	<ul style="list-style-type: none"> • The midwife-factor • The unsupportive environment 	<ul style="list-style-type: none"> • The socio-cultural system • Sine causa slow progress
4. Struggling to deal with SPL	Building therapeutic alliances	<ul style="list-style-type: none"> • The midwives' allies • Therapeutic points of contact 	<ul style="list-style-type: none"> • The necessity of being authoritative sometimes • Therapeutic time
	Changing to provoke change	<ul style="list-style-type: none"> • Position/mobility • Physical environment 	<ul style="list-style-type: none"> • Relational dynamics in the environment
	Relaxing	<ul style="list-style-type: none"> • Water • Vocalisation 	<ul style="list-style-type: none"> • Massage/Acupressure • Other CTies
	Activating/energizing	<ul style="list-style-type: none"> • Enhancing endogenous energies (use of TCM) • Nurturing with exogenous energies 	<ul style="list-style-type: none"> • Activating signals
5. Factors enabling or constraining decisions	Reflexivity and pragmatism	<ul style="list-style-type: none"> • Past experiences • Others' stories of success 	<ul style="list-style-type: none"> • Last hope/despair
	The 'individual' element	<ul style="list-style-type: none"> • Individualisation of care • Midwives' preferences 	<ul style="list-style-type: none"> • Midwives' attitudes • Professional knowledge
	Feeling either under pressure or supported	<ul style="list-style-type: none"> • The influence of users • The midwife's work-partners 	<ul style="list-style-type: none"> • The host(ile) unit • Guidelines, protocols, safety

Table 3 - Themes, subthemes and patterns concerning the case at the Italian site.

Table 4 outlines the specific contributions of each data source to the identification of themes and subthemes.

THEMES	SUB-THEMES	SOURCE			
		INTERV.	FOC. GROUP	DOCUM. REV.	OBSERV.
SPL AS 'THE' PROBLEM	SPL as key cause of transfers	✓	✓	✓	✓
	SPL as stressful enigma	✓	✓	✓	✓
RECOGNITION AS ENGAGING CHALLENGE	Sensing SPL	✓	✓		
	Questioning/scrutinising	✓	✓	✓	
	Strategies for confirmation	✓	✓	✓	✓
UNTANGLING INTERTWINED CAUSES	The baby's role	✓	✓	✓	✓
	The maternal factors	✓	✓	✓	✓
	External hindering actors	✓	✓		✓
STRUGGLING TO DEAL WITH SPL	Building therapeutic alliances	✓	✓	✓	✓
	Changing to provoke change	✓	✓	✓	✓
	Relaxing	✓	✓	✓	✓
	Activating/energizing	✓	✓	✓	✓
FACTORS ENABLING OR CONSTRAINING DECISIONS	Reflexivity and pragmatism	✓	✓		✓
	The 'individual' element	✓	✓	✓	✓
	Feeling either under pressure or supported	✓	✓	✓	✓

Table 4 - Contribution of each data source to the identification of themes and subthemes at the Italian site¹⁴.

4.4 SPL as 'the' problem

The researcher knew prior to entering the field, that slow progress would likely be an issue at the Italian birth centre, given her previous contacts with

¹⁴ Bold tick symbol indicates the perceived high contribution of that particular source to the identification of the theme.

the midwives there. However, the scale of the problem that emerged during the fieldwork and from the within-case analysis was greater than expected.

The majority of midwives reported SPL to be ‘the’ problem of the birth centre, as recounted by this participant:

[Slow progress] is ‘the’ problem of the [name of birth centre]. (Manila-SM-IT)

Midwives seemed highly aware of the phenomenon of SPL in the unit. The main reasons are outlined in the next sections.

4.4.1 SPL as a key cause of transfers

The claim of SPL as ‘the’ problem appeared to be supported by a multitude of facts. Most midwives considered SPL to be the predominant problem because of the related issue of women’s transfers out of the birth centre. Statistics confirmed the relevance of the phenomenon in this sense reporting it as the main or most frequent cause of intrapartum transfer to the host unit. The problematic interface with the host unit in the case of transfers appeared to be the main reason why midwives’ perception of SPL as ‘the’ problem was also emotionally driven. Participants’ accounts, observations of midwives’ interactions and minutes of meetings seemed to support this hypothesis:

The topic of transfers due to SPL appears on the first page [of the annual summary of minutes of meetings] especially in relation to the [negative] organisational climate, relationship with the host unit and importance of communication. (Fieldnotes#19-IT)

4.4.2 Slow progress as a stressful enigma

Enigmatic features of SPL seemed to contribute to its status as ‘the’ problem for midwives in the birth centre. For instance, despite its frequent occurrence in the birth centre, midwives found that difficulty in defining

and identifying it was part of the problem. In some cases, midwives even questioned the real existence of SPL perceiving it as a context-dependent or constructed phenomenon:

Kelly: slow progress does exist! It is not a fantasy!

Manila: but does slow progress exist or rather the constraint of the partogram?

Kelly: well, slow progress doesn't exist per se.

Grazia: you barely observe it there [host unit], you don't even know this thing, do you? Here you start knowing it and see that there are no rules, no manuals, no books that can explain it.

Marzia: you don't see it [in the host unit] because they immediately give the syntocinon!

Manila: it's an environmental phenomenon.

Marzia: I tell you, it is [also] dependent on who of us, on who of them, is in charge. (Focus group-IT)

Observations of midwives' interactions with each other appeared to support the image of SPL as a problem highly-dependent on subjective parameters.

In addition to impacting on midwives' work, and being hard to define and identify, SPL seemed to be extremely difficult to manage at times. The struggles sometimes experienced in managing slow labours led some midwives to consider it a stressful phenomenon. This appeared to be well-captured by the following metaphor of SPL as a 'stagnant marsh' provided by the midwife manager:

Together with late-term [pregnancy], SPL is the condition that gets me more anxious [...] it's a stagnant marsh where nothing happens! Once

you are in the stagnant marsh it is difficult to get out of it. (Barbara-M-IT)

4.5 Recognition of slow progress as an engaging challenge

Midwives' recognition of SPL was predominantly influenced by the criteria provided by the NICE intrapartum care guidelines (2007) adopted in the birth centre. Although the guideline encouraged maintaining a holistic perspective, midwives often referred to it merely for the diagnostic criteria regarding labour length, cervical dilatation and descent of the foetal head. However, in practice, midwives normally engaged in complex reasoning in order to establish a woman's labour as slow, where a plethora of different elements were considered within a bigger and fuller picture. The start of this process, often represented a clinical challenge and was often marked by midwives' sense of something amiss.

4.5.1 Sensing SPL

The midwives' path to recognition of SPL seemed to start from sensing something amiss in a woman's labour progress. Participants actually talked about having a 'sentore'¹⁵. This 'sentore' represented an element that led them to 'sense' or 'suspect' the potential for slow progress, even before noting any variation on the partogram or performing any clinical assessment:

Even before the partogram there is a sentore [...]. I think a midwife doesn't really need a partogram, [it] is a visualisation, but, being with

¹⁵ Italian word deriving from the verb 'sentire' that can be translated as 'to feel/perceive/sense/hear/smell'. 'Sentire' means also 'to apprehend through senses some data coming from the immediate experience of the external world, to perceive impressions based on internal or external *stimuli* and become aware of them' (Garzanti, 2015 found: accessed on 01/02/2015).

the woman for hours, you already have the sentore that that labour is slowing. (Anna-JM-IT)

Even before assessing the obstetric situation [...] I have the feeling of the struggle of the contractions... here is the 'suspect'. (Paola-JM-IT)

The capacity of sensing a SPL seemed not an innate midwifery skill, but dependent on factors such as attitudes, work-context, and trust in intuition. The medical participant defined this ability as a midwifery 'clinical sensibility' or 'perceptiveness' (Carla-LDr-IT).

Where present, the 'sentore' appeared to originate from something observed, heard, felt during the care of the labouring woman.

Observing changes seemed to be crucial to midwives. Changes could concern, for example, the uterine activity, the woman's behaviour or self-perception of the progress and/or aspects of the partogram. Observing changes appeared to function as an incentive or signal for midwives to deepen their evaluation:

A little light switches on [in your mind] because you saw a change [...] an endorfinic woman [...] that turns back to be rational [...] pricks up my ears. (Grazia-JM-IT)

The labour had a rhythm, and the rhythm got lost, and there has to be a rhythm otherwise labour cannot progress. (Barbara-M-IT)

Another element that represented an 'alarm bell' to midwives was deviation from expectations, as, for instance, the one described by this participant:

[You have] that kind of short contractions [...] that however, after a period, do not restart as they should. (Sandra-JM-IT)

Midwives' expectations derived mainly from their training, personal knowledge, protocols, and handbooks. However, they appeared to also be influenced by embedded hospital culture. This seemed likely to produce

distortions, for instance, by influencing midwives' expectations regarding time and labour progress.

I realise that there are distorted expectations on time, because in her [woman in labour] there is nothing that is going wrong, labour is progressing, yet at times it is perceived as slow. (Fieldnotes#16-IT)

4.5.2 Questioning and scrutinising

The midwives' reasoning was aided by a process of questioning and scrutinising different factors in order to understand whether their suspicions were founded.

Examining the various elements within a broader picture constituted a significant component of the midwives' approach. The participants often described this practice as 'putting things in their broader context' or 'looking at the whole picture', as shown in the excerpt:

Basically, you have to look at the whole picture, in other words you don't have to get and focus on one factor [only, but on] the whole situation. (Marzia-JM-IT)

Great consideration was given to the woman's parity, history, general condition and environment. This and other information appeared to be used, though not by all the participants, to focus on the potential normality of slow progress:

You need to distinguish whether she's a primiparous or multiparous [...] as labours between primiparae and multiparae are clearly diverse, [and] maybe [progress] is not abnormal but normal [...] in the context of physiology. (Samantha-SM-IT)

In this process of questioning and scrutinising, midwives seemed to seek evidence of a real onset of labour. This appeared to be driven by the recognised possibility of misinterpretation of labour progress connected to an erroneous diagnosis of labour onset. Commencing the partogram too

early, thus inappropriately, appeared to be key in misleading practice. This was reported to be more frequent than expected and driven by professional inexperience, ignorance, fear or anxiety:

There is this frequent vice of starting the partogram at 4 centimetres [...] but there are situations where at 4 centimetres they [women] are not in labour and you see it from the uterine activity and it's absurd to start it because you stake everything at that point. (Marzia-JM-IT)

Challenges also appeared to emanate from the issue of whether slow progress in a woman should be interpreted as a period of physiological 'rest' rather than pathological 'arrest' of labour. Though the 'rest or arrest' problem was not always acknowledged by midwives, they appeared to refer to seeking cues to distinguish a *resting* from an *arresting* phase of labour. These cues were elicited from women through their verbal and non-verbal communication during labour. By observing and listening to women, midwives attempted to identify behaviours not normally associated with a resting phase indicating, thus, the likelihood of an arrest of labour:

What does this woman do? [...] Does she lament or does she rest? (Manila-SM-IT)

The midwives often reported restlessness or anxiety in women's behaviours, in the context of slowing or the absence of uterine activity, as potential indicators of a problem. Restlessness could be expressed, for example, by women's questions:

They start saying 'How much time does it need?' 'mammamia how much time has passed!' 'How long it will take?' (Marzia-JM-IT)

Or through a physical agitation in what could be expected to be a relaxing situation:

[You see these] women champing at the bit in the pool, it's rare [normally] to see a woman champing at the bit in a pool! (Grazia-JM-IT)

Women's behaviours that appeared to indicate an arrest included 'acting', 'losing focus/getting distracted' as well as becoming 'immobile/apathetic':

*At some point it looks more like it is the woman who is wishing for the contraction rather than the contraction being there [this is not normal]!
(Paola-JM-IT)*

*[The woman] from assuming all the positions [turns] to be apathetic
[indicates] something is not going ok. (Giorgia-SM-IT)*

Midwives' final conclusion regarding SPL usually resulted from using additional strategies aimed at objectively confirming the scenario of an arrest.

4.5.3 Strategies for confirmation

Midwives endeavoured to establish a sound identification of SPL through employing strategies that could objectively confirm their previous evaluations. A strategy advocated, and mostly used, by midwives was to 'stay with the woman' in order to gain precise information about the uterine activity, the maternal and foetal status and the surrounding ambient conditions:

Staying there, staying there!! [with the woman] and looking at the intensity of the contractions, looking at the frequency... staying there! only [by] staying there [you can understand]. (Barbara-M-IT)

By 'staying there', the midwife could ensure not only a physical presence but a certain quality of presence, observation, and attentiveness:

I stay [with the woman], I'm there [but staying] it's not about checking the [foetal] heart rate and leaving the room. (Anna-JM-IT)

In this process of seeking objectivity, midwives utilised means such as the partogram, the performance of vaginal examinations, abdominal palpation, and consultation with significant others. To some midwives the partogram

provided a more objective sense of time, thus SPL could be diagnosed only in light of the partogram:

Unfortunately, [at the end, slow progress is] when the partogram says so. (Lisa-SM-IT)

This image of the partogram as a key tool for the recognition of abnormality in labour progress was strongly supported by internal protocols in the unit. This is evident from the excerpt below:

The partogram is the most adequate tool for the surveillance of labour in its complexity [...]. The correct execution of the procedure allows an immediate understanding of the evolution [progress] of labour and the identification of risk factors. (Protocol#1-IT)

Vaginal examinations embodied another means of objective evaluation, a sort of 'litmus test'. However, midwives often appeared unhappy at the idea of relying on vaginal examinations to confirm a slow progress:

Unfortunately, I probably still accomplish a true confirmation [of slow progress] through the vaginal examination [...] when in doubt [it] represents another objective data. (Samantha-SM-IT)

Again, the organisation seemed to promote this practice especially in the case of suspected or possible SPL:

Vaginal examination [in labour] has to be performed 2-hourly or when substantial modification of labour progress are considered or if there is a suspect of dystocia. (Protocol#2-IT)

Consultation with the midwife-partner on duty represented another pillar in the objective identification of SPL. In particular junior midwives presented the opportunity to share doubts with a senior midwife as crucial. It was also considered appropriate to consult women and their partners.

Midwives appeared aware of the potential fallibility of the recognition process and strategies illustrated above. Counter-arguments included the

fallibility of intuition in midwifery care, the possible alternative explanations of women's behaviours and errors connected to the use of partogram:

Everytime I feel 'there's slow progress here' I automatically start saying [to myself] 'keep calm, don't say that as you have been proved wrong in the past! (Sandra-JM-IT)

Mother's feelings can be also distorted, sometimes endorphins start to work and maybe the mum is less vigil, in pain or sleepy but not because contractions are gone, but simply because endorphins are working [...] each labour is truly individual, so it's hard to objectify it. (Samantha-SM-IT)

Come on, we know that it [partogram] is based on Friedman's curves that are no longer valid! (Kelly-SM-IT)

4.6 Untangling intertwined causes

The next stage in identifying SPL involved revealing causal factors. From observations on site, reflections on the aetiology often appeared to be made individually by midwives rather than as a group.

Identifying the causes of SPL appeared to provide an understanding of the problem and guidance as to how to deal with it.

Awareness of the complex aetiology of slow progress was apparent by observing and talking with the participants. Midwives seldom attributed the occurrence of SPL to a single cause; instead they appeared to recognise a complex interplay between numerous factors. However, this complexity was not reflected in the documentation, rather the organisation seemed to force midwives to resolve complexity by adopting system-centred solutions. For example, for the sake of data reports, midwives tended to record the transfers due to SPL into two main categories: the transfers for '*distocia meccanica*' (mechanical dystocia) and those for '*distocia dinamica*' (functional dystocia). At times, midwives recorded transfers due to '*distocia*

meccanica' e '*distocia dinamica*', highlighting the difficulties in identifying a primary causal factor. This simplistic mechanical-functional dichotomy did not give justice to the plethora of different manifestations of slow progress accounted for by midwives.

Amongst the multiple factors, midwives appeared to strive to identify a key cause in order to 'tailor' their approach. The key causal mechanisms that midwives outlined are presented in the following sections.

4.6.1 The baby's role

Malposition, asynclitism, posterior position of the head, and fetopelvic disproportion represented the main foetal cause of SPL in midwives' view. Midwives who gave importance to the baby's role aetiologically, seemed to consider mechanical dystocia as a crucial contributor to the overall number of SPL. However, regarding this, midwives appeared divided into two clear groups broadly related to professional seniority. Junior midwives tended to ascribe SPL mostly to mechanical problems connected to the foetus:

Oh well, malposition comes at the first place [as causal factor], all shades of malposition. (Chiara-JM-IT)

The high [foetal] head, that is a poor wretch! (Grazia-JM-IT)

Even arguing there could be typical patterns:

Very often the cause was the baby [...] because of asynclitisms or deflections of the head [...] and labour arrests in these cases are frequent and quite typical around 6 cm, aren't they? (Anna-JM-IT)

Other midwives, mostly senior, rarely considered the baby's contribution to SPL:

The quota of malpositions [is] generally inferior [to other causes'] (Manila-SM-IT)

The minor incidence of transfers for ‘distocia meccanica’ compared to those for ‘distocia dinamica’ reported in the unit statistics seemed to support this perception. This group of midwives tended to also consider a mechanical dystocia to be less challenging than other forms of SPL. Normal births of malpositioned babies were used as arguments to support this point:

Mechanical dystocia [contributes] scarcely [...] even if you have a malposition that slows it [the progress], it doesn't slow it in an exaggerated way, because even when babies are slightly crooked, asynclitic, it's difficult that they don't go [down], that there is a complete slowing and arrest. (Samantha-SM-IT)

My colleague said 'I think it is a posterior' and actually it was, [...] but in most of these cases [women] give birth. (Giorgia-SM-IT)

The midwife manager shared this view, noting how midwives, especially junior ones, could potentially become overly concerned regarding head positions considered at times erroneously abnormal:

There is an over-diagnosis of the position of the [foetal] head when the head is still above the brim, obviously deflected, obviously asynclitic, as the phenomenon of engagement is still far. I leave them [midwives] discussing about it but those mechanical factors are not related to what is happening, they are normal, aren't they? (Barbara-M-IT)

4.6.2 Maternal factors

Unlike foetal factors, maternal factors were identified among all the participants as a cause of SPL. These were mainly represented by woman's mental and/or physical exhaustion, fears and anxieties and/or personal attitudes.

Midwives identified multiple conditions, such as antepartum sleepless nights, dehydration (vomiting) and/or fasting, as causes of maternal physical tiredness or exhaustion. These conditions appeared to be able to

impoverish women's energies in general and provoke 'uterine tiredness' in particular:

Their body is tired, women do not eat nor drink, and the only explanation you can give yourself [to their slow progress] is 'maybe the energies are finished, the uterus is tired'. (Anna-JM-IT)

Whilst the role of dehydration seemed to be recognised by all midwives, the role of woman's fasting in labour was subject to different interpretations. Some midwives, for example, reported fasting to be common in normal labour, therefore, not necessarily to be considered as a cause of slow progress:

Generally [women] in labour hardly seek food...maybe some chocolate [...] instead when they barely drink the situation blocks. (Marzia-JM-IT)

Protocols appeared to endorse the aetiological role of dehydration and fasting, by indicating hydration and nutrition as facilitators for labour progress:

[Nutrition and hydration in labour] must be considered as a procedure aimed at maintaining the maternal and foetal wellness and facilitating the labour progress. (Protocol#1-IT)

However, stories of normal births happening despite women's poor nutrition and hydration, as well those of SPL occurring despite good hydration and nutrition appeared to outline the difficulty in attributing unequivocal roles to these factors.

According to the observations and interviews, physical tiredness also appeared to be a result of a prolonged early labour stage or '*prodromi prolungati*'¹⁶ in Italian:

¹⁶ A discussion around the term 'prodromi' can be found in Iannuzzi and Borrelli (2014).

Often in midwives' stories [of SPL] episodes of women are mentioned with prodromi prolungati. (Fieldnotes#2-IT)

Some midwives indicated a prolonged early labour stage as a cause of slow progress secondary to the exhaustion of uterine power, as accounted below:

Prodromi prolungati, [women that] call 2-3 times in the days before active labour... I feel that these uteri [sic] already consumed their fuel along the way... so when the day of the race comes [there is no more power]. (Sandra-JM-IT)

To note, the 'prodromi' were mainly referred as 'prolungati' according to women's experience regardless of the actual length of the latent phase. In this light, some women were reported to perceive even short early labours as prolonged because of their difficulty in coping with the latent phase:

Prodromi prolungati = tired women. [...] I say prolonged but I actually mean difficult, badly experienced by that woman; there could be stupid contractions that anyway are perceived as difficult by that woman as she doesn't accept them, she cannot find her way through them. (Grazia-JM-IT)

Woman's negative experience of the latent phase seemed to have the potential to enhance stress and mental exhaustion producing or exacerbating slow labour progress:

Early stage badly lived, [contractions] badly experienced, lived without attention, with a bad perception of time passing [...] this makes the woman another woman, stressed, not prepared, a woman that has already finished her resources. (Carla-LDr-IT)

However, there was not a *consensus* amongst midwives on the negative effects of a prolonged latent phase on labour progress:

Giorgia: at times [the cause is] this prolonged latent phase.

Chiara: well, it depends...how many times we said 'look, she had this incredible latent phase' and then in just two hours of active labour...

Kelly: ... she quickly gave birth! (Focus group-IT).

As suggested by this excerpt, the prolonged early labour stage also appeared to have the potential to facilitate progress of the subsequent labour stages. Some midwives could see women's struggles in the prolonged early labour stage as being instrumental for easier subsequent phases.

Stress and mental exhaustion were not exclusively associated with prolonged early labour. Women's fears, anxieties and lack of psychological preparation for the birth event, for example, also seemed to be crucial factors. Though elements appeared to be intertwined, women's anxiety and lack of preparation appeared to impact particularly on contractions affecting labour progress at a hormonal level:

I see [the main cause] in the [maternal] stress [...] that can perfectly affect the biochemical elements [of labour progress]. (Carla-LDr-IT)

The fact that she's not ready to be a mother impedes that hormonal profile that allows all those modifications [...] there is an emotional part and a chemical part that don't meet each other. (Grazia-JM-IT)

The above excerpts also illuminate the potential of midwives' judgmental behaviours in respecting the maternal causes of SPL.

Fears appeared to also impact on the mechanics of labour. Scared women, for example, looked likely to 'hold their babies' causing a slowing of the delivery progress in the pelvis despite normal uterine activity:

The sensation is that [the problem] is really at the woman's level somehow. A slight block, a refusal, maybe not refusal rather fear, resulting in a 'holding' of their babies [...] I don't know maybe it is bad [to say this] and a way of blaming women. (Manila-SM-IT)

Lastly, some midwives appeared profoundly convinced in the contribution of women's characteristics and attitudes to part of the overall number of SPL. The characteristics and attitudes that seemed to prevent women from normal progress regarded aspects such as their general approach to labour and birth, level of self-confidence and relationship with their body. For instance, women with a too rigid image of the ideal birth were reported to be likely to become discouraged if facing contradictions between their expectations and reality. Discouragement was identified to trigger a cascade of negativity and anxiety affecting labour progress:

A woman can have a fantasy [about labour] that is not what comes true, this great wound to deal with, then starts the fear, then 'why is there something wrong?' then a lack of confidence in herself, so unless labour is stronger than them [they block it]. (Barbara-M-IT)

Women with a poor relationship with their body or used to being in control or disciplined in their lives, were also reported to struggle. This was attributed, for example, to their shame or discomfort with the instinctive component of labour. Therefore, they appeared to limit the potential of their bodies:

Generally [behind these slow progress], there is a poor relationship with the body, isn't there? So, as soon as they [women] confront themselves really with it [body in labour] they result slightly dazed, unsettled, in difficulty. (Manila-SM-IT)

Women's birth motivation, engagement and focus also seemed to be pivotal. Some midwives suggested SPL to be more likely to occur, where these aspects were identified as impaired:

Sometimes a lack of motivation can block them [women] at times, a lack of concentration on the task, an absolute absence of interpenetration with the task, [women] poorly focused, not in the 'here and now', you see? [...] the mobile, Facebook, Twitter... (Barbara-M-IT)

Episodes of SPL care observed during the fieldwork appeared to support this argument:

I hear the woman saying 'enough!' with a tone of voice typical of who wants to give up. Paola [midwife] maintains a calm tone of voice. (Fieldnotes#6-IT)

4.6.3 External hindering factors

It was evident that midwives also recognised the influence of factors external to women and the baby on labour progress. Macro and microsystems appeared not to be exclusively the context of slow progress but the potential source of hindering actors.

Socio-cultural factors, such as level of education, local or job-related culture, appeared to contribute to SPL by virtue of influencing women's attitudes. Some midwives, for instance, indicated women's managerial attitudes and a high-level of education as connected with a slowing of labour.

I noticed that women-managers had really terrible labours. (Samantha-SM-IT)

But those who are less 'intelligent'...who let themselves go more have less [dystocias] than those who 'I'm conscious of my body and I manage it!'. (Sandra-JM-IT)

In addition, it was suggested that some cultures seemed to nurture the sense of control, like those identified in women-managers, whilst others facilitated habits of 'letting go'. However, some midwives' propositions appeared to be questionable as stereotypes:

Also the cultural base influences a lot, you can see those slow progresses based on cultures, some [women] move their body with all kind of movements [...] I have in mind those [women] of central Africa, that are generally much more instinctive in moving. (Marzia-JM-IT)

Groups of senior midwives attributed socio-cultural factors to the power to shape women's abilities to cope with pivotal components of labour such as pain, time and emotions. Manila's account clearly gave voice to this perspective:

[It's] a cultural moment where women are less and less prepared for labour, isn't it? This in terms of emotional strength, psychological, physical power [...] somehow this leads to an incapacity of bearing labour. (Manila-SM-IT)

As Manila further outlined, modern times, inclined to promote rapid achievements, appeared to lessen women's capacity of standing slow natural rhythms:

Natural rhythms are normally slow, slow but efficient! [...] However we live in an era where we try to have everything immediately, where you can have everything in rapid times, therefore labour is supposed to happen in rapid times [in our era] and just 3 hours [of labour] look like too long a business. (Manila-SM-IT)

Moreover, the identification of positive experiences with 'pain-less' experiences seemed to belong to these socio-cultural hindering factors:

Midwives appeared to recognise external causes also at a microsystem level. For example, disturbing birth environments, unsupportive birth partners' behaviours, as well as midwives' attitudes were identified as additional hindering (f)actors on labour progress. The following extracts offer an insight into scenarios and behaviours identified as causal factors in the birth centre:

Commotion, confusion, these things matter a lot, distract [the woman] a lot, consume [her] a lot [...] certain situations do slow labour progress [...] the continuous coming and going, the flashing lights in the room...thus interferences both by professionals and relatives. (Marzia-JM-IT)

15:30: Giorgia says that the problem is just a matter of contractions, she describes disturbing surrounding behaviours such as the [woman's] nurse-friend that comes and goes, gives the handover by phone etc [...] Marzia [the midwife-partner] looked distracted, she's thinking about some organisational problems, in the meantime arrives a psychologist, that knows the woman, asking how she's going. I tell her the woman is not alone, that she is with her whole group of friends...' so everything is blocked then!' she says, and indeed everything slows. (Fieldnotes#17-IT)

Midwives' attitudes and behaviours were another, albeit less acknowledged, contribution to the aetiology of SPL. Midwives could, for example, exacerbate slow progress through inappropriate practices:

The foundation of a slow progress is often a [midwife's] misinterpretation of labour onset. (Marzia-JM-IT)

A too early use of the pool, when maybe the uterine activity is not so well-established. (Anna-JM-IT)

Everything changes if you lose the concentration, the focus! (Barbara-M-IT)

Staying outside [the room] too much, [or inside] without saying a word [...] when the woman would need to hear 'we are there!' [...] or conversely chatting too much, thus creating a disturbance, and she [the woman] doesn't tell her maybe because she doesn't dare. (Samantha-SM-IT)

Chiara: In some case[of dystocia] I perceived that I was not the right person for her, I felt a distance, and- what a coincidence! - Those labours became slow.

Sara: yes, [dystocia happens] When you don't manage to get into relationship with her. (Focus group-IT)

However, in these cases, neither the woman nor the midwife appeared to be the real cause of slow progress, rather the lack of synergy between the two.

Midwives also mentioned the occasions where the causative factors could not be determined/understood by the midwife. According to participants, this was not infrequent:

The functional dystocias 'sine causa' are much more [frequent than other types], you don't have objective data, everything looks fine [...] yet there are no more contractions'. (Samantha-SM-IT)

How many times we transfer women for distocia dinamica and then interrogate ourselves [on the causes] for hours [...] sometimes you can give yourself an answer, other times you cannot because the baby has a good size, none disturbs her, the woman is in the grip of her endorphins, is fine but her contractions go away and her baby doesn't go down. (Anna-JM-IT)

The suggested high frequency of *sine causa* slow progress could not be extracted from other sources such as the documentation available in the birth centre.

4.7 Struggling to deal with SPL

Once SPL was recognised, whether or not justifications for it were identified, midwives endeavoured to intervene in a timely way to overcome it. The approach of midwives appeared to focus on three intertwined goals: avoiding intervening at a stage of slow progress where any intervention appeared unlikely to be effective (the 'stagnant marsh'); avoiding transferring women to the host unit because of slow progress; and turning a difficult labour into a successful birth in the birth centre. Coping with these issues appeared to constitute a struggle for midwives at this site, as evident in this excerpt:

We [midwives] spent years focusing on it, but without achieving anything concrete. (Manila-SM-IT)

The perception of a lack of achievements seemed to be based on an inability to identify optimal midwifery management in the unit. This was also apparent through observations and revision of documents, such as minutes of meetings, illuminating the midwives' continuous quest for new strategies to deal with slow progress.

Midwives' interventions appeared to be dissimilar at times, and this seemed to be acknowledged within the group. Some midwives interpreted dissimilarity as a reflection of individualisation of care and heterogeneity of professional and personal 'baggage'. They ultimately seemed to consider it as a positive element of the organisation. Counter-views perceived lack of homogeneity to be a representation of flaws in the understanding and sharing of the birth centre ethos. The organisation seemed to try to address this potential problem by increasing the system of protocols and guidelines. Interestingly, midwives tended to refer to dissimilarities as a limitation of the team within individual interviews, whilst presenting them as richness during group discussions. This was apparent during the focus group. Power-imbalances and/or defensive behaviours might represent possible justifications for this phenomenon:

Manila: I don't think this [dissimilarity] is a problem, there are nuances.

Grazia: dissimilarity is not the right word, I can see more a multifaceted group, the fact of this inhomogeneity is not negative, obviously if we all start doing what we please [that's negative].

Kelly: I say 'alleluia!' bless that there are [different] personalities, temperaments, cultural baggage, even different age! (Focus group-IT)

Besides appearing dissimilar, midwives' interventions emerged to be multifaceted. The multiplicity and versatility of midwives' approaches will be outlined next.

4.7.1 Building therapeutic alliances

Midwives perceived the establishment of positive rapport to be pivotal in enhancing (stalled) labour progress. The crucial relationships were identified as '*alleanze terapeutiche*', therapeutic alliances, by different sources. These '*alleanze*' seemed to serve primarily to create a supportive environment that could restore and optimise the physiological processes of birth. The therapeutic alliances were represented mainly by 'the alliance among midwives, the alliance with the woman, and the alliance with doctors and colleagues of the host unit' (Fieldnotes#8-IT; Protocol#1-IT).

The alliance between healthcare professionals appeared to be paramount in providing both an external-yet-committed point of view and the necessary support for comfortable decision-making (see 4.8.3). Another crucial ally, not mentioned in documents but evident from observations and interviews, was the woman's birth partner(s). The following quote, regarding an episode of slow progress, reports an example of positive supportive synergy observed between the midwife and the woman's husband:

The OSS and the student leave the room saying that the woman is discouraged, but Kelly [midwife] is not, the [woman's] husband is not, and I see how this affects [positively the situation] [...] As soon as [Kelly] leaves the room, she looks enthusiastic about the relationship created with the husband, [rapport] that she defines as 'alliance'. [...] If this morning - despite the very kind manners of the colleagues-discouragement and scepticism had prevailed, now there is absolute trust in the woman, in the woman's possibilities, a 'cheer'. (Fieldnotes#16-IT)

Means used to create therapeutic alliances included trust, sympathy, empathy, humour, kindness and compassion, attentiveness and authority. In particular, midwives appeared to seek 'points of contact' through which they could access the woman's world and anchor onto it. Points of contact

could be sought, for example, through listening to emotions, enhancing motivation and/or instilling trust:

I try to make her communicate her sensations, feelings to me, to enter as much as possible inside and find the 'grip'. (Grazia-JM-IT)

I try to re-focus her on her competencies, on her achievements, what she's already done, make her feel safe, make her think she's almost there at the end, as in a marathon, supporting her [...] perhaps this doesn't work on contractions but it will work at least on a woman's motivation. (Paola-JM-IT)

Physical (therapeutic) touch appeared to be used as well to create a platform for the midwife's deep connection with the woman even before using it for other benefits:

The massage often is an excuse to start touching, moving, [blocked] points in a broader sense. (Manila-SM-IT)

'Kelly: Building a rapport, not in the sense of chatting etc, but this works more than acupuncture per se [...] the [effectiveness of the] acupoint comes next [sic], I'm not arguing that the [stimulation of the] acupoint doesn't work, rather that this allowed to create a ground.

Marzia: yes, a start of the communication.

Grazia: the ground that comes from there is fundamental. [For instance] that woman [case of slow progress] opened herself, something moved, from that moment she entered 'in' her part'. (Focus group-IT)

Midwives occasionally engaged authoritative behaviour to make a rapport therapeutic. Only a few midwives justified this as necessary, where women seemed to seek guidance, someone who could take the lead and extract them from a blocked situation:

Authority is needed as well! And sometimes we lack in authority [...] many women need someone who tells them 'try this, it is better this way,

try' and they think 'finally someone is telling me how to do it, I can do it now'. (Barbara-M-IT)

We adopt also more directive strategies, making her feeling where to push, or making her using the gynaecological bed, holding its handles [...] I know it is [a practice] to avoid, but it is one of thousands of possible ways and if it's necessary for that woman... (Anna-JM-IT)

As evident by the excerpts above, often midwifery authority appeared to be translated into having a directive style of care. This seemed to be a reductive, though possible, concept of authority. Interestingly, performing directive care sometimes seemed to be perceived as wrong. This was probably due to a connotation of directive style as being typical of the medical model of care. The fact that junior midwives, with recent experience in the host unit, seemed to be more inclined than senior colleagues to be directive might confirm that impression.

Finally, time appeared to represent another positive factor in such contexts. This was apparent despite the fact that midwives tended to present it as an enemy on many occasions. The time pressure experienced while attempting to avoid transfers, for example, or the dominant concept of time in labour that appeared to be disrespectful of women's individual rhythms contributed to making time unfriendly. Nevertheless, midwives appeared to build a therapeutic rapport with time, for example, through giving time (and trust) to women and making them have breaks.

Giving time to women basically inferred to attentively 'wait and see'. Provided there was evidence of foetal-maternal wellbeing, waiting implied supporting women but avoiding unduly proactive interventions. The rationale for giving time appeared to be primarily the perception of time as a potential natural healer:

In that story, the woman ends-up giving birth and [doing it] greatly, and in this account everything is re-elaborated [by midwives] as 'that uterus evidently needed more time'. (Fieldnotes#2-IT)

Trust in waiting, seemed to be informed by evidence of its advantages from midwives' past experience:

Every time I thought 'mmm here [contractions] are slightly delayed', I forced myself to use time for waiting [...] by saying 'let's give her time!' I gave her time and time has proved me right. (Sandra-JM-IT)

Patient waiting did not seem to be the only form of giving time. Indeed, impatient waiting seemed to occur where midwives occasionally manipulated partograms. Some participants openly reported this as being an additional strategy to give women time. Eventual alterations were made by postponing the onset of labour or lessening the cervical dilation recorded. In this way, midwives seemed to aim at turning back the clock in the birth centre. Consequently, the woman's labour time seemed to be extended. Midwives justified this practice mostly by conceptualising 'hospital times' as constraining and disrespectful of 'women's times', perceiving the manipulation of the partogram, ultimately, as 'humanization' of care:

We do what we can here [...] we know that there is a lengthening, a shortening, a shredding of the partogram [that can be made] to follow the woman's time. (Lisa-SM-IT)

We all know that that partogram is 'humanized'. (Barbara-M-IT)

The midwives' 'humanisation' of the partogram appeared also to be renowned and justified outside the birth centre:

After their meeting, the manager refers to the comments of [name of the head of OU] that argued that the only way of reducing the impact of dystocias was to start the partogram later [than when supposed to]. (Fieldnotes#3-IT)

Justifying manipulation of partograms did not mean being comfortable with this practice as it was also acknowledged to be unexpected or even illegal. Interestingly, midwives rarely reported the eventual negotiation of time,

thus of women's stay in the birth centre, with consultants once the alert line of the partogram was crossed. Therefore, some midwives appeared to prefer the hazard of manipulating partograms to sharing their clinical reasoning with doctors. The perceived impossibility of being understood or supported by doctors as well as power-dynamics could constitute possible rationales for this.

Another way of using time advantageously and as an ally was to suggest having a break to women. Breaks seemed to represent forms of disconnection from stress. This image of disconnection was supported by the manager's description of having a break as 'pulling the plug'. Midwives also seemed to use this strategy to offer a visible mark of disruption, if not end, of the stressful period. The time that the break could take could be variable and variably spent. Particularly helpful appeared to be breaks spent in the kitchen, for example, drinking tea, coffee, eating something or chatting. Several midwives narrated the same story as an example of an effective break. The narrative regarded an episode of delayed second stage where the midwife in charge invited the woman, her mother and the husband to enjoy hand-made crepes with Nutella together in the kitchen:

*I often think about that episode! Well how many times can you prepare crepes? Yet there was a series of positive coincidences: [we were] all in the kitchen, eating Nutella all relaxed [...] those crepes were decisive.
(Lisa-SM-IT)*

As illuminated by her account, conviviality represented a successful element in having breaks. Enjoying convivial moments seemed to offer the possibility of turning the stress related to slow progress into pleasure, enhancing labour for example by working on endorphin-release.

Concluding, breaks appeared to be beneficial to midwives too, which confirmed the notion that SPL is a potentially stressful phenomenon for midwives also (see also 4.4.2):

Taking a break to then refocusing ... it is probably a necessity for that woman to take a break, a pause [...] I would be tempted to say 'let's have a cigarette [together]!' (Grazia-JM-IT)

4.7.2 Changing to provoke change

Midwives' approaches also included a series of interventions aimed at changing a stalled situation by changing some of its components. Changes appeared to be promoted in three primary areas of action: position/mobility; physical environment and relational dynamics. When endeavouring to provoke a change, midwives appeared to be guided by the principle of 'proposing and not imposing' as stated in a document describing midwifery care in the birth centre (Protocol#2-IT):

Paola leaves the room, comes to me and, happy, says 'she pushes!' She then talks to her colleague attributing all the success to the change of position. (Fieldnotes#5-IT)

As illustrated in this excerpt, changing positions appeared to be an effective approach. Maternal mobility per se, as well as the adoption of specific postures in labour appeared to act at numerous levels. For instance, specific maternal positions, such as the upright, genupectoral or lateral were used to enhance uterine contractions, as well as to facilitate a better positioning of the foetal head:

[We suggest] moving, moving the pelvis, explain to them that the upright positions stimulate more contractions [...] you can really see it after, that contractions increase. (Marzia-JM-IT)

Working on positions, on mobility, changing [maternal] positions endeavouring to change, to unblock the baby's malposition (Manila-SM-IT)

Inviting women to be mobile seemed to be an approach universally adopted by midwives in cases of slow progress. Some midwives combined mobility

with the use of CT. These included techniques of Traditional Chinese Medicine, such as acupuncture or moxibustion, and the use of rebozo¹⁷. This latter appeared to be practised especially in cases of foetal malposition.

Midwives also considered changing elements in the environment in order to overcome slow progress, including moving to a completely different scenario, by asking the woman and her partner(s) to move to another room, or acting on the labour room itself:

One of the first things I propose is a change of room, to move to another room and if it is not really possible at least to go to the loo, [...] trying to change her tune even without a precise order. (Samantha-SM-IT)

When inside the room midwives could alter the environment by turning the lights on, opening doors, letting fresh air come in:

Changing the situation, so for instance if she was in the dark, still in bed, to turn the lights on and get her moving, get her out of the room, make her eat, in other words do the opposite, turn the environmental situation upside-down. (Manila-SM-IT)

Midwives' knowledge of the impact of environmental patterns, such as temperature, lights and noise, on the physiological process of labour appeared to offer a justification for these approaches.

Besides physical aspects, midwives could consider changing the relational dynamics in the environment where these were perceived to be barriers to labour progress. Approaches/methods included endeavouring to remove interferences in the midwife-woman relationship and/or in the rapport with the birth partners:

¹⁷ The use of rebozo was taught by Mexican midwives. In this technique, midwives aid the woman and baby's mobility by rhythmically moving a scarf, the 'rebozo', which wraps set areas of the woman's body.

I try to work on those elements of disturbance I noticed that can be my same presence, my behaviour, hence the first thing to do, in this case, is to change my behaviour. (Samantha-SM-IT)

That husband always there as a vulture! Once we removed this factor [...] she went on as straight as a rail (Sandra-JM-IT)

Hindering relationships could even be transformed into alliances (see 4.7.1) instead of being 'removed':

If there are people that appear disturbing, which could be the mum, the mother-in-law, the sister, the auntie, trying somehow to either involve them in a constructive manner [...] or distance them. (Manila-SM-IT)

4.7.3 Relaxing

Though having a break could be considered a relaxing practise, midwives appeared to also adopt techniques for relaxation as a specific strategy per se.

The use of CT seemed to be particularly helpful in this context, and midwives appeared to have a potential plethora of tools. These included the use of water (both in terms of water immersion and shower), techniques of TCM, vocalisation and massage. The midwives' focus on these particular techniques of relaxation in case of slow progress was evident from reviewing the documentation. Massage, vocalisation and water were the only practices explicitly mentioned, in a protocol on the use of TCM in the birth centre, for the prevention of women's transfers in the ante, intra and post-partum period (Protocol#5-IT).

Relaxation appeared to be achievable by adopting just one of these strategies. However, especially where SPL appeared to be particularly difficult to manage, midwives seemed inclined to endorse a combination of relaxing strategies:

I can hear Kelly talking [with the woman] about all her Chinese points [...] to overcome fears, the use of water to rest and relax; the woman objectively vocalises in a different manner now. (Fieldnotes#16-IT)

Relaxation, or even rest, appeared to be considered beneficial for many reasons, from the increase of the woman's general wellbeing, to specific actions on muscular and psychological tensions:

Vocalising can be beneficial; in a mum that hardly lets go, too vigil, it can help as it helps to let go, not thinking about what's happening, but letting it go through breath, this prolonged sound. (Chiara-JM-IT)

As shown above, vocalisation seemed to be a good strategy to release muscular tension and facilitate women to 'let go'. Midwives seemed to attribute similar properties to water. The protocol on the use of water seemed to outline the many benefits of water immersion in cases of SPL, though the topic of SPL was not mentioned explicitly in the document:

In a moment where the woman tends to defend herself, entering water represents instead a manner to lower defences and abandon oneself, as the pool becomes a corner of intimacy and containment. This facilitates the production of endorphins and the permanence of a meditative status. (Protocol#2-IT).

Massage appeared to be the most popular technique in use. Midwives appeared to favour relaxation both through a general body massage and/or massage on specific areas, such as 'hair brush-scalp massage' reflecting a TCM approach.

The majority of midwives considered relaxation/rest to be particularly effective in restoring efficient uterine activity, mostly by reducing the stress-related negative effects on contractions:

If she [woman] manages to rest at the end, even a tiny little rest, somehow contractions restart. (Lisa-SM-IT)

4.7.4 Activating /energising

Relaxing or resting were not necessarily considered the right approach for all slow labours. Midwives could envisage a more successful strategy in trying to re-activate labour by energizing the woman. There seemed to be two main ways of re-energising the woman in order to reactivate the whole labour process. One way seemed to be through the provision of external sources of energies called here 'exogenous'. The other, through the empowerment of energies that were considered to be internal to the woman, defined here as 'endogenous'. This terminology was not adopted by midwives in the birth centre, but seemed to describe some actual approaches accounted for and observed:

*I say 'look, we have to start activating, let's get her something to eat'.
(Giorgia-SM-IT)*

Food and drinks appeared to be crucial sources of exogenous energies for the woman, thus a fundamental means to achieve a (re-)activation of the situation. Nutrition and hydration seemed to embody both a normal element of midwifery care and a specific approach in the case of slow progress. This seemed visible in some midwives' insistence on oral intakes in cases of slow progress, as shown here:

*Giorgia exhorts her [woman], says that everything is fine but that [...] even if it looks hard she has to try to drink and eat again.
(Fieldnotes#17-IT)*

Unlike the apparent *consensus* amongst midwives on the importance of oral intakes for enhancing labour progress, conflicting ideas appeared to exist on which foods and drinks were the most valuable energy-suppliers. Midwives appeared to provide sensible rationales and counter-rationales. No definitive guidance seemed to be offered by protocols and guidelines in use:

Honey, tea, whatever the woman prefers [...] better if energetic but not heavy things. Honey, water rather than tea, crackers instead of biscuits, yes water as it refreshes more. (Paola-JM-IT)

The classic 'bread and Nutella' [...] far better than sugar or honey [...] as the bread provides a slow-release petrol [sic] that lasts more, whilst Nutella gives the immediate fuel to restart [...] and is also a treat so [it works] also from an emotional point of view. (Samantha-SM-IT)

Occasionally, midwives made use of isotonic fluids, such as Ringer's lactate solution, intravenous administration where women seemed to struggle with drinking and re-hydration appeared paramount. Participants often described this practice as rarely performed. The available documentation did not mention it at all. However, according to interviews and personal conversations, this intervention appeared to be often considered, after consultation within the team, especially to prevent women from transfers:

I did it at times [fluids administration] under Barbara's [manager] approval, the [foetal] heart rate improved and labour restarted [...] normally 500 [cc] is enough and it is not that you administrate fluids only, [but encourage] both Ringer and drinking [sic]. (Marzia-JM-IT)

Endogenous energies appeared to be activated primarily through the use of techniques of TCM. This appeared to be coherent with the philosophy underpinning the use of TCM that, for example, considers an abnormal condition, such as SPL, as a manifestation of energetic imbalances. Where adopted, the specific techniques, such as acupuncture and moxibustion, appeared to be selected on the basis of identification of the 'energetic problem'. A specific protocol, as well as a few committed midwives, seemed to offer guidance in this stimulation of the woman's endogenous energies. For example, ST36, SP6, K7, BL60 and BL67 were reported to be the main acupoints to stimulate with moxibustion and/or acupuncture in case of woman's 'energetic emptiness'. Instead, points such as LI4, SP6, GB34, L3 and BL67 were suggested to be more effective in cases of 'energetic stasis'. Midwives were supposed to perform these techniques only after specific

training; most of them were trained via a Regional course for midwives on TCM for labour/birth, only a couple of them were completely naïve to this approach. Being trained to use these approaches did not necessarily mean that the midwives adopted them in their practise. This issue relates to the problem of decision-making that will be further discussed in the chapter (see 4.8).

To conclude, it should be mentioned that a few midwives also indicated a number of disparate interventions used for the purpose of activating the woman. These included nipple stimulation, polarity¹⁸, little ‘tricks’ such as asking women to wash their face with cold water or walking with naked feet, and ARM. This latter appeared to be mostly considered in difficult cases and to be avoided during early stages of labour¹⁹. One midwife described the function of ARM as an ‘activating signal’ attributing the ARM to psychological, as well as mechanical and functional effects. In this view, ARM could work as being a ‘signal’ for change. That seemed an uncommon view of ARM:

Sometimes it's enough to perform an ARM both because the liquid is full of good substances and because after ARM the woman feels different. How many time women after having their water broken say 'we got it?' some reported even that they heard a 'crack' [sound] This means [...] it is a very strong signal [both] from a chemical [and psychological] point of view. (Grazia-JM-IT)

4.8 Factors enabling or constraining decisions

In each of the aspects of the case hitherto discussed there seemed to be some elements of decision-making. Decisions, for example, were

¹⁸ Polarity here represents a technique that originates from elements of TCM, yoga, and Ayurvedic medicine. The polarity technique is used to circulate energies of the body. For more information see Donna (2011) and Spandrio *et al.* (2015).

¹⁹ The participants that mentioned ARM indicated that it should be performed not before 6-7 cm of cervical dilatation, in order to avoid problems, such as malposition of the foetal head, related to an early performance of this practice.

consciously or unconsciously made when midwives chose whether and how to follow their intuition in relation to slow progress, if it actually represented a rest or arrest, or which factor had to be identified as the primary cause. However, most of the characteristics of midwives' decision-making in the context of slow progress were illuminated by the investigation of why midwives chose an intervention, rather than another and on the eventual decision for women's transfers. The exploration of those areas enhanced the identification of factors that appeared to enable, or conversely constrain, midwives' decision-making. The factors that seemed to be crucial regarding midwives' decision-making are illustrated next.

4.8.1 Reflexivity and pragmatism

Reflexivity and pragmatism seemed to be connected components in midwives' decision-making. Generally, the group of midwives appeared to be highly reflective. This level of reflexivity seemed to be due partly to personal attitudes and partly stimulated by the organisation. For example, the periodic requests for reports, or audits, as well as the weekly internal meetings - where aspects of the midwifery care in the birth centre that were regularly discussed- appeared to be important organisational facilitators of midwives' reflexivity. Decisions appeared to be frequently informed by reflections on what worked, or not, from past experience. The use of reflexivity and pragmatism in midwives' decision-making appeared to be also recognised as a feature of the group outside the birth centre, as the following excerpts from the doctor's interview outlines:

[Set midwives' approaches] certainly work...in part...otherwise they wouldn't do them, they would have decided themselves not to do them anymore. (Carla-LDr-IT)

All the midwives seemed to be influenced by what emerged as successful from their personal experience:

I don't use much moxa or acupressure [...] because at the end waiting [the expectant management] gave me more, rewarded me more. (Sandra-JM-IT)

The 'baggage of situations' collected from personal experiences seemed to provide lessons to be used while making decisions even in different conditions of SPL:

[Choices are] based on experience; over time by assisting more and more [slow progresses] we collected a baggage of situations [sic] to draw from, so [our reasoning is] 'are there commonalities between that case and this case?' 'Yes'. 'We did like this last time and it didn't work-or did work- so shall we propose that again?' (Chiara-JM-IT)

Different professional experiences in the birth centre seemed to count too. For instance, the fact that some interventions were considered and/or experienced as helpful by many, seemed to increase some midwives' confidence in their adoption. Similarly, approaches that appeared to be unsuccessful in others' experience seemed to be less likely to be adopted by midwives:

[I suggest upright positions] because I saw how much they work here [...], [they] limit the use of oxytocin [and are] highly satisfactory [for women] too. (Lisa-SM-IT)

This participant outlined the importance of the collective experience also for having a 'tranquil approach', as confidence in a strategy could be enhanced by its frequent adoption and demonstrated success:

I've made use of what I've seen here, experienced here, that helped me also in having a more tranquil approach and saying 'this thing doesn't scare me, I've seen it many times'. (Chiara-JM-IT).

Insights on past collective experience with SPL in the birth centre could be grasped during group or team interactions such as midwives' meetings or consultations between colleagues on duty. In this sense, accessibility to the

minutes of meetings in the site seemed to play a big role in giving midwives permanent accounts of stories of success and failures to learn from. Sources such as protocols, guidelines, or reports of training courses seemed to represent additional means of accessing other professional experience.

Pragmatic principles also seemed to underpin other recurrent behaviours observed. These included the strategy of not abandoning an approach unless a more effective alternative was found. This strategy, used by many midwives, was clearly promoted by the manager, as illustrated below:

If we abandon [an intervention], we must be sure that it doesn't work or that we've found something that works more, you see? [...] but until we haven't reached that point we must go on, if it doesn't work, we consider alternatives without insisting on that [intervention]. (Barbara-M-IT)

Midwives seemed also to endorse a pragmatic philosophy of 'trying everything before surrender' especially when transfer for slow progress seemed to impend:

Marzia has not left the room, I deem she's trying all the possible [interventions] in this moment. (Fieldnotes#6-IT)

'Trying all the possible' did not mean that midwives attempted unreasonable interventions, rather that at times they considered previously neglected interventions due to a sense of 'desperation' or 'discouragement'. The excerpt below illustrates this behaviour and also the frequent ironic way in which participants described decisions thus made:

There are strategies [...] that I use as an act of desperation because if it were for me [I wouldn't choose that] [laughs] but I leave no stone unturned [...]. Actually, in those [hardest] cases, if someone would tell me 'let's give her coffee and salt, it works, contractions will start again' I would give her coffee with salt! (Anna-JM-IT)

A recurrent example of interventions made as a last resort before considering women's transfer was the adoption of TCM, complementary or alternative therapies:

'Kelly: when you are hopeless you try the nipple stimulation.

*Lisa: yes, but it's not the first thing that I'd consider otherwise'.
(Focus group-IT)*

Basically I use this [moxa] because I have nothing left to do [...] probably, certainly, without a strong conviction. (Manila-SM-IT)

Unsurprisingly, there was neither protocol, nor policy that suggested consideration of everything as a last attempt to overcome SPL and avoid transfers.

4.8.2 The 'individual' element

Decision-making seemed to be influenced also by individuals' characteristics or, as described here, by an 'individual' element. Midwives, for example, tended to adopt strategies that they envisaged to be most helpful for the purpose of providing personalised care:

According to what I find in front of me I act, it doesn't exist [one way only] [...] I decide situation-situation, birth-birth [sic]. (Marzia-JM-IT)

Features such as the labour phase where slowing occurred, maternal condition and the woman's history appeared to be frequently evaluated in order to tailor interventions to the individual woman and their individual slow progress:

If we are in a latent phase²⁰ we can wait even for four hours, provided that wellbeing is safeguarded, we can wait, I would wait. (Grazia-JM-IT)

If we are fully dilated, we can even break waters! (Anna-JM-IT)

In this, midwives seemed to be guided by principles such as appropriateness. Selecting the appropriate approaches was also presented as paramount in documents, such as minutes of meetings, guideline, reports, and in midwives' internal and external communications. However, according to observations, decisions could vary depending on the individual interpretation of what was considered appropriate in order to overcome that slow progress. This seemed to also be connected to the problem of midwives' dissimilar and varying approaches discussed in section 4.7.

Factors such as women's individual characteristics, preferences or attitudes, were acknowledged to be influential as well. Women's motivation and trust in the possibility of overcoming slow progress seemed to be particularly powerful in affecting midwives' decisions. Midwives could feel themselves able to push boundaries where they perceived women to be highly motivated in attempting any potentially successful strategy in order to give birth in the birth centre. This was apparent in Anna's account below.

A woman who goes for broke, who trusts, who when you tell her 'let's do this, let's do that' she follows you because she's confident in her capacity of giving birth, in this place [...] is a woman that I concede more to. (Anna-JM-IT)

Anna also illuminated the opposite scenario where midwives could feel themselves limited in their actions because of women's demotivation or distrust.

²⁰ Some midwives labelled as latent phase any passive phase of labour stages or moment of transition, regardless of the conventional identification of latent phase with the early labour stage.

In front of a discouraged woman, who keeps saying that everything is useless, that she won't do it, despite all the efforts, all the energies I put [in that case] I tend to concede less. (Anna-JM-IT)

However, women's characteristics did not directly influence all the midwives. The manager, for instance, acknowledged the importance of women's behaviours and preferences in midwives' decision-making but outlined how choices could not necessarily ensue from these factors.

If I have a woman in front of me who is conscious that she needs more time then we discuss it, if I'm in front of a woman who complains about wasted time then we discuss that too [...]. But sometimes I don't feel like I have to follow her sensations blindly. (Barbara-M-IT)

Midwives' personal tastes, characteristics and attitudes seemed to matter as well when making choices. At times midwives seemed to direct their decisions, for example on what intervention to adopt, and even their narratives, according to personal beliefs and tastes.

Handover on the woman with slow progress: when accounting all the various approaches used, Kelly focuses on TCM; I believe there is a tendency to privilege the aspects that each [midwife] sees as most important, [based] on her personal taste too. (Fieldnotes#16-IT)

At other times, choices seemed to be informed by the presence (or absence) of midwives' trust in women's possibilities of overcoming slow progress. Some midwives appeared to have a trusting attitude towards women's innate resources, others trusted specifically in the abilities of some categories of women, such as the highly motivated one mentioned above. Few participants seemed to argue the importance of having trust in women's skills but to not reflect theory into practice. However, the benefits of midwife's trust in women was apparent in observations. The midwife's trust, for example, seemed to bring out or enhance a woman's self-confidence in their abilities. This, if not serving to overcome slow progress, at least appeared to increase the possibility of making this happen.

This situation makes me reflect on how much the midwife's trust [in woman] can change a situation. I think that if Kelly would have not believed in her [woman] so much, in all likelihood that lady would have been in the labour ward with an epidural now. (Fieldnotes#16-IT)

Attitudes that seemed to affect midwives' behaviours included being more or less interventionist. The midwives that appeared to be more interventionist, for example, looked more inclined to use directive styles and more invasive/medical approaches, such as ARM. Those midwives, as also mentioned in 4.7.1, seemed to refer to medical models of care at some level. Medical-based education, for example, seemed to underpin some midwives' reluctance towards 'unconventional' practises, such as CT. The following excerpt illuminates this.

Unfortunately I come from the Medical school and something of Medicine remained [in me] such as the scepticism towards unconventional medicine like TCM. (Anna-JM-IT)

However, individual education and knowledge appeared to be influential besides a medical or a non-medical background. Midwives, for example, tended to adopt interventions they were more familiar with, which they knew more about. This seemed to be particularly evident looking at the use of complementary therapies, though it was also observed in other contexts.

I use the Chinese medicine because is the one that I learnt... that I know more [...] vocalisation is not one of the first approaches I use because I know it less [than others] it is more unfamiliar to me. (Chiara-JM-IT)

'Kelly: the issue with [using] water is that we don't know enough about it, for instance how long women can stay in water, the natriuretic effect.

Lisa: it's true, for this reason water is not frequently used at the end'. (Focus group-IT)

Professional knowledge seemed to affect choices, for example, by affecting midwives' confidence in using certain approaches rather than others. At other times, midwives seemed to have adopted or experimented with approaches because of the involvement of some midwives of the group in master programmes or research projects.

'Lisa: at the end, why do we adopt all this Chinese stuff? We as a group endeavour to use it because Chiara is working on that for her thesis [...] although there is also this aspect of 'good grief, I don't want to do it, but I'll try!'

Marzia: it's Chiara's fault!' (Focus group-IT)

Postgraduate training, courses, workshops and seminars appeared to be the main sources of this influential professional knowledge. Less frequently, midwives acknowledged books as inspirational.

Reports and minutes of meetings displayed how frequently midwives dedicated formal moments at this site to sharing knowledge on possible new approaches to adopt. This habit of sharing knowledge appeared to be fostered by the manager if not spontaneously endorsed by midwives.

Individual characteristics seemed important too while making decisions. These included passions and feelings, influential factors that, according to some participants, appeared to be unavoidable by nature in humans' activities.

People have minds and feelings, they have passions, therefore thousands of things that can influence decisions in that moment. (Carla-LDr-IT)

Some participants mentioned passions to be the motive behind their focus on specific interventions. Therefore, among the many possible practises midwives could foster those which looked more appealing, as disclosed during the focus group:

'Kelly: there is also a human fact...I am more attracted by that in this moment

Marzia: the chinese?²¹[sic]

Kelly: yes, and I say to myself maybe it is because I have already explored the other things [so I feel the charm of the unexplored]'

Other times, participants talked about having (or not) the 'courage' of using a specific intervention, such as water, or rebozo, although its potential benefit was recognised.

I don't dare to use it! Yet this thing of using rebozo when there are asynclitisms is something I did once. (Chiara-JM-IT)

This seemed to be due partly to a lack of confidence and partly to personal temperaments. Courage was mentioned not only in relation to specific practises, but also in general as a necessary characteristic for pushing boundaries and making hard decisions. On this, the doctor seemed to identify lack of courage as a feature of the midwifery group, as if there was a midwives' attitude to avert taking full responsibility in difficult clinical scenarios. The same participant seemed to attribute this behaviour to the immaturity of the professional group in working autonomously against a medical habit of making courageous choices:

There is an act of courage, that of breaking out schemes that is still performed by doctors only, the midwife doesn't take that yet [...] midwives do not take this responsibility thus it's like they suffocate a series of skills. (Carla-LDr-IT)

However, other sources seemed to not reflect courage as a feature of a particular professional body but rather confirmed the problem to be at an individual level. Episodes where women prolonged their stay in the birth

²¹ The participants refer to the use of TCM.

centre under full responsibility of the midwifery team seemed to contribute to counter the argument of midwives' cowardice in breaking schemes. Finally, actions seemed to be inhibited by emotional states, such as embarrassment. An example was offered by midwives' use of nipple stimulation as a strategy for coping with slow progress. Behaviours around nipple stimulation appeared to be particularly insightful because, despite this intervention being mentioned by different sources as useful, some midwives appeared notably reluctant to its adoption.

Kelly: on sexual aspects [approaches] we are slightly ...

Lisa: we are deficient;

Kelly: [because] they embarrass us. (Focus group-IT)

Thus the midwives' individual relationship with sexuality seemed to affect the use of interventions with a sexual component, highlighting from another perspective the power of personal characteristics on decision-making.

4.8.3 Feeling either under pressure or supported

Midwives seemed to be empowered to make decisions when they felt themselves to be supported; conversely they appeared to be constrained when under pressure. Human relationships appeared to be the main source of support or pressure; in this sense midwives seemed to be affected by both the influence of users and other members of the team.

In the midwife-woman rapport, for example, the perception of a lack of women's trust in midwives' strategies appeared to prevent midwives from pushing boundaries. This could be due to the midwife's impression of working against the woman's will, as well as to a perception of being helpless with a woman who distrusted suggestions and efforts. The quality of the relationship with the woman was reported by the doctor to be influential not only on midwives but on any professional.

The lack of relationship between the professional and the labouring woman induces you [professional] to deviate from your [clinical] observation of that labour and decide to act differently [...] I'm not blaming women, just arguing that there is this psychological aspect coming from the lack of a trusting relationship. (Carla-LDr-IT)

Episodes where women's trust in the midwife appeared the key to success confirmed the importance of this factor in the care of slow progress.

I can hear the woman changing the breath rhythms and I almost visualise the scene in that room. It looks like that woman trusts completely in Paola and lets herself be accompanied by her. (Fieldnotes#5-IT)

Midwives' care looked likely to be informed also by the rapport with the woman's birth partners. Often the latter seemed to have even greater power than women in influencing midwives, as acknowledged by participants in this excerpt of the focus group:

Lisa: the woman...

Giorgia: she's a fundamental [influential factor];

Lisa: but the husband...

Kelly: the husband girls! Sometimes they work against; [...]

Manila: yes the husband comes at the first place;

Researcher: more [important] than the woman?

Marzia: yes, because he gives you;

Giorgia: he gives you support;

Marzia: he can help out when the woman got lost, if you lose the woman there is still the husband. (Focus group-IT)

In reality, it seemed to be hard to untangle which factor was the most influential among many, as the impact on midwives' decisions looked variable on a case-by-case basis. Certainly, fathers-to-be could affect midwives' decisions by being either supportive or disempowering to the woman. Marzia exemplified these possible scenarios:

What influences you [midwife] a lot is if you have a husband that collaborates with you, that if there is a need to spur [the woman] he does it; I know it seems strange but everything changes neatly because of the husband's behaviour; if he starts saying 'poor her-poor her, she cannot do it anymore', hence it's much more challenging to push her forwards, because you have to convince two people [that she can do it] instead of one! ²² (Marzia-JM-IT)

The type of proposal per se could change because of the lack of support of birth partners.

The availability of the partner to be involved, to be active, impinges a lot on [my decisions] [...] having a man who supports or one that is negative and doesn't believe [she can do it] really changes the kind of proposals I do. (Manila-SM-IT)

However, the pressure generated by fathers' behaviours, defined as 'negative', such as discouraging, unsupportive, anxious or aggressive compartments, did not necessarily result in a negative influence on women and midwives. Some women, for example, appeared to be impermeable to both negative and positive inputs from the surroundings. Additionally, some midwives perceived themselves as adamant once decisions were made, as Samantha outlined:

I'm rather irremovable, in other words, if we tried everything and we are not in the [normal] times anymore and still contractions are not there

²² The participant referred to the woman and her husband instead of the woman only.

they [women and partners] can even cry in Chinese²³, but we have to go there [host unit]. Even when everything is fine, if we are out of physiology we cannot be moved to pity. (Samantha-SM-IT)

External actors seemed to affect choices especially where midwives had to deal with fluid areas of practice, such as proposing an intervention or waiting and giving women more time. Little influence appeared to be played by an unsupportive environment where decision-making was much less complex, such as transferring women because of critical maternal exhaustion or complete arrest of the progress. Supportive birth partners' behaviours always seemed to be considered a positive element, if not influencing women's behaviours and midwives' decisions, at least for providing the right context to do so. The same potential for affecting midwives' decision-making was observed where, instead of the father-to-be, the birth partners were friends, siblings or relatives. Paramount to this was also the midwife's partner(s), that is, the colleague(s) with whom midwives interacted with during SPL care.

Before making a decision I speak with the colleague in charge, whether junior or senior doesn't matter [...] I feel the need of that external opinion to support me. (Sandra-JM-IT)

Similar to what was observed for the confirmation of SPL (see 4.5.3), colleagues personified the possibility of gaining an objective or different perspective for choices. Colleagues seemed to offer support especially by helping identifying strategies not considered before and, most importantly, sharing the professional difficulties, anxieties and responsibilities connected to the management of slow progress. All these aspects were captured in Paola's account as shown below.

²³ This Italian saying is used to describe a situation where someone tries to reach a goal by pretending to be desperate, so to cry even in a difficult foreign language. To move someone else with pity. (source available at: <http://dizionario.internazionale.it/polirematica/17855/piangere-in-cinese>).

She [colleague-partner] can propose new things to do, she can say 'look, I support you too in this', thus I can rely on her constant support [...]. It's really unlikely that a colleague [doesn't support], normally she takes responsibility too for the situation without saying 'do this, do that', but suggesting, being assertive purposeful. In case I'm in doubt she takes charge of the situation and if she also thinks that there's no way, there are two of us at that point and I'm even more tranquil [in making decisions]. (Paola-JM-IT)

The possibility of 'sharing' the weight of decision-making seemed to allow a more tranquil approach. Sharing seemed a component of the midwives' ethos in the birth centre, an independent factor to professionals' temperaments or seniority. This was illuminated by observing a supportive interaction between two very different midwives.

Paola speaks about positions to suggest with the colleague that calmly listens to her [...]. Even now when she leaves the room worried about the FHR²⁴ and sharing her idea of changing the woman's position, Marzia keeps calm and supports her in her decision. I find this interaction among such different midwives beautiful, and yet it works! [...] Now I can hear the two colleagues' voices both encouraging and spurring the woman to push. (Fieldnotes#5-IT)

Many midwives reported it as fundamental to have a colleague 'on the same wavelength' as them. Manifestations of this included having the same trust in women's possibility of giving birth or 'having the same goal' as said below.

Paramount is both of us believing that she can do it, being on the same wavelength! [...] The fundamental thing is to see the same goal, in my opinion if this is not there when dystocia occurs we can go there [transfer] immediately! You can try anything, but when you have the

²⁴ FHR= foetal heart rate.

type of person besides you who [unsupportively suggests] 'yes... try... if you want...' you feel less motivated to do that. (Samantha-SM-IT)

Though midwives seemed to normally partner with each other in a supportive manner, as Samantha mentioned, some midwives could be reluctant to accept the partner's proposal and advice. Minutes outlined a sort of internal agreement in case of conflicting views: this informal rule was to make decisions in accordance with what was suggested by the senior midwife where consultation with manager was not possible. The dissimilar views were supposed to be re-discussed in the meeting following the episode. Just one participant, the most junior midwife, seemed to identify the potential for paternalistic behaviours of senior midwives in decision-making under this rule. Except for that, midwives seemed to consider this internal agreement as positive, both in ensuring sound decisions and in preventing conflicts. Both the views seemed realistic.

A major role, for most of the participants, seemed to be played by the team in charge in the host unit, or rather by the characteristics of the colleagues with whom midwives would have contact in case of transfers. Even the manager recognised the power that the host unit team could have on midwives' approaches to SPL. This vulnerability was suggested to be a weakness of the group.

Who is in charge there [labour ward] does influence! Let's say it is probably more the fear of being criticised by them, but I'm too influenced by this, it's one of our limits. (Barbara-M-IT)

Given the apparently non-collaborative relationship with the host unit, it appeared that some midwives might not take personal initiatives beyond what was agreed and stated in internal protocols, guidelines and procedures. In this way they seemed to attempt to avoid conflicts, critiques or 'attacks' from the host unit. This scenario was clearly depicted by some participants like Anna:

We [midwives] work in a standard manner as much as possible to face external attacks [...]. I don't do this [intervention] as I don't wanna hear people commenting or criticising a practice I performed [...] I think that everything we do here has to be coded, I don't take personal initiatives. (Anna-JM-IT)

The influence of the host unit was confirmed also by episodes where decisions of avoiding transfers seemed to be driven by fears, rather than trust in the possibility of overcoming slow progress. The following excerpt provides an example of this:

At the beginning the midwives were upset to still find the woman [admitted the day before] there; then they felt that to transfer the woman at that point would expose them to a lot of criticism. They felt they had to go ahead but this was not primarily based on trust in the woman. (Fieldnotes#2-IT)

According to the lead doctor's view, there seemed to be an awareness of the influence of this external pressure on the birth centre. However, the rigid referral to protocol was identified as a group strategy, rather than a consequence of behaviours of the host unit.

THEY ABSOLUTELY, UNQUESTIONABLY, refer to protocols and guidelines [to make decisions] and THAT'S IT. FULL STOP. [...] The problem in such places where midwives are at risk, as they are alone²⁵ and they must have no flaws, the risk, if any, is to deprive their clinical skills and sensibilities and to rely on guidelines and protocols only. (Carla-LDr-IT)

Although midwives seemed not to refer unquestionably to protocols, as the doctor said, they actually perceived themselves and/or the whole model to

²⁵ She referred to MLU's where midwives work autonomously without doctors.

be exposed 'at risk' when making decisions that looked non-compliant with guidelines and protocols' recommendations:

At times the protocol is not precisely complied [...] without risks for mothers and babies but for midwives. (Grazia-JM-IT)

This perception of risk seemed to be exacerbated by discourses on safety promoted in the organisation. Making protocol-based decisions appeared necessary not only to safeguard maternal and foetal health, but in protecting midwives and the whole midwifery model as well. Advised by the organisation to adopt a principle of 'prudence' (Fieldnotes#9-IT), midwives looked greatly discouraged to push situations beyond set boundaries as provision of 'safe' care appeared to be vital to maintain the model of care. Some participants seemed aware of the constraining effects of a too rigid use of protocols for decision-making.

Sometimes for the sake of complying protocols, women loose opportunities and midwives too. (Grazia-JM-IT)

The protocol that appeared to inform more decisions and equally make women and midwives 'lose opportunities' was the one regarding the use of the partogram. Some midwives, for example, perceived a 'lack of possibility to wait' (Carla-LDr-IT) because they seemed to consider the interval marked between the alert and the action line of the partogram as the only time in which non-medical interventions were justified.

I've got a clock in mind where time is marked by the partogram, it sets red lines²⁶ and if you reach the red line and the situation is completely unblocked we can stay, if it is stalled this makes me decide to move there [host unit]. Up to the action line we try, we endeavour everything. (Anna-JM-IT)

²⁶ The ultimate red line is represented by the action line.

Unfortunately you have to comply with times of the partogram [...] if I didn't have this limited time I would take [...] at least 20 minutes more and the situation could change. (Marzia-JM-IT)

The partogram seemed to be endowed with a constraining power even where not rigidly used. Constraints, for instance, seemed to come from the authoritative culture underpinning the tool, a culture that seemed to equal 'normality' to 'standard'. Consequently, even those midwives who seemed to question the use of the partogram appeared to be affected by the internalisation of its patterns.

Paola updates her partogram; though she has moved beyond the partogram [the action line] and I could superficially say that she was not rigid [in the use of partogram] there is something more profound than that...the partogram is in her mind, she was not completely free from its scheme. (Fieldnotes#6-IT)

4.9 Final considerations on midwives' approaches to SPL

Before concluding this case report, some final considerations on what appeared to be the overall midwives' experience in dealing with slow progress are necessary. The following excerpt sketches some of these final aspects:

Just this week I heard two midwives' emotional stories of care and both regarded women with dystocia. It was rare to hear such stories of challenging, successful and empowering moments [...] SPL represents the fount of major difficulty but also strengthening and satisfaction. (Fieldnotes#2-IT)

As accounted in the field notes, the overall midwives' experience of SPL care seemed to oscillate between challenges and satisfactions, a sense of disempowerment and reward. Apparently, any difficult case of slow progress seemed to mark midwives and make them grow professionally. However, in their accounts, midwives seemed to perceive themselves as

rewarded especially in cases of happy resolutions of slow progress, embodied by the woman's birth in the birth centre, or at least a vaginal birth in the host unit. A successful birth seemed to be the real reward for all the women's struggles that the midwives looked to empathetically participate in. However, the counter side of this view of birth as 'achievement' was the sense of frustration, even loss, which seemed to characterise many midwives in cases of transfers.

'Kelly: you somehow experience a sense of loss for an experience that didn't get to saturation through the birth... you miss a part

Manila: yes, a part, a conclusion, that conclusion that gives a catharsis

Kelly: then you have to process the grief!' (Focus group-IT)

There is this separation [...] at times, I'm sorry for that, there is a frustration because I would always love to get to the end, but it's not always possible, that's why I experience a little frustration. (Giorgia-SM-IT)

Midwives could even become disempowered by the care of SPL. Just as a birth after a SPL could resemble the woman's and the midwives' victory, to some participants, failure to progress could represent a failure of midwifery care. Consequently, each transfer had the potential to make midwives question their midwifery care and skills. Critiques from the host unit could even provoke a sense of guilt for having transferred the woman and not 'being able' to facilitate birth in the birth centre.

As if it was our fault! There is a sense of guilt because they throw it to you, you see? They make you feel guilty because you gave them this additional work to do when they are already so busy. (Barbara-M-IT)

Feelings of being useless in helping women with slow progress and powerless in protecting women from inappropriate care once in the host unit also emerged. Chiara illuminated this by accounting an episode in

which the doctor in charge decided for a CS as soon as she came with the woman in the host unit:

In front of this discourse on caesarean, you feel powerless because now he [doctor] is in charge [...] and I don't feel I have the authority of [opposing] like the colleagues that worked for years in the labour ward [...] So I feel that what I have done with the woman was useless at the end [...] I took my responsibility for trying everything and you [doctor] that could use other resources do not use them and why don't you? Because I'm transferring her. (Chiara-JM-IT)

Also illustrated above is that midwives at times perceived themselves, or the fact that they embodied a midwifery-led model of care, as the cause of injustices performed to women in the host unit. Frequently midwives mentioned behaviour that appeared to be ordinary injustices to women and midwives. These included perceiving stigmas, different approaches used by the host unit team for women in SPL coming from the birth centre compared to those whose slow progress occurred in the labour-ward.

They consider these women [from the birth centre] as different, as more annoying, they retaliate them. (Giorgia-SM-IT)

Furthermore, often during the handovers to the colleagues in the host unit, midwives reported themselves as judged and mistrusted. The following excerpts give a flavour of those interactions that looked disempowering and unjust for midwives.

When we arrive there after two hours of active pushing [doctors and midwives say] 'are they really two hours? Truly two hours? But how long has the woman been fully [dilated]?' [...] They don't consider our hour of passive phase so two hours automatically become three. (Samantha-SM-IT)

You just told them a few minutes before that she's been pushing for two hours, but they don't trust you and they ask the woman. (Grazia-JM-IT)

So what does the doctor do? He re-examines [vaginally] the woman before me! (Giorgia-SM-IT)

However, these elements only seemed a temporary, reversible disempowerment for midwives. Rewarding episodes, rapport built with women and families because of slow progress, and alliances with colleagues all offered the potential to restore lost confidence.

4.10 Chapter summary

This chapter illustrated the main features of the case as they emerged at the Italian birth centre. The complexity of midwives' approaches to SPL seemed to mirror the complexity of the phenomenon of slow progress per se. This latter emerged as a key midwifery issue in this site. No straightforward process seemed to be possible for recognition or identification of the cause of SPL. Conversely, midwives seemed to be often engaged in complex reasoning where factors were considered within a bigger picture. Interestingly, many times the components that seemed to be hindering factors also appeared to be key for resolution. For example, the midwife-woman rapport, the human interactions in the environment, the socio-cultural context, as well as single elements such as nutrition or hydration appeared to be within midwives' different approaches to slow progress as part of both the problem and of the solution. Relationships seemed to be crucial in looking at the influential factors on midwives' decision-making and the impact of the (lack of) collaboration with the host unit on midwives' overall experience.

5 THE CASE IN THE ENGLISH SITE

This chapter illustrates the case as it emerged at the English site. As in chapter 4, it will initially provide information regarding the data collection and analysis. It will follow a description of the context that bounded the case and aided in illuminating its features. The key themes, subthemes and categories that emerged as characteristic of midwives' approaches to SPL at this site will then be discussed. Finally, the chapter will conclude with a case report summary.

5.1 Data sources and their contribution to the analysis

This section illustrates the material that informed the within-case analysis at the English site in the same manner and purpose as the Italian site. The number, type of sources utilised, and their specific contributions to this case report are summarised in Table 5.

DATA (MAIN SOURCE)	COMPONENTS	N	HOURS
INDIVIDUAL INTERVIEW (TRANSCRIPTS N=12)	BAND 7-8 UNIT LEADERS-SENIOR MIDWIVES (<i>Katie, Patricia</i>)	2	3.5
	BAND-6 MIDWIVES (<i>Lauren, Jennifer, Fiona, Donna, Deirdre, Sarah, Lucy</i>)	7	8.5
	BAND-5 MIDWIVES (<i>Deborah</i>)	1	1.1
	MIDWIFE MANAGER (<i>Michelle</i>)	1	1
	LEAD DOCTOR OF THE HOST UNIT (<i>Audrey</i>)	1	0.8
Total		12	14.9
FOCUS GROUP (TRANSCRIPT N=1)	UNIT LEADERS-SENIOR MIDWIVES (<i>Katie, Amber, Patricia</i>)	3	
	BAND 6 MIDWIVES (<i>Myra, Jennifer</i>)	2	
Total		5	1.8
OBSERVATIONS OF DIFFERENT EPISODES	MEETINGS	2	3
	INTERDISCIPLINARY MEETINGS	1	2
	HANDOVERS	12	4
	TRAINING COURSE	1	5
	CLINICAL SHIFTS -DAYS	10	100
	CLINICAL SHIFTS- NIGHTS/WEEKENDS	5	50
	CLINICAL SHIFTS WITH SPL	1	8
SOCIAL OCCASIONS	1	3	
Total		33	175
DOCUMENT REVIEW	PROTOCOLS	13	
	GUIDELINES	2	
	MINUTES OF MEETINGS	1	
	OTHER IN SITE-MATERIAL (e.g. POSTERS, LEAFLETS, BOOKLETS, INFORMAL MESSAGES)	6	
	REPORTS	1	
	TRANSFERS FORMS	44	
	FIELDNOTES/PERSONAL JOURNAL (diary)	1	
	ORGANISATIONAL DOCUMENTS	2	
Total		70	

Table 5: Summary of the main sources of data collected and analysed at the English site.²⁷

²⁷ The number of documents available exceeded the one reported in the table, which focused on those of particular interest for the research purpose.

5.2 Situating the case

5.2.1 The English maternity system

The maternity system is a free at the point of access in the National Health Service (NHS) in England.

In 2012-2013, around £2.6 billion was spent on maternity services. This is equivalent to 2.8% of the overall NHS financial resources, mainly deriving from general public taxation (National Audit Office, 2013).

Such costs are partly justified by the high volume of maternity users. In 2012 alone, there were around 700,000 births in England, 87% of which were assisted in hospitals (NHS Commissioning Board, 2012; National Maternity Review, 2016). Childbirth constitutes the single most common reason for hospitalisation in the country (National Audit Office, 2013; National Federation of Women's Institutes, 2013). Factors such as the increasing CS rates (around 20-25%), maternal and neonatal care related to smoking in pregnancy and/or hospital care of low-birth weight newborns, have been described as significantly impacting on the economics of the system (Mistry, 2009; Public Health Research Consortium, 2010; NICE, 2011).

There is clear recognition of the peculiarity of maternity services compared to other facilities within the NHS. In fact, a recent report of the Department of Health described maternity as 'a unique area of the NHS as the services support predominantly healthy people through a natural, but very important, life event that does not always require doctor-led intervention' (National Audit Office, 2013, p.5).

The provision of high-quality maternity care has been related to the role played by midwives in the system (Lavender and Chapple, 2004). Generally, the midwife is considered the lead caregiver for low-risk pregnancies and intrapartum care, but also a 'vital professional' within multidisciplinary

teams, appointed to assist women with complex health and/or social conditions (Officers UCN, 2010, p.16). Indeed, women in England might receive care from a range of different health care professionals, including general practitioners (GPs), obstetricians, health visitors, and maternity support workers (Officers UCN, 2010). All women are cared for by midwives throughout their pregnancy regardless of their risk status, though GPs might also comprise the first contact point with the service (National Audit Office, 2013; Care Quality Commission, 2013). Midwives are based both in hospitals and in community settings; community midwives generally provide antenatal and postnatal care, unless labour and birth occurs at home, whilst hospital midwives mostly provide intrapartum care. Different models of care, such as caseload midwifery, have been developed in England to offer women continuity of care between community and hospital. In the caseload model one midwife, or an identified team of midwives, guarantees childbearing women care from the beginning of the pregnancy to the postnatal period. A recent Cochrane review on midwife-led continuity models (Sandall *et al.*, 2013) details the proven benefits of these midwife-led models of care.

Since the publication of the 'Changing Childbirth' report in 1993 (Department of Health, 1993), concepts such as 'women-centred care', 'continuity of care', 'midwifery partnership' and 'women's choice' have been used as keywords for the English system. According to the 'Maternity Matters' policy (Department of Health, 2007, p.5) the choices that should be guaranteed to women in maternity services are:

- The choice of how to access maternity care;
- The choice of type of antenatal care;
- The choice of place of birth;
- The choice of place of postnatal care.

The vision of future maternity care within the NHS has been stated in the recent review of 'Better births' (National Maternity Review, 2016).

According to this vision, services across England have to become 'safer, more personalised, kinder, professional and more family friendly; where every woman has access to information to enable her to make decisions about her care; and where she and her baby can access support that is centred around their individual needs and circumstances. And for all staff to be supported to deliver care which is women centred, working in high performing teams, in organisations which are well led and in cultures which promote innovation, continuous learning, and break down organisational and professional boundaries'(National Maternity Review, 2016, p.8).

In England, like many western countries, the hospitalisation of births characterising the early 1950's marked the onset of a rapid decline of homebirths (McIntosh, 2012). Consequently, hospitals became the main birth place. A couple of decades had to pass before this supremacy started wavering for the (re)-establishment of alternatives such as MLUs, as well as for renewed forces advocating home births. However, it was only recently with the Birthplace research programme (Hollowell *et al.*, 2011) that a systematic mapping and monitoring of birthplace in England became available. According to the Birthplace findings the variable options of birth place for women are represented by OU, AMU and FMU and home. However, there seem to be significant differences in configurations and care packages of the units depending on geographical areas (Redshaw *et al.*, 2011). Furthermore, data from 2007 showed that, despite the potential variety of birth places, the majority of women (95% of the population) gave birth in hospitals with just a minority of babies born in MLUs (3% in alongside settings and 1% in freestanding) and at home (2.5%). In the triennium 2007-2010, an increase was noted of 11% in MLUs, with AMUs doubling in number (Redshaw *et al.*, 2011, p.10).

While outcomes of maternity care in England appear positive, with women generally satisfied with their experience (The National Federation of Women's Institute, 2013; Department of Health, 2013), many organisations and authors have clearly identified limitations and areas where the current maternity services can be improved. Factors such as the constant shortage

of midwives, the increasing rate of complex/high-risk pregnancies and medical interventions, a growing social and ethnic diversity in the population, and the inequalities in the access to facilities, seem to represent the real challenge for present and future maternity care in England (Officers UCN, 2010; Department of Health, 2013; Royal College of Midwives, 2013).

5.2.2 Geographical and spatial configuration of the service of the English birth centre

The English FMU was established a few years before the study as a unit that served the community. It was centrally located in a deprived area of the North-west of England. A general hospital, situated approximately 14 miles from the unit, accepted referrals in case of transfers. Two other MLUs were part of the same Trust, but this seemed particularly attractive and accessible for women of any social status. Professionals, academics and media often mentioned it as a point of reference and excellence inside and outside the region. According to experts, this birth centre soon became one of the largest FMUs in the country.

The birth centre was easily accessible from a side street off a main town road. The building was situated slightly marginally to the gate entrance and close to other NHS community services. A large green area framed all those NHS facilities and the birth centre in particular was surrounded by an extensive garden, which offered the contrast of a peaceful, calm island in the middle of an unattractive urban zone. Participants recognised the relevance of this geographical feature of the service:

So it's because we've got an integrated community model that is working so well, because we're positioned where we are. We're actually central, we're an integrated part of maternity services, and we have a really good relationship with the hospital. And you can't function like this without it. (Patricia-B7-UK)

The structure was entirely distributed on one floor divided into sub-units. This configuration gave the impression of individual, though

interconnected, boxed spaces suggesting the possibility of privacy and autonomous midwifery work. However, this kind of layout of the unit seemed also to limit, at times, the natural/spontaneous interactions, communication and sharing between professionals and render the understanding of the ongoing activities less accessible to the researcher as an observer. This impression is captured by the following excerpt:

The image I've got of this place is like many closed little boxes from which occasionally someone pops out. For instance, I went to the toilet near the office and there were at least 3 people working at the pc whose presence I didn't perceive before. (Fieldnotes#14-UK).

On entering the building, the first visible space was a colourful welcoming area with coloured sofas, pictures of mothers and babies on the walls and a large desk. Clerical staff and/or other professionals on duty could usually be found there. On the right of the entrance, there was a kitchen/rest room for professionals, a meeting room where various activities, including parental classes, were performed, and a staff room where the leaders, consultants and data archives were usually based. Behind the desk area and separated from it by doors, there was a room for outpatient clinics, some storage space and public toilets, four birthing rooms and a four-bed postnatal bay/rest area. All of the above were located along a corridor, which appeared narrow compared to the spacious birthing rooms. Each birthing room had an en-suite bathroom and was equipped with everything necessary for an emergency, normally hidden within the furniture, such as a neonatal resuscitation isle. Three of the four rooms had birthing pools; all the rooms had a view and access to the external garden. This connection to green areas appeared to enhance, using natural beauty, the advantages of having a 'home-from-home' environment, as the service self-described it (Trust-website-UK, 2013) in support of normal births. Nevertheless, little details, such as the hospital-like beds placed in most rooms, seemed a reminder of hospital culture even within a home-like environment.

5.2.3 The birth centre ethos

According to the Trust website, the unit endorsed a family-centred approach for women with no anticipated problems in pregnancy. The midwifery care was described as 'sensitive' and all staff focused on promoting 'physiological (natural) birth' supported by evidence-based practices. Serving the community – also supporting homebirths- and providing continuity of care to local women represented the ideals in midwives' philosophy. An information pack for new staff outlined this commitment of the organisation to provide 'seamless and effective care to women during the antenatal, intrapartum and postnatal periods' with the aim of facilitating a positive experience of childbirth for all women (Information pack-UK, 2013). Collaborative work represented another feature of the birth centre; the encouragement of a collaborative approach to care aimed at maximising 'positive health outcomes for mother and baby' (Guideline#3-UK). Midwives generally proudly presented the positive collaboration with doctors and other professionals. However, interactions did not always seem as positive as presented (see 5.8.1)

The midwives who had contributed to the establishment of the birth centre and/or were engaged in its activity since its early stages appeared particularly keen to transmit the right philosophy to new colleagues. Conversely, some midwives who had started to work latterly at the birth centre and/or spent less time in there, being mostly dedicated to other services, seemed to embody that ethos less, although apparently equally committed to the unit. The importance of having and maintaining the ethos was also raised during the focus group:

Myra: I don't think you can just open and anybody can work in there. There has to be an ethos of supporting women and encouraging women and believing in women and it is a confidence thing. (Focus group-UK)

Besides personal characteristics, the significant staff rotation (see next), might have contributed to limit the participation and maturation of the

birth centre philosophy in some midwives. However, restricting the problem of endorsing an ethos to organisational factors or seniority in the birth centre would be an error. For example, the length of midwifery experience did not always equate to being committed to the setting and ethos.

5.2.4 The internal organisation of the birthing unit

The staff of this FMU was drawn from a large group of midwives of approximately 40-50 professionals. Most of them were based in the community and only periodically involved in the birth centre shifts. Conversely, few midwives appeared to be allocated mostly to the MLU.

Shifts were scheduled as 'early' (8-16), 'late' (12:30-20:30) and 'night' (20-8:30) so as to guarantee a 24/7 service. Services included antenatal, intrapartum and postnatal care, arranging and supporting home births, new-born examinations and vaccinations, antenatal classes and hearing screenings (Trust website-UK). Sometimes, midwives worked an all-day shift covering half of the day in the community and the other in the birth centre. Each shift was usually staffed with one health care assistant and three midwives, one per community teams²⁸. An on-call midwife was available for home births. Consequently, women from all local areas were facilitated to encounter a known caregiver during their stay at the birth centre.

The system benefitted from having various levels of midwifery leadership: there was one team leader per community team and one shift leader per shift. Moreover, the daily management and functioning of the birth centre was entrusted to two specific midwife leaders. Besides managerial duties, these unit leaders, together with some senior midwives, seemed to serve as a core group committed to the preservation and communication of the birth

²⁸ There were three teams reflecting the three main local areas served by the Trust.

centre ethos. The fundamental role played by the leaders was openly recognised by the manager:

I think we chose the right team leaders. And then as some team leaders have moved on we've put the right person back in, you know, chosen the right person to take over. (Michelle-M-UK)

During the day, clerical staff and other people/professionals such as breastfeeding consultants, supervisors of midwives, medical and midwifery students could also be found. All staff reported to a midwife manager and, ultimately, to the head of midwifery at the Trust.

According to documentation on site, midwives were identified only by their belonging to a specific community team or their eventual role as leaders. Leaders and supervisors of midwives were identifiable also by their different uniforms. The midwives' banding status could only be determined by direct questioning. According to the English banding system²⁹, most of the practising midwives in the birth centre were band-6 midwives, while some leaders, supervisors and manager were band-7 or 8. The presence of entry level/band-5 midwives was limited to a period of 6-months only, during their preceptorship. After this period, band-5 midwives were generally allocated to hospital.

There was no rotation between the personnel of the birth centre and the hospital. However, the leaders and the midwife manager reported rotation to be in the future plans of the head of midwifery. Midwives' emergency skills were maintained by periodic 'skills and drills' sessions performed either in the birth centre or at the main hospital. Besides transfers, these training days represented the main occasions for midwives of the birth centre to encounter the host unit multidisciplinary team.

²⁹ Further information on the English banding system are provided by Robinson (2016).

Labour progress was recorded on a specific part of the woman's chart composed of a blank space for notes and a grid where the midwife in charge of the woman manually depicted the partogram (Figure 6). Vaginal examinations were performed 4-hourly on average as indicated in the local protocol and NICE guidelines adopted (National Institute for Health and Care Excellence, 2007).

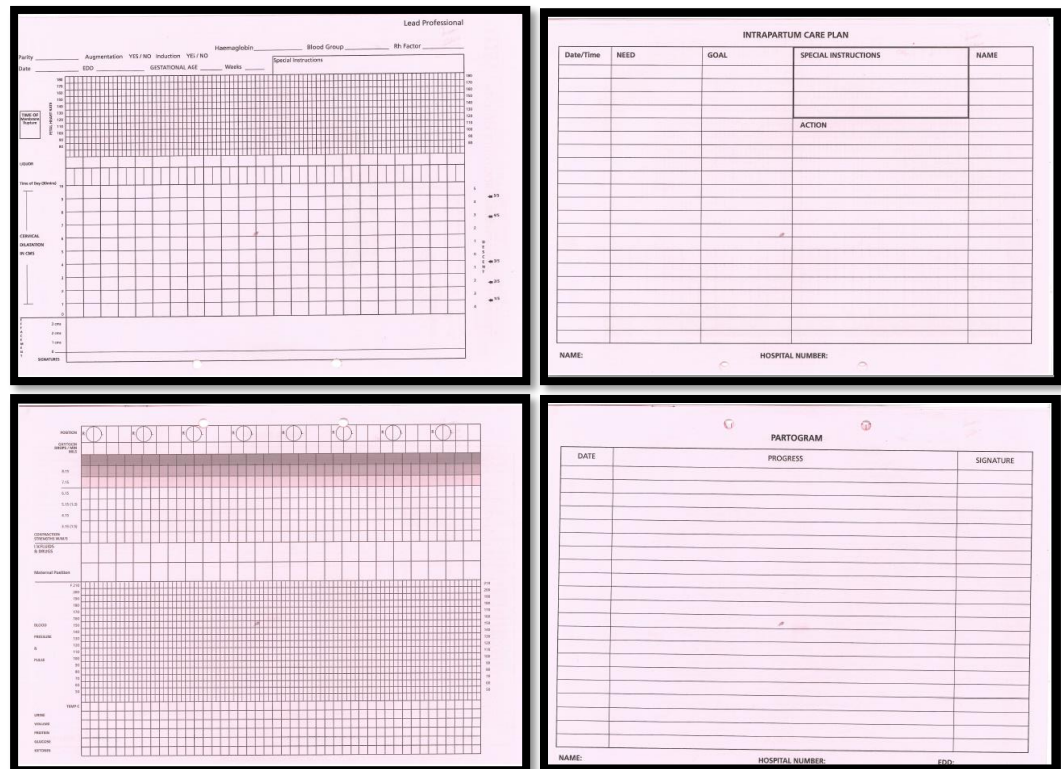


Figure 6: parts of the woman's record referring to the partogram adopted at the English site.

On this chart, midwives drew themselves an alert line at the point of labour onset and a 4-hour distant action line. So, although the WHO partogram was not adopted in terms of a pre-printed form it was as a clinical framework.

In case of transfer, the midwife in charge referred to the host unit medical staff by phone, called the ambulance and followed the woman to the hospital. A taxi service was available to bring back the midwife to the FMU once her work in the host unit was ended. Many midwives lamented the pressure to stay in the labour ward and help with the workload in the business of the host unit. Despite the picture of positive collaboration

between the two units, some participants talked about the challenges commonly faced in the interface with the host units. Some are summarised in the following excerpt; interestingly they emerged early-on as features of the MLU during the researcher's first visit.

*I rethink about my first encounter with midwives and the fact that in less than two hours the problem of being labelled series A and series B midwives came out, the discord with the labour ward restored only by personal rapports, the theme of 'you do nothing at the birth centre' as if the only real work is in the delivery suite makes me smile [because I see the similarities with Italy despite the apparent differences].
(Fieldnotes#2-UK)*

Each transfer was recorded on a specific form including the reason for the transfer, the date and hour of the ambulance call, the arrival to hospital and the outcomes. The accuracy in filling this form, as all the documentation, which was periodically scrutinised for monitoring purposes, was constantly recalled by one unit leader. The motto used, mirroring a phrase stated on an internal document, was 'IF IT IS NOT WRITTEN IT NEVER HAPPENED!' (Bluelight#2-UK).

Online information reported 15 minutes transfer time on average, but participants talked about a realistic 30 minutes driving distance. The Trust website, however, was generally lacking in information regarding transfers. The organisation seemed to avoid any emphasis on this aspect of the pathway although it might represent a concern for users. The attempt to focus attention on normality and reassuring elements of the care so as to limit users' fears might represent a rationale for this choice. Alternatively, the Trust might have privileged only positive images of the service minimising the communication of potential weaknesses.

5.2.5 The clinical pathway

The birth centre normally served the local catchment area but could also host users coming from the entire region and outside. Women who chose to

birth in this freestanding MLU were usually looked after by a local GP and/or community midwife and discussed the clinical pathway with them. Information could be attained also by other means including weekly in-site tours, the Trust website and popular consumer websites such as 'Birth choice UK'³⁰. However, an appointment with local midwives could be booked from 6 weeks of pregnancy even for women outside the community. A dedicated check around 35 weeks of pregnancy, represented a mandatory appointment where choices and appropriateness of the midwife-led pathway were discussed with the woman. Midwives in the birth centre had access to the clinical records of women who asked to use the service prior to meeting them. Records were scrutinised in order to assess women's health status; where no problems could be anticipated the woman was considered eligible for the unit. Women's health conditions that might need to be referred to doctors and potentially signpost women to obstetric-led care could be identified early thanks to protocol based criteria for low-risk pregnancies. Women who did not fit these criteria but expressed their choice for midwife-led care were normally invited to consult an obstetrician and were provided with all the information about the risks and benefits of giving birth at the MLU in their clinical conditions. Supervisors of midwives were available too in the unit, at least once a week for consultations of complex situations.

After inclusion on the clinical pathway women were supposed to be cared for by the same group of midwives antenatally and postnatally so as to minimise the number of carers. Women can contact midwives in the unit, or their community primary care facility, prior to labour. The unit offered a telephone triage service, which appeared to be particularly helpful for women in the early labour stage. Families were normally encouraged to stay at home during this phase. However, women who seemed to need checks and physical reassurance could be invited to use the facilities even

³⁰ Available at <http://www.birthchoiceuk.com/>

for a few hours if necessary. Births could occur exclusively at term and women could be accompanied by multiple birth partners, e.g. external practitioners and doulas. The usual stay in the unit varied from a few hours to a day. When women needed to stay more than a few hours they were generally asked to move to the 4-bed postnatal bay when single rooms needed to be freed. In the presence and maintenance of a healthy status, women's care was only provided by midwives throughout the whole pathway. Normal labour was supported primarily by caring for the birth environment, promoting mobility, hydration and nutrition in labour and offering pain management that included the use of Entonox and pharmacological aids, such as diamorphine and pethidine. Though protocols acknowledged the possibility of using complementary therapies for labour pain, these were rarely part of midwives' practice (except for the use of water in labour and birth).

Neonatal checks were performed by specialised midwives from 6 hours after birth to 72 hours depending on professionals' availability³¹. If a baby did not have any checks during the stay in the birth centre, a later appointment at the unit was booked before discharge. Coherently with the 'baby-friendly' accreditation of this service, breastfeeding was highly supported at the birth centre and once the family returned home.

5.2.6 Main statistics of the birth centre

Midwives were informed about the activity figures of the birth centre during their meetings, up to four per year. Generally, key information was circulated by emails. All staff members were asked to be as accurate as possible in their records, which were both electronic and hand-written. One unit-leader was particularly keen on keeping midwives' attention on the data reporting system and providing good quality data to the midwife

³¹ Besides the organisation of the unit, newborns were commonly checked after birth by midwives only in the system. Paediatricians were involved in the care just in case of health problems.

manager. Data was periodically scrutinised both by internal and external institutions aimed at controlling the quality of the service. A poster placed in a corridor leading to the staff room reported a summary of key outcomes. However, most participants when asked about figures of the unit, suggested consulting the midwife-leader, as if many relied on having someone to refer to, rather than knowing all the statistics themselves. Some of the following data was not easily accessible in the unit, and was only obtained after consultation with the midwife leader and the manager.

According to available sources, the unit hosted approximately 900 births in past years. Most of the users were multiparous women. The intrapartum transfer rate often mentioned by midwives was 13%, while 22% of transfers occurred in the antenatal or postnatal period. In the study period the intrapartum transfer rate was around 16%, transfers occurred primarily in *primiparae*, and SPL represented one of the main causes. The terminology adopted in transfer forms varied from 'delay of 1st stage' (or second) to 'failure to progress' to 'dystocia'. Interestingly, SPL was the most common cause of transfers in all the months preceding the fieldwork at this site, while it was less recorded during the study period. Besides the hypothesis of this being totally casual, it might be considered a potential impact of being under scrutiny on midwives' outlook and behaviour concerning SPL. However, since this argument could not be supported by any other data, it has to be considered only as a supposition.

Half of the women who gave birth in the unit had an intact perineum. The episiotomy rate was not available, nor was a detailed report of the degree of perineal tears which occurred in the MLU. Third degree tears were recorded in transfer forms but their occurrence did not seem to represent an issue for the organisation. CS rate fluctuated around 5% against a 4% of operative births by forceps or ventouse.

The unit achieved a high rate of water births (approximately 50%), some midwives' particular commitment on promoting intrapartum use of water could have been at the root of this phenomenon. Data showed a 16% use of

pethidine/ diamorphine intramuscularly administered in labour as pain relief in a seven-month period. This latter fact, together with observation of the common use of Entonox, appeared to be contrary to the ethos where promoting normality and limiting (medical) interventions was considered to be key. Participants seemed uncritical when openly asked about midwives' views on using pharmacological treatments for labour pain management in a MLU during the focus group. This was probably due to it being traditionally part of midwifery care in England, thus integrated in 'normal' care, or simply representing one unquestioned practice.

5.3 Overview of the themes, subthemes and patterns of the case in the English site

The following sections will outline the principal themes that emerged at the English site which illuminate the case of interest. As in Chapter 4, the key themes, subthemes and patterns selected are summarised in

Table 6 to facilitate the reader in gaining an overall view before entering into detail.

Table 7 offers an additional aid by depicting the individual contribution of each data source to these findings.

Themes	Sub-themes	Patterns
1. SPL NOT AS AN ISSUE	SPL as individual phenomenon	<ul style="list-style-type: none"> • Hard to define • The 'lady's way' • Woman do surprise you • No progress vs SPL • Slow progress yet progress
	SPL as an organisational construct	<ul style="list-style-type: none"> • Different experience of SPL in OU vs MLU • No experience in MLU • Experience in MLU, but different approach
2. RECOGNISING SPL IN THE BIGGER PICTURE	Use of Intuition	<ul style="list-style-type: none"> • Get the feeling • Staying and observing • Intuition vs observation • Fallibility of intuition
	Getting evidence	<ul style="list-style-type: none"> • Contractions, observations • Vaginal examinations • Partogram as aid • Premature start of partogram
3. INFLUENCING THE ONSET OF SPL	Early labour	<ul style="list-style-type: none"> • Exhausting latent phase • Lack of preparation • Willing themselves into labour
	Culture, attitude, behaviours	<ul style="list-style-type: none"> • Maternal • Professional and carers • Organisational • Social: the 'quick-fix'
	Being shattered	<ul style="list-style-type: none"> • Tiredness • Dehydration/ketosis • Lack of energies
	Mechanical issues	<ul style="list-style-type: none"> • Malposition • Immobility • bladder care
4. GIVING WOMEN THE BEST CHANCE	Putting a plan and taking an action	<ul style="list-style-type: none"> • Tailoring interventions • Reassessing earlier • Documenting actions and decisions
	The 'simple things'	<ul style="list-style-type: none"> • Nurturing the body • Nipple stimulation • Ambient • Minor interventions • Stay mobile! • Medical approaches • Rest/pain management
5. MANAGING INFLUENCES THROUGH EXPERIENCE	Influential people	<ul style="list-style-type: none"> • Women • Birth partners • Colleagues • Senior vs Junior • Hospital staff
	Influential contexts	<ul style="list-style-type: none"> • Birth setting • Distance from OU

Table 6: Themes, subthemes and patterns that emerged at the English site.

THEMES	SUB-THEMES	CONTRIBUTION			
		INTERV.	FOCUS GROUP	DOCUM. REV.	OBSERV
SPL NOT AS AN ISSUE	SPL as individual phenomenon	✓	✓	✓	
	SPL as an organisational construct	✓	✓	✓	✓
RECOGNISING SPL IN THE BIGGER PICTURE	Use of intuition	✓	✓		
	Getting evidence	✓	✓	✓	✓
INFLUENCING THE ONSET OF SPL	Early labour	✓	✓		
	Culture, attitude, behaviours	✓	✓		✓
	Being shattered	✓	✓	✓	✓
	Malposition	✓	✓	✓	✓
GIVING WOMEN THE BEST CHANCE	Putting a plan/ taking an action	✓	✓	✓	✓
	The 'simple things'	✓	✓	✓	✓
MANAGING INFLUENCES THROUGH EXPERIENCE	Influential people	✓	✓	✓	✓
	Influential contexts	✓	✓	✓	✓

Table 7: Contribution of each main data source to the identification of the main themes and subthemes concerning the case at the English site.³²

³² Bold tick symbols indicate the perceived high contribution of that source to the identification of the theme.

5.4 SPL not as an issue

The fieldwork at this site was soon characterised by the impressions of participants arguing that SPL was not a midwifery issue in their context. At times, the seeming irrelevance of the topic for the group led the researcher even to question the possibility of gaining comprehensive insights on the phenomenon at this site. This is visible in the following extract of field notes of an individual interview:

The relationship [with the interviewee] has always been highly spontaneous; after a few exchanges, I soon realised, that actually [our] perception of the argument was fundamentally diverse: for me SPL was a crucial problem, highly relevant; for her, as she explicitly said afterwards, it was not at all an important issue [...]. The more I asked questions, the less I seemed to [be able to] enter into the matter (Fieldnotes#10-UK)

Questions arose from comparing the participants' affirmation of the (non) relevance of the topic in their clinical practice with the opposing evidence coming from the literature and site documentation. According to the available data, SPL did in fact represent one of the most common causes of all transfers from this FMU. However, this apparent controversial perception of SPL not being an issue unveiled elements that contributed to new knowledge of the case.

The subthemes discussed below represented key factors in explaining the unexpected midwives' outlook on the phenomenon of SPL in this site.

5.4.1 SPL as an individual phenomenon

In this site, labour progress was generally presented as a tremendously individual phenomenon that could hardly follow standardised patterns. Even within the realm of standardisation, such as protocols, this quota of changeability seemed to be acknowledged mainly as variation in labour duration:

Duration of first stage could be varied. Progress of cervical dilation to the left of the action line is indicative of acceptable progress. Once it crosses the action line, i.e. to the right it is indicative of delay and referral to obstetric care must occur. (Protocol#intrapartum-care-UK)

Given the great variability reported in women's labour progress, some midwives showed a difficulty in providing a prompt definition of what can be classified as SPL

I cannot give you a conclusive definition. I think it is very much dependent on the individual cases (Katie-B8-UK)

I would say every case is different [...]. Would you class a long labour phase as slow progress? (Patricia-B7-UK)

It's very hard to say that's a slow progress because of all the different factors that you have to take into account [...] since I worked in here more and more women I've seen that come in being fully or have been 2 to 3 and just potted around and then suddenly they're fully! So, is that fast progress? (Lauren-B6-UK)

Midwives acknowledged the possibility of SPL being an expression of the woman's labour uniqueness, or as one participant phrased it 'the lady's way' of labouring:

Well, I don't know whether there is a slow progress or whether that is just that lady's way (Lauren-B6-UK)

Another way of illustrating this aspect came from a few participants talking about the surprise of seeing women labouring slower than expected and yet progressing efficiently:

Every lady is so different; I had a lady come in a few weeks ago and midwife was looking like 'mmm maybe she's not in labour', she was a really nice and calm and relaxed lady [...] You delay sometimes because she was so calm and relaxed. She was definitely fully dilated and she

started pushing [...] and you would have never thought she was in labour. So people do surprise you and everybody is so different so you can't judge just by looking at somebody (Deborah-B5-UK)

Sometime you have very short and very irregular contractions and it's all doing the job! (Lucy-B6-UK)

This fact seemed to support the argument of SPL as a false issue in many cases.

An element that appeared to be key in creating erroneous considerations of a slow-yet-progressing labour as a problem was the focus on cervical dilatation solely, underpinned by the discourse of a normal dilation rate equal to 1cm/h:

Sometimes it's looked at the dilatation alone instead of if actually progress has been made. It is slow, but the presenting part is coming down. (Fiona-B6-UK)

Consequently, to various participants, the very existence of SPL was questionable leading some midwives to accept only the evidence of no progress rather than SPL as the real issue.

Finally, SPL seemed to be denied as an issue also because of its high dependency on the individual midwives' perception of the phenomenon. This suggested SPL to be, for many, a constructed problem.

That's a midwifery thing, not because the women are coming in with a problem in labour (Patricia-B7-UK)

It's very hard isn't it? Because what one midwife might think is not slow progress and another might think 'oh my God! That is really a slow progress!' (Lauren-B6-UK)

The potential for SPL to be a construct also seemed confirmed by another emerging subtheme: the influence of organisational elements on the perception of SPL as an issue, as discussed next.

5.4.2 SPL as an organisational construct

Several cues indicated the role of the organisational context in influencing midwives' outlook on SPL, leading them to consider it, at some level, as a constructed entity.

The perception of a minor incidence of SPL was one of those components that made participants relate the existence of SPL to the organisational context. For instance, a group of midwives reported almost no experience of SPL since they had practised in the birth centre, conversely from what they had experienced in hospital settings.

I have to say that I haven't seen as much slow progress of labour here as I used to see at [name of hospital]. Since I've worked here in three years is probably only one person who I had been on transfer with slow progress (Lucy-B6-UK)

Yeah, I haven't had a big experience [here] of women making a slow progress [...] No, I can't say that it's there. (Fiona-B6-UK)

I think we only had a few and we always say they've probably made no progress rather than slow progress (Lauren-B6-UK)

In numerous interviews, the move from practising in the labour suite to the birth centre coincided with a different awareness of SPL and consequently a different approach to the problem. Some midwives, indeed, rather than denying the significance of SPL, outlined the achievement of a more flexible and 'relaxed' approach obtained by working in the birth centre.

I think you're more prepared to relax the rules a little bit and think actually it is slow progress, but is everything else okay? (Sarah-B6-UK)

This relaxed approach was mainly attributed to the better understanding of the physiological processes and the absence of those time-medical pressures that were characteristic of hospital settings.

Jennifer: I don't think we feel under pressure to like have time constraints [...] especially coming from the consulting unit that we have to have babies every minute or at a certain time.

Patricia: I think it's become less of an issue since we've opened and we've learned a lot more about it and the absence of risk factors or pathologies, we know that these women are able to do it and not all labours just go in a straight linear fashion. [...] I think we're less stressed about it, [...] but now is not an issue at all!

(Focus Group-UK)

According to observations, the internal organisation of the unit seemed another probable explanation for the context-dependent (ir)relevance of SPL. The frequent rotation between community services and the birth centre, indeed, might have influenced midwives' perception of the scale of the problem represented by SPL in the overall experience of the birth centre. In other words, given the organisation of staff, the less time an individual midwife spent in the unit, the less she might have perceived the impact of SPL on women's labours and midwives' care. This explanation seemed supported by this participant's input:

I have to be honest and say hand on heart no I haven't [come across SPL], but I don't work in a birth centre the number of hours that you do, I'm not in here frequently. So the more frequent, the more times I was in here if it kept occurring then I'd be thinking 'oh hang on what can we do about this?' So it depends on how much you're living a certain situation? Yes. (Fiona-B6-UK)

As this point emerged from one participant only, the researcher decided to discuss it within the focus group. Although they had not considered it before, in that context, participants seemed to recognise the potential, of this simple organisational element for influencing midwives' perception of the scale of the problem of SPL.

5.5 Recognising SPL in the bigger picture

A recurrent theme, when talking about midwives' approaches to SPL, was the need to consider all the possible factors involved. Participants expressed this concept as 'looking at the bigger picture' or 'taking all factors into consideration'. Considering all factors did not purely mean to list the several components implied in the manifestation of SPL but to also 'look at everything as a whole'.

This necessity of having a comprehensive, holistic approach appeared to be based on the awareness that any simplistic outlook on SPL would have been inappropriate, given the inherent complexity recognised with the birth process. The documentation in use, such as the intrapartum care protocol based on NICE guidelines (National Institute for Health and Care Excellence, 2007) seemed to encourage this view.

The importance of having the bigger picture in mind emerged particularly in the context of the identification of a slow labour. In recognising SPL within the bigger picture, the use of intuition and evidence seemed paramount in midwives' experience.

5.5.1 Use of intuition

Most midwives reported intuition as an instrument for SPL recognition. Some argued that while providing a straightforward definition of SPL could be hard, realising it could be immediate thanks to the midwifery sense:

I would say 'slow progress is so hard to define, but as a midwife I think you know when something is not right'. (Lauren-B6-UK)

Jennifer: I think you just know, don't you, that they're going to be fine. Sometimes you just know that perhaps they're not. (Focus Group-UK)

It is difficult to know if these sentiments were somehow transmitted to women subconsciously and had an impact on them. However, under different terminologies, such as 'sixth sense', 'instinct' or 'inkling', intuition

was normally valued as helpful. 'Getting a feeling' of something not going right seemed to provoke in midwives a special attentiveness to the overall situation. At times, midwives seemed to have intercepted SPL early by following intuition, before any evidence from other sources.

Well sometimes you get a sense that the woman's contractions, despite the fact that she might be several centimetres dilated, just never improve. So, you get a feel that the labour's not progressing particularly well. (Michelle-M-UK)

After getting this feeling, a number of midwives indicated 'staying in the room' with the woman as fundamental in order to gather all necessary information to support or disconfirm what was suggested by their intuition.

I always stay in the room, always, [...] you have to because then you're doing that observing and watching. I think that's crucial, a lot of midwives don't realise how important that is. And with the delay side, it's vital because then you're gathering information. (Patricia-B7-UK)

In some cases, the sense of SPL contrasted with observations of normality; yet feelings seemed to be eventually proved right by experience.

All the measures that we have, the action line and everything, she was still within the right parameters, but I just didn't feel easy about things. (Patricia-B7-UK)

Sometimes you've got a feeling this is not right even though the picture could be okay, there could just be some little niggle that's in there saying this doesn't feel right, something should be happening, everything's okay, but why is it not? And I think you need to go with that sometimes, it's usually right. (Fiona-B6-UK)

However, a few midwives who endorsed the use of intuition in the recognition of SPL, reflected on the potential for errors driven by misguiding feelings. The following excerpt narrates episodes where

intuition was subsequently demonstrated to be erroneous with a resulting influence on midwives' trust in their feelings as well.

I've had a few times recently where my intuition has let me down [...] I've had a couple of cases recently where I thought women were really progressing really well, and they actually weren't and they've ended up transferring [...]. I think sometimes I let my desire for normality maybe overcome. (Jennifer-B6-UK).

A unit-leader outlined the importance of a careful use of intuition, hinting at a better use of it by expert midwives and the need for objective evidence to support midwives' feelings.

Katie: Yes and I think you have to be very careful using your intuition really and be absolutely objective in why you're thinking that... We have that feeling, but why are we thinking that? Because someone who's not confident about working here could then think...well almost write that lady off. (Focus Group-UK)

The use of evidence, recommended by the leader actually emerged as a subtheme and will be illustrated in the following argument.

5.5.2 Getting evidence

The organisation endorsed guidelines and protocols that indicated considering all factors within a bigger picture as important for the recognition of SPL. An example is provided by this extract (Box 1) from NICE 'Intrapartum care' (2007), a reference guideline for protocols around normal labour care and abnormal labour care available on site.

A diagnosis of delay in the established first stage of labour needs to take into consideration all aspects of progress in labour and should include:

- Cervical dilatation of less than 2cm in 4 hours for first labours;
- Cervical dilatation of less than 2cm in 4 hours or a slowing in the progress of labour for second or subsequent labours;
- Descent and rotation of the foetal head;
- Changes in the strength, duration and frequency of uterine contractions.

Box 1: Definition of delay in the first stage of labour from the NICE intrapartum care guidelines.

To note, the few midwives who provided a straightforward pathway for the identification of SPL clearly referred to the parameters indicated in Box 1, as testified by this excerpt:

Active labour is classed from 4 cms, so from 4 cms we expect ladies to dilate on about half cm to a cm an hour so anything less than that I would class as slow progress in labour. (Deborah-B5-UK)

The medical participant seemed to adopt another clear reference for the recognition of slow progress.

It's ineffective uterine activity causing slow cervical dilatation and not progressing at one centimetre per hour in active stage of labour. (Audrey-LDr-UK)

The referral to the outdated discourse of normal progress as '1cm/hour' seemed to illuminate the power of authoritative medical paradigms amongst professionals.

As recommended in the guidelines, the status of cervical dilatation, the progression of the foetal head in the pelvis and the characteristics of contractions represented key elements within a holistic process of recognition. A specific protocol on abnormal labour care also added the 'women's emotional status' to the list. Amongst all, finding the same cervical dilatation after consecutive (four-hourly) vaginal examinations emerged as a sound evidence for SPL.

Somebody in established labour that has slow progress? I would imagine somebody that was the same examination on maybe two or three occasions, and you're having to work round what to do to deal with that. (Patricia-B7-UK)

The next vaginal examination...that would be the confirmation, so if there was no progress from the last VE I would see where it plotted on the action line and if it was still on the right side. (Lucy-B6-UK)

Most of the participants illustrated the same concept by talking about the woman 'crossing the action line' on the partogram; according to the model of partogram used, indeed, the action line could be crossed only where dilatation was not progressing over the set time.

The woman crosses the action line, she wasn't really contracting brilliantly and there wasn't much progress in dilatation you know between vaginal examinations. (Lucy-B6-UK)

Undoubtedly, the partogram played a major part in midwives' recognition of SPL. However, opinions on its usefulness appeared conflicting. Despite being criticised as being too rigid for monitoring the individual and flexible process of labour, the majority of midwives appreciated the visual aid offered by the partogram when having to take all factors into consideration. According to observations, all participants, in any case, did use it in their care. Particularly helpful appeared to be inputs on the need of partogram to limit views on labour progress and the relation between the necessity of having the partogram boundaries and midwife's self-confidence.

I think the partogram can be helpful if you've been with that woman very intensively for maybe six hours. [...] It can help me take stock of what's happening [...] you just get a fresh set of eyes to look. (Jennifer-B6-UK)

For the moment I do rely on things like that [...] I would be happy not to use it when I got more confidence and experience as well (Deborah-B5-UK)

The aid offered seemed to be lost where the partogram was adopted prematurely, before a real onset of labour. A premature plot of women's observations on the partogram was associated with false identifications of SPL. Starting the partogram too soon was disclosed as possible ongoing poor practice in the birth centre.

She was not much further on, someone plotted that [examination as] first one so it could look like she is [having a SPL]. (Deirdre-B6-UK)

Sometimes they start the partogram too soon, and then you've got an action line which is really close to that first examination. (Patricia-B7-UK)

Finally, the evidence a partogram hardly seemed to offer was on whether slowing in progress could represent a real arrest or a phase of physiological rest in the woman. Only a couple of participants provided elements to consider for a better discernment and all regarded observation of women's behaviour. The following excerpts summarised the main characteristics reported that included different focus, attitudes and even sounds:

She [resting lady] was very in tune with her body, she knew what was happening. Whereas the other woman [SPL] was just like a rabbit in the headlights. (Jennifer-B6-UK)

I think women who are progressing well in labour reach a stage where they don't want to communicate with you, where they are going in, their normal physiological instincts are taking over and they're able to go

with it with a glazed expression [...] when the woman's having the contraction she's fff-fff-oh-fff-fff-oh, [...] and it's very much you hear a different noise. [...] you can be walking past out in the corridor and you can hear that noise [...] they [women with SPL] tend not to make that deep throaty sound, they get more distressed, they might scream. Quite often they thrash about a lot, they move around a lot, they maybe shake their head from side to side. They look scared, [...] women with slow progress I think they reach a stage where they are expecting to be progressing. So sometimes maybe they do act as if they are progressing. (Jennifer-B6-UK)

5.6 Influencing the onset of SPL

Much of the information regarding midwives' views on causal factors for SPL came from individual, group interviews and observations of hand-overs. The insights obtained seemed to suggest SPL was mainly caused by multiple dynamics rather than by single factors. Participants mostly described causes that went beyond mere physical/mechanical problems. The episodes narrated and evidence provided suggested the influence of contextual, relational, behavioural and/or cultural elements on labour progress at several levels including the bodily aspects. There seemed to be a strong sense that SPL was provoked most of times, instead of being an unexplained phenomenon. The following sections will discuss the principal factors involved in the causative mechanisms of SPL that emerged.

5.6.1 Early labour

The early labour stage was related to the manifestation of SPL. Participants who did mention this labour phase amongst causal factors for SPL usually talked about the effect of a long latent phase on a woman's physical and mental *equilibrium*. One reason why a latent phase, or a long latent phase specifically, seemed to contribute to the epiphany of SPL was the potential for maternal exhaustion. Typical scenarios of physical and psychological

exhaustion caused by experiencing a long early labour are illuminated by these excerpts:

I think a lot to be is ketones, dehydration and especially with women whom have had a long latent phase of labour. It's going on for few days but sometimes women [...] forget to sleep, eat, drink because they are just focused on [pain] while they're at home and very often they're coming because they think they're in labour and you know, they go home again and they come back. (Lucy-B6-UK)

Sometimes these ladies have been into latent phase of labour for few days, and without much sleep they can be very tired [...] I think when you are tired you cannot cope with things as well as you generally would be able to. (Debora-B5-UK)

Various participants also reported the specific woman's behaviour, often noticed in early labour, as potentially hindering to the physiological onset and progress of labour. What was argued was that the woman's waste of energies caused by her 'willingness to be in labour', as suggested below:

I think a lot of women seem to think they are in labour when they are not. They will come in and they [...] come back again six hours later, and it is still the same. Sometimes in their eyes, they've already been in labour for six hours. (Sarah-B6-UK)

They're willing themselves into labour when they're not. I mean I try to prepare the women I see [...] that it's absolutely normal to have the early phase, the preparation phase of labour when they might be having contractions that might stop and then they'll start again. But it's important in that time to sleep, to eat, to drink you know. (Lucy-B6-UK)

Yes, acting it out rather than allowing it to happen. And I think those tensions, because [of] your adrenalin levels and everything else must have an impact on. (Jennifer-B6-UK)

The issue of women getting exhausted in this phase because of their perception to be in labour was also evident when looking at protocols. The document on care of women in labour (Protocol#2-UK), indeed, dedicated a paragraph to this issue recommending adequate support to women (see Box 2).

Some women have pain without cervical change. Although these women are described as not being in labour, they may well consider themselves 'in labour' by their own definition. Women who seek advice or attend hospital with painful contractions but who are not in established labour should be offered individualised support and occasionally analgesia, and encouraged to remain at or return home.

Box 2: excerpt from the protocol on care of women in labour concerning the support for the early labour stage.

An appropriate management of this phase, as well as an adequate antenatal preparation seemed crucial in order to prevent not only SPL, but a negative birthing experience. The lead doctor of the host unit appeared particularly keen on this point, outlining the importance of living this period at home.

I do feel that it's the initial management at the onset when the woman thinks she is in labour, if it is not managed properly then that can have problems later in the labour [...] It's important that in latent labour they're not hospitalised, they're kept mobile, they have adequate calorie intake by means of eating and drinking, and [...] if everything else is low risk then they can be at home until they are established. (Audrey-LDr-UK)

5.6.2 Culture, attitudes, behaviour

A plethora of characteristics of women, birth partners, professionals and even society appeared to have the power in influencing women's labour and

their potentially slow progress. These factors were usually ignored in documentation, but seemed to be relevant in ordinary midwives' practice.

Reflecting on women, midwives indicated fear, stress, lack of preparation for the birth and motherhood as frequent obstacles for normal labour progress. The often-consequent anxieties seemed to result in behavioural patterns, such as 'holding the baby', 'not letting go', and 'behaving as if in danger'. These could be apparent both from verbal and non-verbal behaviour, as exemplified below.

She was very frightened to the point of if I moved or I picked something up, put something down, moved something around, just went to a different part of the room, 'what's the matter, what's happened?' [...] Slow progress, it does tend to be [in] those women who seem very anxious, very uptight, very rigid, and not able to let go. (Jennifer-B6-UK)

A few participants affirmed women's psychological attitudes to be a 'large element' of SPL. Unhelpful mind-sets for women included a negative or problematic approach to labour, being too much or too little in control of their own body and a lack of inner focus on the birth event.

She is negative. She is wading through treacle. You know, she cannot get her head in the game or feeling any semblance of control. Her body is taking over. I think they are the women who have true exhaustion. (Katie-B8-UK)

Some midwives argued that hindering attitudes were more likely to belong to specific categories of women. For instance, the tendency of being in control was attributed mainly to older, higher-educated women with managerial kind of jobs. Participants recognised the risk of judgmental assertions, but still looked convinced of their statements.

Anxieties and unsupportive behaviour of people surrounding labouring women appeared to contribute to causing SPL by generating or exacerbating women's own anxieties. Professionals and birth partners were mostly seen as highly responsible for the creation of a supportive or an

unsupportive 'atmosphere'. Having a supportive atmosphere did appear a crucial component for facilitating labour progress. One midwife-leader outlined, through the story below, the causal effect of midwives' negative attitudes in labour. The same story served to indicate the potential for turning SPL into a normal birth when having a midwife with a positive, supportive, empathic approach.

I have seen girls come in here, and be looked after by one midwife, and they have slogged, and slogged, and slogged, and they have been then looked after by a midwife with a completely different approach, and they have laboured like that [...] The midwife who can stay with that woman, and be in the same zone as that woman, and get the woman to just concentrate on one contraction at a time. I truly believe [...] get the best outcomes. (Katie-B8-UK)

Interventionist approaches of single professionals or entire organisations represented another facet of the problem. These could lead to poor practice that could interfere with a normal labour progress:

If they [women] do present at the hospital or the birth centre early then there are more chances that there will be intervention because people get worried about somebody being in labour for two days whereas in fact, and then there are chances that you will be rupturing the membranes because you think things aren't happening so I need to intervene. (Audrey-LDr-UK)

Most of the participants ascribed interventionism mainly to hospital settings, though they did not exclude the possibility of such an approach even within MLUs.

Women's socio-cultural context also played a part in the bigger aetiological picture of SPL. Modern culture was considered a cause of women's inability to cope with the natural long rhythms and pain connected to labour. Some midwives related this to the dominance of a 'quick-fix' culture, a culture that was explained as follows:

We are much more of a quick-fix society aren't we? [...] if people have a problem now they want it solved immediately [...] And, I think they expect a quick-fix in labour [...] an epidural, because that will immediately get rid of the pain. An induction, because that will get her to a 4 to 5 centimetres quicker in their ideas [...] I think some midwives have that fix-it-quick response. (Katie-B8-UK)

If something happens in their body they go and see a specialist, and they get it sorted out [...] They've got a pain, something's wrong. The gas isn't working, give me something else, what else are you going to give me? [...] We don't rely on ourselves to help [...] They are losing their ability to care for themselves. (Jennifer-B6-UK)

Moreover, society could enhance unhelpful attitudes or introduce, especially through media, misleading images of labour progress. The false expectations created by media, for instance, seemed to contribute to maternal (psychological) exhaustion as the mismatch between expectations and reality could imply a high emotional investment for women.

People are wanting to appease people. Somebody wants to be in labour, they want to be further on than they are; they're not going to be happy until they're 10cms and pushing that baby out. [...] we're sort of willing people into labour sometimes. (Patricia-B7-UK)

that programme [one born every minute] it's dreadful. She was in the pool and she was kneeling up, and she said can you see the head coming? [...] they can see it when it's on the television. I said well we're not on the television. It's hard, and I think perhaps the women that I've seen that have longer slower labours are first baby and they do have ideas about how it should be. (Jennifer-B6-UK)

Finally, social conditions, such as poverty, were mentioned as influential in limiting women's resources both mentally, by impacting on self-esteem, confidence and belief, and physically.

5.6.3 Being shattered

Women's tiredness represented a cause, as well as a consequence, of SPL for midwives. As illustrated in section 5.6.1, a long latent phase could be a major reason for maternal tiredness both because of the associated lack of rest and the fasting usually characterising this stage. However, women could become tired, dehydrated with low energy, regardless of the occurrence of a long early labour. The scene depicted by a group of participants was that of women 'being shattered'. Whatever the reason behind that, being shattered resulted in a reduced capacity to cope with the bodily and mental requirements in labour. The vicious circle at the base of SPL seemed well sketched by the following participant:

*I can't even bring to mind. I think not being able to eat, because of the strength, it's the muscles and the uterus is muscle and, you know, if you're not able to feed your body... [...] if I don't eat I get tired, I'm tired, my muscles won't take me up the hill and ride my bike. So, if people aren't able to get ready energy then the uterus can't function properly.
(Fiona-B6-UK)*

As mentioned by that midwife, in the absence of energy the uterine function appeared vulnerable; the ketosis connected to the prolonged fasting and/or dehydration, as well as the acidosis associated with the physical work of the labour process could have a specific arresting effect on contractions. Guidelines also seemed to recognise dehydration and tiredness as causal factors by recommending the periodic assessment of the level of ketosis as good practice in intrapartum care.

5.6.4 Mechanical issues

The last main subtheme concerning midwives' outlook on the aetiology of SPL regarded the role of mechanical components of labour. Mechanical issues at the base of a slowing or an arrest of labour progression were embodied mainly by a foetal malposition and malpresentation. The group of participants who mentioned foetal malposition amongst the cause of SPL

seemed divided into two subgroups; one argued the great relevance of this factor while the other affirmed the absolutely minor importance of it. The following excerpts exemplify both positions:

Foetal [mal]position tends to give you a slow progress in labour or it can do. (Michelle-M-UK)

Could be a posterior position, and you get slow progress because it's not well fitting and not causing the cervix to dilate. (Patricia-B7-UK)

I haven't seen a slow progress because of that ...so it wouldn't be at the top of my list [...] maybe somebody else like the doctors they may put things like that, cause they see things from a different point of view to the midwives. (Deborah-B5-UK)

The last excerpt seemed to suggest malposition as some doctors' rationale for SPL. However, general differences in perception between obstetricians and midwives could not be confirmed or disconfirmed by the current research. Moreover, malpositions did not represent the only mechanical problem taken into account by midwives; other mechanical obstacles included a big baby and inappropriate intrapartum bladder care, resulting in a full bladder delaying the labour process.

5.7 Giving women the best chance

I have not got anything that I think particularly works. Also, you're probably not going to have it. (Sarah-B6-UK)

As illuminated by this participant, midwives seemed reluctant to provide an unequivocal management approach to SPL. Fundamentally, there did not seem to be any intervention or series of interventions that could guarantee success in overcoming a slower than expected progression of labour. This highlights the fact that a 'one-size-fits-all' approach to SPL was considered inappropriate, given the uniqueness of the natural process of giving birth.

As a result of this, practical interventions appeared individually adopted in the remit of ‘giving women the best chance’ to overcome SPL and to have a normal birth, hopefully with the best possible experience. The main actions that seemed to be endorsed by midwives in making this happen are discussed below.

5.7.1 Creating a plan and taking action

Once SPL was identified, whether by means of a partogram or not, one of the first midwives’ approaches was to ‘make a plan’ and ‘take action’ over the situation. The language used by participants could be influenced by the fact that the partogram had a specific section entitled ‘intrapartum care plan’ to fill (see

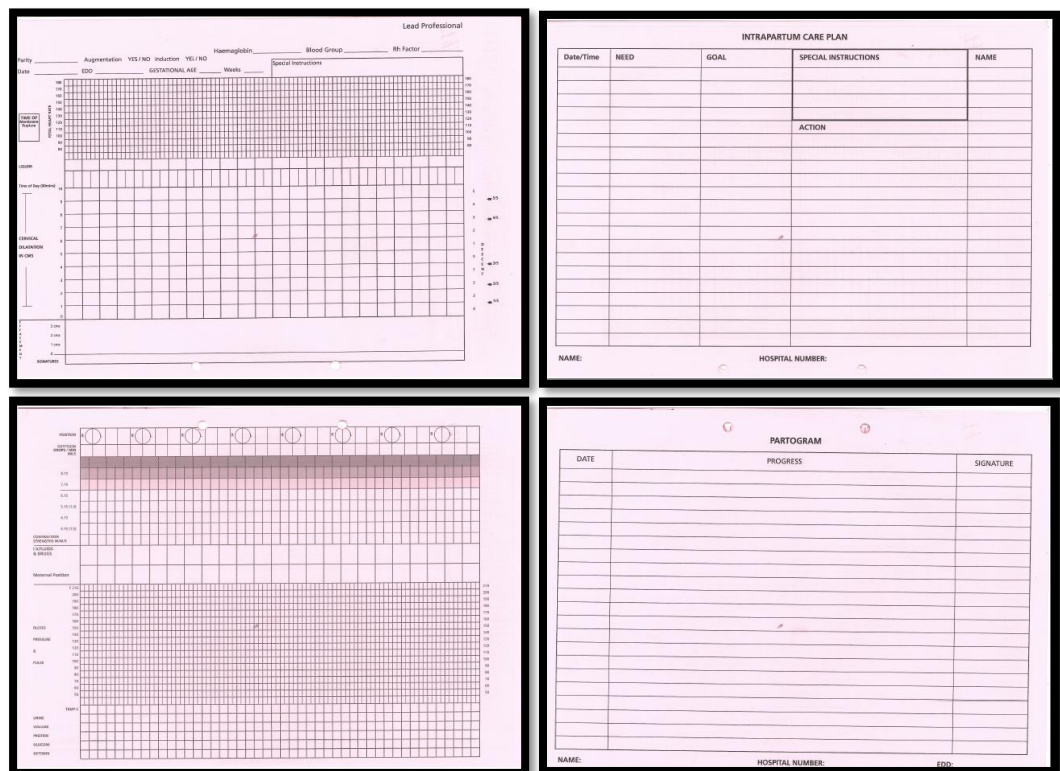


Figure 6). So ‘making a plan’ seemed to describe a mental process as much as a practical one.

It's about saying 'I have a plan, I'm not just going to wait for another six hours and see what happens, I have a plan', whether that's about reassessing cervical dilatation or something else. (Jennifer-B6-UK)

'Having a plan' seemed to help midwives face the problem proactively. The content of the plan was considered to be tailored to each individual woman's specific situation, also considering the different manifestations, connected to different aetiologies, of SPL. So, midwives' plans did not resemble a standardised process that, for instance, could be easily represented with a flow chart. No rigid framework to follow was provided by protocols either. The site protocol on abnormal labour care (Protocol#3-UK), aimed at standardising some professionals' behaviour, in fact, it indicated factors to consider and suggested brief interventions such as:

- Parity;
- Uterine contractions;
- Cervical dilation and rate of change;
- Station and position of presenting part;
- The woman's emotional state;
- Referral to the appropriate healthcare professional and support, hydration and appropriate and effective use of pain relief.

This absence of straightforward strategies in documents could indicate midwives' individual approach as more appropriate for the phenomenon of SPL. In fact, for other pathologies (e.g. PPH) protocols seemed to be used to depict a clear sequence of interventions. Alternatively, this may simply outline a dearth of evidence and, consequently, a difficulty in tracing an optimal standard management.

In order to adjust their plan with time, midwives usually reassessed women vaginally earlier than usual.

If you assess it two hours later, you can see if they are having some progress. You are not leaving at four hours to find in four-hour time she

still not progressed [...] You don't want to literally wait until this has turned into an emergency. (Sarah-B6-UK)

We think about doing vaginal examinations more frequently because obviously we can't wait indefinitely because eventually [...] somebody is going to have to step in, so we have to be realistic about how long we can safely [go on]. (Lucy-B6-UK)

This appeared to be a reassuring intervention for midwives; reassessing women earlier could be interpreted as part of clinical reasoning aimed at providing prompt and safe care. However, it could also suggest the presence of pressures within the system, such as the pressure to perform appropriate transfers. The only real criticism to this intervention, mostly justified and routinely performed, came from a newly qualified midwife. The participant argued this to be more interfering than helpful as an approach.

If you examine her in 4 hours, you are giving the lady more chance; if you are examining in 2 hours she's got less chance of progressing and more chance of those interfering. (Deborah-B5-UK)

Midwives appeared strong believers of the fact that 'taking actions' in the context of SPL does not necessarily translate into performing major interventions, such as transferring women and augmenting labour. Most participants referred to the action line of the partogram as a powerful mark for the need to take an action. However, midwives considered actions to be any intervention adopted to support women in SPL. In this sense, even resting could represent an intervention promoted by midwives to overcome SPL.

We do a little plan in our notes and we might take some sort of action, but that action might just be to get her more mobile. (Lucy-B6-UK)

Doing something about it doesn't necessarily mean you have to manage her actively, transfer her over here, put her on syntocinon. It just means that you need to be objective about how you now manage that woman's labour, or how you help her to manage her labour, and you have to

actually document what you're going to do. So, you can't just acknowledge the fact that the woman's crossed the action line.
(Michelle-M-UK)

This interpretation of the action line and approach to care revealed a high level of professional confidence and autonomy within the group. This confidence was confirmed by the interaction with hospital staff in cases of referrals of a SPL. Having a plan, taking actions and documenting them on the women's records emerged, indeed, as an aid in the relationship with doctors. The manager suggested how the partogram could serve to justify interventions and testify to midwives' proactive management.

At that stage, even though it is working a little bit outside the normal guidelines that we have got at [name of Trust], I can justify my intent.
(Katie-B8-UK)

Documenting activities arose again as being of paramount importance within the group, even though professionals frequently lamented about overwhelming paper work.

5.7.2 The 'simple things'

Jennifer: I think our approach is a no-drama approach.

Patricia: Yeah. It's always not do nothing. Nothing is never an option. You do small things. You have a drink, maybe try the pool.' (Focus group-UK)

Midwives' actions did not necessarily represent elaborate interventions. Conversely, much of midwifery management of SPL appeared characterised by the adoption of basic, but fundamental, midwifery practices, the 'simple things' as phrased by a participant.

First of all about fluid and nutrition, because these women are working hard. Their bodies are working hard, they need to be nurtured. (Jennifer-B6-UK)

Hydration and nutrition were universally recognised as important restoring resources in case of SPL. Hydration, in particular, was mentioned in the protocol regarding abnormal labour care. Participants suggested and adopted several food and drinks for 'nurturing the body'. These included isotonic, sugary drinks, snacks, easily digestible food, and whatever else the women might like. A lack of consensus emerged on the optimal nurturing elements.

Probably biscuits [...], because chocolate bars just give them a big sugar rush, and there's a lot of fat in them, so they're hard to digest. (Patricia-B7-UK)

Take the chocolate and give her the chocolate! (Lauren-B6-UK)

Ladies in labour don't always feel like eating, but if they feel we can have a sandwich or something like that can help with the energy. (Deborah-B5-UK)

If somebody's eating a full sandwich, you're wondering whether she's really in established labour! (Patricia-B7-UK)

Guidance was offered by the protocol on intrapartum care stated a list of recommended low fat, low fibre diets and nutrients in small amounts. These included drinks such as tea, coffee, squash and snacks including toast, biscuits and soup. Despite the recommendations offered, no midwife actually referred to the protocol and its content when talking about the food and drinks suggested to women. Characteristics such as easy availability and preparation could also have influenced some choices, as deduced from the following manager's affirmation.

We tend to rely on toast really because it's easy to do and [...] because we keep bread and butter in the ward area, so we can do that, that's a quick-fix really. (Michelle-M-UK)

Other simple, key approaches included inviting women to be or stay mobile. Most participants believed mobility to be crucial as it could positively affect

slow labour mainly by inducing a better positioning of the baby in the pelvis and enhancing contractions with the aid of gravity. 'Moving', 'standing up from bed', 'walking around' seemed helpful also for supporting/stimulating a positive, active attitude in women. Promoting maternal mobility looked a very simple means for empowering women with SPL and a highly effective intervention. The spatial layout of the structure, including the fact of having an inviting beautiful green area, appeared to favour women's mobility. One participant ascribed success mostly to moving and being active *per se* rather than to a specific position.

Being mobile and being active in labour is the key to labour's success. [...] It works, without a shadow of a doubt. (Patricia-B7-UK)

Conversely, protocols, within the remit of using mobility to enhance contractions, seemed to recommend upright positions in particular. In midwives' experience, a number of women with SPL seemed to have benefitted from a period of rest in addition or alternatively to periods of activity. Participants illustrated resting as much as possible, especially where maternal tiredness was suspected to cause SPL. Rest seemed supported by the unit equipment, for instance by having beds as argued by one leader:

Women sometimes need to rest. We had a big debate when we opened, that we had beds in the room. I really believe there is a place for a bed because women get tired. Women need to lie on their sides for a while and just have that sort of recouping their energy time. (Katie-B8-UK)

Other means included suggesting water immersion to women. Unexpectedly, often midwives also mentioned the use of pethidine to facilitate women's rest.

Sometimes giving them a dose of pethidine and leaving them for a few hours can really help, because [...] then you've got a person that's rested a bit, and [...] willing to get up and do some more then. (Patricia-B7-UK)

Participants scarcely seemed aware that despite their declared reluctance for pharmacological approaches these played a significant role in their practice. When this matter was discussed in the focus group, participants after some hesitation tended to present the use of pethidine as rare. Possible explanations for this behaviour include, lack of previous sound reflections on this practice or the intent to defend a certain image of midwifery care, with the use of pethidine easily referable to medical models. Only the following participant showed concerns and questioned the actual use of pethidine in the unit.

I've used pethidine since I've been here far more than I've ever used it, [...] And I know other midwives who use it a lot. (Jennifer-B6-UK)

Pethidine did also represent an instrument for pain management so data on its use should not be interpreted under the sole remit of facilitating rest. Nevertheless, participants mentioned pethidine more for rest than for pain management.

Ensuring a good pain management was included amongst midwives' fundamental approaches when coping with SPL, but it did not emerge as strongly as other themes. To note, documents suggested pain to be modifiable through approaches such as 'support, distraction, physical comfort' and faith in the suggested treatment. Environmental aspects and non-pharmacological methods, mostly complementary therapies that could enhance pain relief were listed as well in a protocol. However, CT were not really part of the approaches adopted by midwives at any level in cases of SPL. Only a couple of participants mentioned hypnobirthing, massage on specific acupoints and aromatherapy as used to enhance labour progress, but even in those cases the choice seemed driven by women rather than CT offered by professionals. The most frequently adopted strategies for pain management included the use of inhalation analgesia (Entonox) and support and care using the birth environment. These environmental approaches used mainly by midwives and recommended by an internal protocol (Protocol#intrapartum-care-UK) can be found in Box 3.

- Choice of companion
- Constant empathetic attendance when required
- Privacy
- Subdued lighting
- Warm water to bathe or lie in
- Music
- Unthreatening labour rooms (equipment available behind curtains or outside until needed)
- Comfortable chairs, bean bags etc.
- Adopting an upright position
- Use of inflatable birthing balls.

Box 3. Factors in the environment that may reduce anxiety/pain in labour, according to the internal protocol on care in labour.

However, acting on the environment represented a broader approach in midwives' management of SPL. Besides the elements considered, midwives also tried to create a positive environment for the woman so as to facilitate labour progression. Interventions in this sense included 'building a rapport with the woman', 'trying to get into relationship' with women and partners, 'making supporters be in tune' with the woman and midwife. The manager outlined the necessity of guaranteeing a supportive environment for carers too in order to provide the necessary support to women. From the managerial perspective, ensuring a supportive context for midwives included actions such as allowing appropriate time to restore energies (e.g. having breaks) to be able to face the demanding care of SPL in the best possible condition.

Caring about the environment also meant facilitating women's intimacy to lower women's tensions and let hormones flow adequately in support of labour progress. Many midwives mentioned nipple stimulation as an intimate practice suggested for dealing with inadequate uterine activity.

There did not seem to be an agreed technique amongst participants, just individual descriptions of stimulation of nipples with or without the partner's help. The following excerpt shows the absence of a conventional manner.

Obviously I would tell the woman to do it herself [...] I would just say 'just roll your nipples' or 'touch your nipples' if she wants some of that.
(Lucy-B6-UK)

I'd just encouraged the women to [do] a sort of hand expression, just a massage of the breast, stimulate the nipples... I'd stimulate the nipple by just rolling the nipple into the finger...and just do whatever is feeling comfortable for them [couple]..I don't want this man to hear this.
(Lauren-B6-UK)

In the last sentence, the participant referred to a new-father staying in the next room and the (unrealistic) possibility of being heard by him. This detail expressed the level of embarrassment that seemed to characterise midwives when talking about nipple stimulation. The embarrassment suggested that nipple stimulation is likely to be more theoretically endorsed than practically suggested and utilised.

The ARM represented another simple intervention performed in cases of SPL. Although ARM embodies a typical medical management of dystocia, it was highly recommended and, apparently, performed by midwives in the unit. The doctor presented it as the first approach used by professionals;

The first intervention would be the artificial rupture of membranes.
(Audrey-LDr-UK)

This appeared initially as an extension of her experience in the host unit to the birth centre. However, numerous midwives, at different levels, confirmed this to be a primary midwifery approach to SPL:

One of the first things we can do is rupture of membranes to see if that speeds things up. (Deborah-B5-UK)

If there'd been no progress you would probably consider an ARM. And then you'd assess her progress again after three hours. (Michelle-M-UK)

Only a few midwives provided counter views.

I don't ARM anybody unless there's an [important] indication! (Lauren-B6-UK).

Midwives' views on ARM could be partly influenced by the power of protocols. Amniotomy, in fact, was reported as the first action to consider in case of delay in first stage in the protocol dedicated to abnormal labour care. Midwives could then feel particularly encouraged to adopt this intervention in their practice. However, participants appeared convinced of its helpfulness for the care provided at the MLU, even arguing that ARM should always be performed before considering a transfer.

So we would give them the best chance, because we see that as an intervention. So we wouldn't transfer somebody before we'd done that. (Patricia-B7-UK)

As outlined by the manager, membranes could be artificially ruptured by midwives at any stage after 4 cm of cervical dilatation. The performance of early ARM appeared discouraged by the organisation.

Finally, a plethora of sparse interventions emerged from individual interviews: these varied from 'just wait and see' regarding the evolution of SPL, to bladder and bowel care, to help women 'getting on board' their labour even by means of directive style of care. Regardless of the inter-professional variability of the approaches adopted, midwives appeared to be universally happy with the management offered in the birth centre. Participants did not indicate a particular need to explore different approaches and only a few midwives seemed open to new ones. This could resonate with the midwives' perception of SPL being not a real issue as described in 5.4. Alternatively, it might outline the achievement of a solid confidence regarding the approaches adopted and their effectiveness as per experience within the group. Experience and confidence emerged as

paramount components of midwives' approach and sprang as the main drivers of midwives' decisions during the study. The influential factors on midwives' decision-making represent the last theme discussed, as follows, in the current chapter.

5.8 Managing influences through experience

Maybe when [I'll] get more experience I'll have different views and approach things differently...[It's] just learning, just learning. (Deborah-B5-UK)

This affirmation captured the essence of what was apparent during the study: midwives' approaches to SPL were highly influenced by personal and professional expertise and confidence. This newly qualified participant seemed to describe not only a desirable future scenario for herself, but a real process occurring daily in the birth centre. Indeed, the group of midwives in this site seemed mostly to be in control of their care, and able to justify and challenge choices because of the confidence achieved in their work throughout the years.

This characteristic appeared also to be confirmed by the external viewpoint of the psychologist who performed the observation during the focus group and encountered the group uniquely in that context. These, in fact, were some of the notes provided by the collaborator:

The first impression I have is that of fronting a 'well-organised group that masters its own work'. (Psychologist's fieldnotes-UK)

One unit-leader provided a testimony of this process of maturation occurring over time, taking as example the changed attitude towards transfers:

Katie: At the beginning, we were much stricter and when I look at the audits, I see the cases, [...] we would not transfer them now.

Researcher: So what changed things?

Katie: The experience. I think it varies as to who is on duty and the confidence of individual midwives. But I do think that we are transferring less women for slow progress now. (Katie-B8-UK)

Some evidence of scarce self-confidence existed amongst midwives; however, the overall impression was that the group did not seem affected by this. Having said that, the high self-confidence and reliance on experience observed in the group seemed to facilitate, unconsciously, in some an ultimate resistance to questioning and critiques, which in turn may have had a limiting effect on their professional ability to be reflective.

The factors that seemed to play a relevant role in midwives' decision-making are outlined in the next sections.

5.8.1 Influential people

Several factors could affect midwives' choices, from which approach to use, to whether they needed to call the ambulance for transferring women and referring them to the host unit. The people that emerged as most influential when dealing with SPL were the labouring women, the birth partners, colleagues and hospital staff.

Most midwives described as paramount a consultation with the mother-to-be, to share evaluations and decisions with her. A few participants depicted consulting women as a sort of moral duty, an essential component of midwifery partnership.

Because it's about her, and her baby so she's got the right to know everything. I would still say this is the decision [...] but in a way that she felt she was included in. (Lucy-B6-UK).

Factors such as the woman's condition, attitude and behaviour could affect a midwife's plan especially regarding transfers, as these participants illuminated:

Some women are really keen to give birth there, so you would try everything in your power within the realms of safety to help her to have the birth she wants there. (Michelle-M-UK)

What can affect your decision is how distressed the woman is. Here she can have only that much pain relief [...] so If she's really distressed and saying "I really need an epidural," she needs to be transferred [...] to give the woman what she want. But sometimes you will get somebody who is fully dilated. It's her second baby, and she's going "I wanted epidural!" That's different because you wouldn't be doing her any favours by sending her off. Again, it's what the woman wants, but with your judgment. (Sarah-B6-UK)

As seen in the quote above from Sarah, the line between partnership and paternalism could be fine at times.

Birth partners could be either facilitators or barriers to decision-making. For instance, they could reinforce midwives' supportive messages, help women on the performance of some interventions, or push decisions by pressing midwives and women in one direction. Relatives were more likely to be presented as interfering rather than helpful presences in this context.

The negative influence of the birth partners I think that it's the biggest barrier. (Lucy-B6-UK)

Decisions made under a negative pressure of surrounding people appeared likely to be inappropriate and to generate bitter memories in midwives, like the one reported below.

Yeah, we did transferring at the insistence of everybody and within ten minutes of getting to hospital the baby was born. (Fiona-B6-UK)

Colleagues embodied another category of people whose behaviour could be pivotal for decision-making. Whatever the level of self-confidence of the midwife, on-duty colleagues were always consulted or, at least, informed of

decisions related to SPL care. This midwife provided a description of the role that colleagues could play:

You have to be with staff that you trust, because here you're dependent on support and advice from your colleagues [...]. Usually we'd discuss it and then make a joint decision together. And ultimately it's your decision. [...] And then I might change my decision, but I always come out of that room with a decision that I've made, and then go and discuss it with them. You can't be expecting other midwives to make your decisions for you, you have to work here and make your own decisions. That's where you learn. (Patricia-B7-UK)

Where decisions were perceived as more difficult, leaders and, if available, supervisors of midwives were involved as the next level of support. Consulting the registrar at the host unit was the last option considered. A number of midwives even described the interaction with doctors to be more informative than decisional.

I'm not asking you [doctor] what you think we should do. I'm telling you this is what is happening. (Sarah-B6-UK)

That was particularly interesting in contrast to the inputs coming from protocols, where obstetricians were described as the main professionals to consult.

According to observations and most of the interviews, the group emerged as highly supportive. Even contrasting views were presented in a very gentle manner, limiting tensions and expressing a mature collaboration between professionals. Nevertheless, a few participants indicated episodes where support appeared lacking. In contrast with their supportive attitude observed, the unit leaders were the most likely to be criticised in this sense showing the potential for power-imbalances or conversely confirming the presence of the strong leadership argued by the manager. Junior colleagues were at times depicted as those whose insecurity could result in an inadequate support for decision-making.

Certainly we have seen, a lack of confidence in some junior midwives has caused us to transfer women. (Michelle-M-UK)

This kind of consideration could represent a simple fact or show a slight stigmatisation of this group. However, according to observations, differences in supporting choices could exist.

[Decision on transfers for SPL:] I had the impression of a more rigid attitude of junior midwives. (Fieldnotes#26-UK)

Lastly, midwives' experience and confidence also seemed to be crucial for facing and managing the influence of the staff operating in the host unit.

Views and experiences on the relationship with hospital staff varied, ranging from mostly collaborative to quite tense.

They've been quite happy with our decisions [...] I think because I tried to make sensible decisions. (Lucy-B6-UK)

I think it works well. We are usually phoned beforehand, even if they don't want to transfer at that particular time, they will warn us and give us the clinical history and say, what do you recommend we should do, can she have a couple more hours? (Audrey-LDr-UK)

some of the staff on the birth suite feel that they're in charge of the birth centre. So they go over so I don't know whether it happens, but I don't know whether they go and ask their opinion on things, but that is a big no-no. You can't operate as a birth centre and be on the flippin' coattails of the senior midwives on birth suite; you can't do that. (Patricia-B7-UK)

Besides positive collaboration and symmetric interactions, some midwives appeared to be more vulnerable than others to medical power and influence; this was clearly visible in this participant who felt herself inadequate and unable to challenge a doctor's decision despite considering it to be wrong:

I personally didn't think she was making the right decision, but I don't think I would've had the power to challenge her. (Sarah-B6-UK)

A group of midwives indicated that they were pressurised by hospital staff and that their choices were subject to heavy criticisms. This did not necessarily impact on midwives' decisions, but could affect feelings around them or make midwives question their choices *ex post*, as visible in the excerpt below.

They make me feel she should have been transferred earlier. (Lauren-B6-UK)

The influence played by hospital staff seemed limited by the geography of the birth centre. The context did matter, as will be discussed next.

5.8.2 Influential contextual elements and geography

The context, with its multiple facets and meanings, did not purely equate a frame, or a stage where events occurred and decisions were made. The geography of the FMU and other contextual factors had the full potential to influence midwives' actions and, evidenced by fact, they did so on many occasions. Several elements could be labelled as contextual and potentially influential on midwives, such as human interactions within the birth scenario or the professional role within society. However, the exploration of the case at this site particularly illuminated the impact of the workplace and proximity to the medical model regarding behaviour. This represents the rationale for focusing primarily on these areas in the current section. The insights obtained in the field supported the relevance of investigating the case in specific and different models of birth centres.

Concerning the first aspect, midwives recognised the potential of the context of practice, the work setting, for informing approaches to SPL, or in general to care. The evidence in support of this statement came foremost from their own past experiences, whether they had practised in OU or at home. Frequently, while reflecting on decision-making in the birth centre,

participants described differences or similarities in their behaviour. According to descriptions provided, the same midwife seemed to intervene less and less frequently in the context of the birth centre, compared to her practising in hospital settings. Some participants justified this fact by referring to the medical dominance discourse;

I used to work in the birth suite and it's just interventions that we do, a lot of rupture of membranes and start them on the Syntocinon drip and they are just reviewed by the doctors constantly and obviously the doctors' decision to what they do [...] here we can push the boundaries to give this lady more time. (Deborah-B5-UK)

Others by identifying SPL as a different phenomenon in different settings (see also 5.4.2), thus, requiring different approaches. Some talked about the effect of how busy the unit was on midwives, or suggested decisions were potentially influenced by the different information that different contexts revealed on labour progress.

Myra: You didn't watch ... weren't with her. Whereas now here we are with her we know what's right and normal and what's not and how she does and she doesn't. So you almost get a kind of gut and I think that it's real. (Focus Group-UK)

The attitude to perform less/different actions noticed in the context of homebirths, confirmed through counter evidence the influence played by workplace/birthplace. This participant, for instance, described how decisions on ARM resulted differently depending on the context:

When we were doing home births, they didn't like us to do that [ARM] They didn't really encourage that. They brought that around when you brought women to the hospital. Obviously it's different here. (Sarah-B6-UK)

Given the rotation of staff between contexts, it could be argued that there is potential for contamination of care in both a positive and a negative sense.

Another key influential component lay in the proximity to, or distance from, the host unit. Intuitively, the midwives' decisions that seemed most affected by this factor concerned women's transfers. A great number of participants perceived the distance from hospital as positively influential; reasons included less medical control on midwives' decisions induced by the geographical separation, as reported by this midwife:

We feel more autonomous in our decision-making and I think [it's] the fact that we are completely separated from the doctors, with not having them interfering [...] like they used to do. But now they're not here so they can't come in and interfere. (Lucy-B6-UK)

Moreover, distance seemed helpful for minimising conflicts between groups, or at least the related emotional impact. For instance, the possible stress produced by transfers, and eventual criticisms coming from hospital staff, seemed more manageable given the physical separation between units. According to observations and interviews, controversial elements, such as the driving distance, appeared to push midwives to 'trying everything before transferring' rather than be anticipatory of transfers, as might be expected.

Although distance was acknowledged to cause concern for both professionals and users, the group generally appeared not to be overly worried by this. A few participants openly expressed a greater difficulty in making decisions in this context.

Deborah: I think being here make me a little bit more nervous, because I know [hospital] it's...

Researcher: Far...

Deborah: Yeah [...] so that I would do something sooner rather than wait because I'm here, whilst the [name of the AMU of the Trust] is just next door, it allowed me to feel more comfortable [in decisions]. (Deborah-B5-UK)

It's very difficult in this situation where we work at the birth centre because you don't want to be transferring somebody all the way to the hospital in the ambulance for no good reason, you have to make that decision [...] I find that it's not as straightforward as it might be if you work somewhere else. (Sarah-B6-UK)

As evidenced above, oftentimes comparisons were made between this birth centre and the AMU belonging to the same Trust. Usually midwives identified in the freestanding model a better context for midwife-led care, both in general and in the specific context of SPL.

5.9 Chapter summary

This chapter illustrated the case as it emerged from the English site. The single-case analysis showed how SPL did not represent a concern for participants, although data from other sources might have supported a counter view. Organisational, socio-cultural and personal characteristics seemed to have played a role in midwives' perception of SPL, in addition to being involved in the aetiology of the phenomenon and its management. Participants highlighted the importance of having a holistic approach for both recognition and management of SPL, offering individualised care. Midwives seemed to privilege simple approaches, considered the basics of midwifery care, such as support, mobility, nutrition and hydration, to give women the best chance of overcoming difficult labours. Having a plan appeared in many cases the most fundamental approach. Experience and self-confidence emerged as key characteristics that could enable midwives to master influential factors and make decisions. People and contexts appeared particularly influential on midwives' decision-making processes. The geographical distance from the hospital played a significant role. However, further considerations on similarities and differences of midwives' approaches to SPL in different contexts could be found in the cross-case analysis illustrated in the next chapter.

6 MIDWIVES' APPROACHES TO SPL IN BIRTH CENTRES: CROSS-CASE ANALYSIS

This chapter will illustrate the main findings that emerged from the cross-case analysis. According to Stake, the core objective of a cross-case analysis in multiple case study is to 'make Assertions about the quintain' (Stake, 2006, p. 40). For this reason, the cross-case findings will be reported here in the form of assertions regarding midwives' approaches to SPL in birth centres.

Firstly, findings will be introduced by a schematic comparison of key contextual elements of both cases in order to give the reader a platform to understand the socio-cultural and organisational factors that will be discussed. Assertions regarding midwives' approaches to SPL in birth centres will then be offered. The narrative of the chapter will endeavour to synthesise, in accordance with the methodology, the evidence in support of each assertion. Lastly, the chapter will conclude with a final general assertion and a chapter summary that will accompany the reader to the following discussion chapter (Chapter 7).

6.1 Situating the cross-case themes

The cross-case analysis involved, comparing and contrasting the multiple contextual features as well as the themes. In this process, both the broader and specific contexts of the two cases were considered important in order to make sense of the cross-case findings. Core contextual factors regarding health, maternity, midwifery systems and organisations of the two cases were identified, summarised and juxtaposed in Table 8, 9 and 10.

FEATURES	ITALY ³³	ENGLAND
NATIONAL HEALTHCARE SYSTEM		
Financing/ Funding source	Public- General taxation	Public- General taxation
Provision	Mostly public (private sector highly present in some geographic areas)	Public, rare private sector
Access to care	To all residents	To all residents
MATERNITY CARE SYSTEM		
Primary model(s) offered to women and families for childbirth	1. Obstetric-led care 2. Midwife-led care Low use of public community services	1. Midwife-led care 2. Obstetric-led care High use of public community services
Primary caregivers of antenatal care	Obstetricians/Gynaecologists, Midwives	Midwives, Obstetricians/GPs ³⁴
Primary caregivers of intrapartum care	Midwives, obstetricians, gynaecologists	Midwives
Primary caregivers of postnatal care	Midwives, obstetricians, gynaecologists, paediatricians	Midwives, Health visitors
Birth place (rates)		
Hospital/OUTs	> 95%	87%
Alongside MLUs	No official reports, there have been indicated 5 AMU and 1 FMU ³⁵	9%
Freestanding MLUs		2%
Home	0.04 %	2%
Key indicators		
Infant Mortality Rate	2.9- 3.3 deaths per 1,000 live births	4.2 deaths per 1,000 live births
CS Rate	36%	26.5% ³⁶
Breastfeeding (at least initiation) Rate	90%	73.9%

Table 8: Key features of Health and Maternity systems in Italy and England.

³³ Where not differently indicated data regarding the Italian system was taken from Lauria *et al.* (2012) and from the National Audit Office (2013) as concerns the English system.

³⁴ Midwives in England are normally the primary carers of low-risk women unlike the Italian system.

³⁵ Data from oral presentations of the first Italian National Meeting of in-hospital birth centres/first Meeting of the Italian Midwifery Unit Network held in Genova on April 2016.

³⁶ Data from 'Birth choice UK' (2016).

FEATURES	ITALY	ENGLAND
MIDWIFERY SYSTEM³⁷		
Training to become a midwife	Midwifery Degree (Bachelor)- 3 years	Midwifery Degree (Bachelor)- 3 years or Midwifery short programme 18 months
Post graduate programmes accessible to midwives	Pg Diploma, Pg Certificate, Masters, PhDs	Degree, Masters, PhDs
Head of Midwifery Schools	Doctors (midwives generally as coordinators)	Midwives
Main academic job positions covered by midwives	Lecturers, Coordinators of university programmes (few researchers and professors)	Lecturers, Researchers, Professors, Head of Divisions/Schools, Coordinators of university programmes
Qualification to work	Mandatory registration to the FNCO- Federazione Nazionale Collegi Ostetriche [National Federation of Colleges of Midwives	Mandatory registration to the NMC -Nursing and Midwifery Council
Scope of practice/area of competences	Professional profile stated by law DM 740/94, codice deontologico; Theoretical full independence in low-risk pregnancy and birth and interdependence with other professionals in others Eu standards-Directive 2005/36/EC38 art. 40-42	Professional profile/ standards stated by NMC Theoretical full independence in low-risk pregnancy and birth and interdependence with other professionals in others Eu standards-Directive 2005/36/EC art. 40-42

Table 9: Key features of Midwifery systems in Italy and England.

³⁷ (Spina, 2009)

³⁸ In Italy the European directive has been translated with some modifications through the law DL 206/2007; this has led to restrictions of the area of independence for midwives in Italy, differently from what is stated in the original European document.

CHARACTERISTICS	ITALY	ENGLAND
NUMBER OF BIRTHS PER YEAR IN THE UNIT	300-400	900-1000
DISTANCE FROM HOST UNIT	Bedside (AMU)	30 Minutes (FMU)
SPATIAL LAYOUT-CONFIGURATION	Rounded	Squared
LEVEL OF AUTONOMY	Medium	High
RELATIONSHIP WITH HOST UNIT	Mostly confrontational	Mostly collaborative
STAFF OPERATING IN THE BIRTH CENTRE	Small Hospital Core Team	Large Community-Based Team
SYSTEM OF LEADERSHIP	Mostly Positive in the Amu, questioned and conflictual between AMU and hospital	Strong and Integrated, mostly positive though questioned in few cases
PARTOGRAM USED FOR ASSESSING LABOUR PROGRESS	Modified version of WHO 4-Hour Partogram (pre-printed)	Self-drawn partogram based On the WHO 4-Hour Model
PERFORMANCE OF VAGINAL EXAMINATIONS	2 Hourly	4 Hourly
MAIN GUIDELINE FOR INTRAPARTUM CARE	Nice Intrapartum Care (2007)	Nice Intrapartum Care (2007)
SPECIFIC PROTOCOL FOR CARE OF DYSTOCIA	No	Yes
INTRAPARTUM TRANSFERS RATE (STUDY PERIOD)	18.%	16%
ONE-TO-ONE CARE	Yes	Yes
USE OF CT	Moxibustion, acupressure, tuina massage. Aromaterapy only if requested by women. Use of rebozo, vocalisation, polarity	Rare in practice, some knowledge of hypnobirth, aromatherapy and acupressure.
USE OF PHARMACOLOGICAL PAIN RELIEF	No	Yes (Pethidine, Entonox)
WATERIMMERSION/WATERBIRTHS³⁹	High/Low (Approx. 10%)	High/High (Approx. 50%)
AUDIT/ CLINICAL MEETING	Frequent/Weekly	Frequent/Four-Monthly

Table 10: Key contextual/organisational characteristics of the Italian and English cases.

³⁹ The rates concern only water births, precise data on water immersion in labour were not available.

Some of the available information appeared to be particularly helpful as a platform for the interpretation of the findings. For instance, midwives in England and Italy seemed to operate in similar Health care systems (the Italian one was actually based on the English NHS model as noted in section 5.2.1), and the midwifery profession appeared to be based on the same principles, similar laws and educational pathways. However, despite many, at least theoretical, similarities, data from primary models of care, birthplaces and academic roles in both countries (see Table 8 and Table 9) suggested a less favourable context and culture for midwifery practice in Italy. In both countries, birth centres appeared an unusual place of birth, indicating the potential for a different experience of midwives in these contexts compared to those operating in hospital labour wards. Moreover, the rarer presence of MLUs in Italy, together with facts such as a higher CS rate than in England, seemed to indicate a greater predominance of medical, interventionist models of care in one culture compared to the other. These kinds of considerations offered an additional aid to the within-case analyses performed, in seeking to unveil overarching, or underlying, dynamics related to midwives' approaches to SPL in birth centres. The next section, while offering a narrative of the final cross-case results, will provide more detailed examples of the findings in order to achieve a more comprehensive interpretation of the results by looking at the wider contexts.

6.2 Characteristics of the quintain: midwives' approaches to SPL in birth centres as emerged from the cross-case analysis

6.2.1 Midwives' views on SPL

One of the first findings from the cross-case analysis was that midwives differed widely in their perception of the impact of SPL on their practice. In fact, SPL was presented as a predominant issue at the Italian AMU, while little relevance was attributed to it at the English FMU. Such a different framing of the problem did not seem justifiable from the figures in the

reports, as data from both sites suggested similar rates of SPL in the two birth centres. Pivotal in generating these contrasting views appeared to be the contextual and organisational features of the two midwifery units. For instance, the different staffing or distance from hospital (see also Table 10) seemed to have been influential by creating less exposure to the problem and/or to the emotional impact connected to its care. Findings seemed to suggest that the larger the team and the further the MLU from the host unit, the less the likelihood for the individual midwife to encounter episodes of SPL (regardless of the real occurrence in the unit). Because of this, midwives seemed to perceive less the importance of SPL as a collective phenomenon. Moreover, emotional aspects, such as the possible distress connected to transfers for SPL, seemed harder to manage where midwives worked closer to the host unit environment with difficult inter-professional dynamics.

In this light, cultures, attitudes and relationships embedded within organisations appeared highly influential too. For instance, a midwife-friendly culture, an organisation which promoted positive intra- and inter-professional collaboration and consequently, positive relationships with the host unit, seemed to have positively contributed to midwives' outlook on SPL. In contrast, where the above factors were scarce or absent midwives seemed to be likely to have more negative experiences related to SPL.

Midwives' perception of the phenomenon of SPL seemed not to necessarily reflect the perspective of the organisation they worked in. An example was provided by a paradoxical finding; the presence of a dedicated protocol of abnormal labour (progress) care only in that unit where midwives seemed not concerned about the issue (English FMU) and not- as would have been expected- in the one where the problem of SPL was felt more acutely (Italian AMU). However, this data could also be interpreted as a lack of awareness on an organisational level of the clinical relevance of this issue for professionals. It could also be justified by the presence of different systems of governance.

Most midwives considered SPL hard to define, given its multifaceted aspects and the complex mechanisms involved in its recognition and management. Objective and subjective components appeared to influence midwives' definition of SPL. Although participants recognised SPL as a real phenomenon, some of them also outlined the possibility of it being a construct that was merely women taking additional time to progress through the stages of labour. For example, a group of participants talked about SPL as a context-dependent or individual-dependent phenomenon. The tendency to label labours as slow in labour wards more frequently than in birth centres was used more than once as an example to indicate the impact of medical models of care, and/or interventionist culture on professionals' definition of SPL. Interestingly, doctors and junior midwives tended to provide a more straightforward definition of SPL based on the partogram parameters, though counter behaviours existed. Conversely, practising in MLUs seemed to have led many midwives to reconsider the way they used to define SPL previously, by facilitating a greater awareness of labour progress as a non-standard process by nature. A group of midwives, especially in the English site, argued that SPL represented in some cases only the normal way, 'the lady's way' of labouring rather than an abnormal process.

First Assertion:

To midwives, SPL is a multifaceted phenomenon, with subjective and objective characteristics. Midwives' perception of SPL is highly influenced by contextual factors.

6.2.2 The aetiology of SPL in birth centres according to midwives

Midwives' perspectives on the aetiology of SPL confirmed it as being a complex phenomenon. Participants normally acknowledged the presence

of concomitant, interconnected causes and seemed reluctant to ascribe SPL to a single cause. There seemed to be a higher commitment in understanding causal mechanisms of SPL in the Italian group compared to the English one. This appeared to be related to factors such as greater importance being attributed to the phenomenon in the Italian site, as discussed above, as well as to midwives' different cultures and attitudes.

Midwives appeared to recognise universally mechanical problems, such as foetal disproportion or malposition, as reasons for SPL. Even where mechanical issues were not openly attributed as causes, all midwives seemed to act with an awareness of the presence of these factors. This was apparent by observing elements of midwifery care, such as bladder care or the promotion of optimal foetal positioning (by facilitating women's mobility), which seemed directed to prevent, if not treat, SPL. These observations illuminated the potential for discrepancies between midwives' narration of their practice and their actions. Despite the general acknowledgment of mechanical problems as possible causes of SPL, only a minority of participants considered these factors as highly relevant in the overall incidence of dystocia. This minority seemed mainly composed of junior midwives and medical participants, although differences emerged more in the Italian site. SPL appeared easier to identify when generated primarily by mechanical problems compared to cases due to non-mechanical reasons. However, an easier identification did not seem to equate to a less demanding management for midwives.

According to participants, the early labour stage represents a crucial moment for the development of SPL. A prolonged latent phase was frequently associated with maternal physical and/or mental exhaustion; women could consequently experience a depletion of their energy levels, resulting in a slowing, or even an arrest of progress in established labour. Midwives seemed not to use the same criteria to define an early labour as prolonged; indeed, midwives in the English unit mostly adopted time parameters, whereas Italian colleagues seemed to outline more the necessity of considering women's perspectives.

In this light, besides time parameters, prolonged could be any latent phase perceived as such by the woman, regardless of its actual length. According to midwives, women's perceptions of prolongation seemed to be influenced by their ability to cope with this stage and finding 'their way' of getting into labour. Physical factors, such as tiredness or presence of keto-acidosis due to prolonged body efforts and dehydration, seemed to affect both maternal wellbeing in general and uterine activity in particular. A group of midwives, in both settings, illuminated the likelihood of women getting exhausted because of identifying themselves too early in this phase. Aspects of this early commitment included women 'willing themselves into labour', acting as if in established labour, endorsing behaviours that, to midwives' eyes, appeared uncommon or inappropriate for this stage e.g. engaging in active breathing techniques, or moving around restlessly. By adopting these behaviours, women seemed to waste energy and undergo high levels of stress.

Exhaustion appeared exacerbated by the mismatch between women's expectations of early labour and its length and reality; inappropriate expectations were mainly enhanced by women's significant others, media and society as a whole. That said, not all midwives agreed that a prolonged latent phase represented a cause of SPL. A few participants provided an alternative position by arguing the positive effects of a long early labour in some women. In their view, longer latent phases could mean enhanced maternal preparation and a smoother progress in later stages of labour.

Tiredness, fatigue and exhaustion seemed to represent key causes of SPL not only in early labour, but also at any stage of labour. At their worst, the presence of factors of this kind, could result in women 'being shattered' in labour. There seemed to be a *consensus* of the role of these factors, as well as of the role of maternal fears and anxieties. Relevant for the occurrence of SPL appeared to be women's lack of preparation, at several levels, for the birth event. Interestingly, unlike the themes of fears and anxieties, the theme of labour pain and women's coping strategies did not recur frequently among midwives. These elements were not ignored in practice,

as the offer of non-pharmacological and pharmacological approaches to labour pain in the birth centres seemed to suggest, but midwives seemed to suggest pain per se not being a main cause of SPL. Various midwives seemed to identify the problem more in women's lack of relaxation than their presence of pain, as if these two spheres were not necessarily connected.

Personal attitudes and behaviours -of mothers-to-be, and/or their partners and/or midwives- also seemed to have a great impact on labour progress. Concerning women, key factors included having a negative preconception of labour, struggling in engaging with the emotional/instinctive side of self in favour of maintaining a too 'cerebral/rational' behaviour, and having a low self-confidence. Birth partners (e.g. fathers, mother-in-law, and friends) could interfere for instance by creating disempowering interactions with women and professionals, amplifying women's anxieties through the transmission of their own fears or simply by being unsupportive. Individual attitudes appeared to be informed, at some level, by modern society and culture. Many participants agreed in defining images and messages concerning labour in media as misleading and impactful on women and their significant others. Modern culture was mainly contemplated as an obstacle to labour process and progress; both in Italy and in England, midwives identified the presence of a 'quick-fix' culture⁴⁰ as paradigmatic of the current era. Contemplations of the effects of modern culture included the lowering of women's capacity to cope with bodily pain, natural time (often characterised as slow) and processes. However, when midwives referred to culture, they did not indicate uniquely the predominant culture in society. SPL appeared to be, indeed, facilitated or exacerbated by other forms of culture such as the culture of the profession or culture of the organisation.

⁴⁰ This specifically refers to the current culture in society that requires needs to be met promptly by services.

Professionals' characteristics seemed to hinder labour progress; these included having a negative/discouraging approach and/or using inappropriate interventions, such as starting the partogram too soon as a reflex of 'willing people into labour, because of own anxieties'. However, for a few midwives, mostly Italian, it was not the single professional or woman's characteristics that were crucial, but the quality of the rapport created between the two.

Finally, part of SPL could not be attributed to any intelligible cause; although, only Italian midwives really acknowledged a portion of *sine causa* SPL.

Second Assertion:

Midwives consider the aetiology of SPL to be a complex interaction of concurrent causes. Complexity seems to increase where SPL is due to non-mechanical issues. Maternal fear, attitudes, physical and mental exhaustion and external interferences represent key aetiological factors, and early labour a critical stage for the development of SPL.

6.2.3 Midwives' recognition of SPL

In approaching SPL, midwives attempted to consider all possible factors involved, evaluating each clinical element within its broader context. 'Looking at the bigger picture' appeared to be, a fundamental part of midwifery reasoning. Consideration of all factors did not represent simply an act of listing or juxtaposing elements. The process of recognition looked both logical and dynamic, employing the use of intuition, as well as observation and evidence.

The term 'intuition' was exclusively adopted amongst English midwives who indicated, without specifying a particular pattern, room for a gut

feeling in their reasoning. Italian midwives gave importance to intuition too, although they presented it under different terminologies, talking about having an impression, sense (or 'sentore' as described in 5.5.1) or even suspicion/ hunch of SPL. Unlike their English colleagues, Italian participants mostly seemed to postulate progress as a linear path that started from sensing SPL to confirming or disconfirming it. In any case, midwives seemed to search for objective evidence to get to a sound conclusion regarding the presence of SPL.

Elements that seemed to enhance objectivity in midwives' evaluation included records on partograms, assessment through vaginal examinations, and observation of women's behaviours and of any relevant change obtained through an attentive presence, by staying mindfully with the woman. While searching for objective evidence of SPL, midwives seemed to interrogate themselves especially concerning the real presence of an established labour and the quality of uterine activity. Women's progress crossing the alert line on partogram and the finding of two similar consecutive vaginal examinations in labour emerged as primary methods of confirmation of SPL, though midwives had conflicting ideas concerning their use. Indeed, the adoption of partogram and of serial vaginal examinations was mostly presented as non-evidence-based practices that appeared to force women's individual labours into standards. However, *de facto*, midwives were reluctant to abandon these practices, feeling for instance regarding partograms, the need for a visual aid. Participants seemed to suggest the unlikelihood, in midwifery practice, of completely disregarding partograms and/or consecutive vaginal examinations for the identification of SPL. However, differences emerged about the approach to partograms and their interpretation. Italian midwives tended to interpret the partogram strictly, whilst midwives at the English site had a more flexible approach (see 6.5.2). Insights from the English site seemed to suggest that flexibility comes with midwives' expertise and confidence. The organisational context also played a role in midwives' detection of SPL, as the comparison of midwives' attitude towards vaginal examinations

illuminated. In fact, despite midwives in both sites endorsing the same NICE guidelines and principles, Italian midwives were expected by their internal organisation to perform vaginal examinations more frequently than recommended (i.e. 2-hourly instead of 4-hourly). This was mainly due to organisational compromises made in order to limit conflicts with the medical staff in Italy. Italian midwives seemed to be pushed to classify more labours as slow, to intervene more and have a less relaxed approach to the whole process of identification and care. The strength of evidence seemed insufficient to overcome power issues. Across cases, midwives appeared aware that whatever the strategy employed to reach a sound conclusion regarding SPL there was the potential for fallibility.

Lastly, midwives valued as being important to recognise, in each woman, whether SPL represented a rest, or an arrest of labour progress. The 'rest or arrest' debate was not necessarily part of the cultural inheritance of midwives in both units. However, when midwives were asked about this issue they contributed with several reflections. Most of these insights came from the Italian site, but they were also confirmed by the few participants at the English site who contributed to the reflection. Midwives argued the difficulty in distinguishing between the two above mentioned scenarios, but suggested clues came predominantly from observations of women's verbal and non-verbal behaviours. These included women's agitation or restlessness in conditions where relaxation was expected, loss of inner focus/looking over-distracted or being too much in control of the situation (see also 5.5.2 and 6.5.2). The midwives who contributed to the 'rest or arrest' debate perceived this as an area where more midwifery thinking was necessary.

Third Assertion:

Midwives' recognition of SPL represents a dynamic process in which factors are scrutinised within their broader picture. Although subjective elements are involved, midwives aim at objectivity in their evaluation. Midwives acknowledge the fallibility of methods adopted and illuminate the 'rest or arrest' dilemma.

6.2.4 Midwives' management of SPL

Midwives also seemed to envisage comprehensive and holistic approaches for dealing with SPL. No single practice was considered to be totally effective for all cases (although one-to-one care appeared to be a 'must'); midwives, instead, identified various approaches from which to draw interventions each time. Managing SPL in a birth centre often appeared to be in contrast with the experience of its management in other contexts. For instance, in midwives' account of their experience in hospital labour wards, care emerged as less individualised with approaches more conformed to medical standards. Conversely, home settings were related to higher flexibility, thus midwives' approaches in birth centres sounded like a middle point between the highest personalisation of care observed at home and the highest standardisation of care seen in hospitals.

The first action of midwives' management in birth centres appeared to be the identification of the main causes of SPL, so that interventions could be tailored to individual situations. Once the problem was identified, English midwives set a plan of action documented on women's records (see also 6.7.1); this element was not part of midwives' approaches in Italy where interventions were recorded only once performed and plans appeared to develop almost one step at a time.

Some interventions were adopted by midwives across-cases, as if they represented basics of midwifery management. These included ensuring

evidence-based practices, such as one-to-one and continuity of care (at some level), mobility, hydration, nutrition, rest and limiting/removing stress (relaxation) and of any external hindering interferences on women's labours by caring for the environment. Offering constant support emerged as pivotal even when, rarely, this could take the form of assuming a more directive style to guide the woman through difficulties. Interprofessional variations in the use of these approaches existed and seemed inevitable. Significant examples were found in discussions around which food and drinks represented the best energy sources and in the use of pharmacological interventions, such as pethidine, compared to non-pharmacological strategies to enhance maternal rest and relaxation that appeared different in the two sites.

Some differences between cases in approaching SPL looked particularly interesting. For instance, although all midwives recognised the importance of their rapport with women in dealing with SPL, Italian midwives theorised building rapports, or 'alliances' (see 4.7.1) with women, partners and colleagues as a component of midwifery management of SPL. The necessity of finding allies appeared linked to more of a struggle in managing dystocia perceived by midwives in Italy. This could be contrasted with the more relaxed approach to management observed amongst midwives in England who benefitted from a less conflicting relationship with the host unit, and consequently seemed to experience less emotional impacts connected to SPL care.

Moreover, Italian midwives talked about 'activating' women in case of SPL, whilst English midwives seemed to privilege a proactive preventive approach to SPL. The knowledge and use of CT was higher in the Italian AMU, where professionals also showed a greater curiosity towards new alternative approaches to SPL compared to their colleagues in England. The impression of having reached good results with the current management, by using essential interventions of midwifery care, looked to be the main justification for this lack of a search for alternatives in the English birth centre. Different levels of self-confidence, consideration of the relevance of

SPL and organisational cultures in the two sites seemed to play a role as well. An important expression of the different cultures appeared to be the different midwives' attitude towards time which was considered as a potential ally in solving SPL in both cases. However, Italian participants perceived and acted more as if it was a constraint for midwifery action.

Fourth Assertion:

Midwives envisage adopting a holistic approach to SPL, tailoring interventions to single situations. Some interventions are universal and seem fundamentals of midwifery management; these include one-to-one care, mobility, hydration and nutrition. Others, such as the use of CT, may vary depending on various factors.

6.2.5 Influential factors on midwives' decision-making

A plethora of factors seemed to influence midwives' decision-making, especially regarding what to propose and adopt as interventions and decisions regarding whether or not to transfer women to the host unit.

Women themselves, their birth partners, relatives and friends, together with midwives' colleagues (inside and outside the unit), emerged as the main influential people across cases. Amongst them, women and their partners appeared to be the most influential actors. For example, women seemed to affect decisions more directly by consenting to, or not to an approach, or their motivation to continue to deal with SPL within the midwifery unit. The birth partners' role, which also included relatives and friends, was often more subtle. For instance, fathers-to-be appeared to influence midwives' decision-making both directly and indirectly. Pressing choices towards one or another direction could be an example of a direct way, as well as being supportive or not with the woman. Thus, the main way

by which birth partners could enable or constrain midwives' decision-making indirectly appeared to be the formers' contribution to maternal empowerment or disempowerment.

Support from colleagues appeared pivotal, especially where the hardest decisions, such as those related to transfers, had to be made. Although in both settings midwives collaborated with senior and junior colleagues, the relevance of seniority in influencing midwives' decision was mostly outlined in the English site. This was also the site with a stronger system of leadership, which seemed to suggest that the stronger the leadership the higher the perception of its influence on decisions. Furthermore, behaviours of the host unit staff often provoked midwives to be either more or less defensive in their decision-making. The interactions with hospital colleagues made a difference in threatening or empowering midwives' confidence in their own capacities, skills and clinical reasoning.

Although positive and negative influences appeared likely to occur in any context, midwives in Italy depicted more frequently a disempowering relationship with the hospital staff. Conflicts, disrespectful and/or judgmental behaviours seemed to affect professionals almost daily at this site. Negative experiences were reported in the English FMU too, but midwives seemed to benefit in their choices from a predominantly positive interface with the host unit.

Midwives also considered themselves as part of the influential group of people in their own decision-making. Most participants acknowledged the impact of their inclinations, preferences, attitudes and behaviours on their practice. Personal knowledge, beliefs and preferences seemed particularly influential regarding choices of interventions to adopt. Conversely, elements such as curiosity, motivation and scope for research were indicated as influential only by a minority of participants; these features were probably taken for granted by the majority of midwives operating in birth centres. Nipple stimulation appeared to be a paradigmatic intervention, across case, for the role played by midwives' personal

characteristics on choices. Similarly to what was observed for CT, midwives' endorsement of nipple stimulation appeared more influenced by individual (un)easiness with the approach rather than by any available evidence in support of it.

Midwives' own experience and confidence were universally recognised as pivotal in making decisions; by reflecting on their experience midwives could identify helpful or unhelpful strategies and avoid recurrent mistakes. However, the experience mentioned by midwives could not be confined to a collection of episodes but also indicated the level of professional maturity reached through the lessons learnt. In this light, experience seemed inevitably linked to confidence and reflexivity. Interestingly, while in the Italian site these personal characteristics sounded less influential, for English midwives they represented crucial qualities not only for making decisions but for mastering external influences on their choices.

Contextual factors represented both facilitators and barriers for decision-making across cases. By marking out a territory (or terrain), the geography and the spatial characteristics of the MLUs contributed to affecting midwives' behaviours. This influence was not necessarily acknowledged by midwives, yet it was visible. For instance, the typology of the MLU offered a higher (AMU) or lower (FMU) exposure to daily interactions with the hospital staff and model of care, to those powerful dynamics mentioned above. The proximity with the host unit played a role in decisions, not only because distances were taken into account in clinical reasoning, but also because they seemed to allow a different level of free thinking. The internal configuration of the unit also seemed to impact on midwives' choices. For instance, the characteristics of the spaces and relationships between spaces had the potential for facilitating or not spontaneous interactions between individuals potentially leading to a sharing of views and decisions between professionals. For example, the round shape of the Italian AMU -where spaces appeared highly open and connected- appeared to facilitate observations and exchanges between people. Conversely, the 'boxed' spaces of the English FMU seemed to favour independent activities where sharing

decisions emerged more as a choice of individuals rather than as behaviour spontaneously facilitated by the environment.

The possibility of having certain spaces, equipment or birth tools seemed to have inevitably affected some midwifery choices in both the cases. For instance, the presence of birth pools allowed midwives in both sites to consider water immersion as an aid for SPL. Conversely, as emerged from a few midwives, the absence of certain tools, such as ropes in the English site, were perceived as a limitation to choices, in some situations, by limiting the support of some midwives' proposals to women (e.g. adopting upright/squatting positions).

The instruments of clinical governance, including protocols and guidelines, emerged as part of those influential contextual factors. Documents seemed to reflect the organisational culture, though not to express perfectly the reality of the organisation. In both cases, midwives appeared keen on evidence-based practice, so decisions seemed to be mostly perceived as sound when they were in accordance with/supported by recommendations of protocols and guidelines in use. Moreover, some differences between cases looked influenced by differences in protocols connected to SPL. For instance, the fact that, despite the adoption of the same NICE guidelines, the Italian protocol stated vaginal examinations were to be performed 2-hourly instead of 4-hourly, certainly affected midwives' behaviour. This, in fact, seemed to contribute to the greater time pressure perceived by professionals and a tendency to engage a higher number of interventions emerged in the Italian case compared to the English one. The practice in the English FMU was also supported by a specific protocol on SPL that could offer additional help in case of criticism from the host unit. Furthermore, the more collaborative the organisational culture was in the English site, the more flexible the approach appeared.

Not only the organisational culture but also the broader culture within society was a component of the context which appeared to influence midwives' decision-making. Although midwives perceived the power of

these elements as distant from daily practice, living in socio-cultural contexts where, for instance, fear of litigation, the variable reputation of midwifery care or the dominance of the medical models that existed seemed inevitably to affect their practice.

To conclude, findings showed that similar influential factors could exert a power on midwives' approaches to SPL in different contexts. There seemed to be the potential for various possible interactions between factors within birth centres.

Fifth Assertion:

Midwives' decision-making is profoundly affected by the presence or absence of support. Levels of support are mainly influenced by individuals, interactions between them and the organisational features. Midwives can master influences differently in different contexts.

6.3 Chapter summary and final considerations

This chapter outlines the key cross case findings that led to making the original assertions regarding midwives' approaches to SPL in birth centres.

As illustrated throughout the narrative, important similarities and differences emerged between the cases. One of the main findings, to highlight in this summary is related to the different perceptions of the relevance of SPL that characterised the midwifery approach in the MLUs involved in the study. Indeed, while Italian midwives considered SPL the issue of greatest importance in their unit, the English participants seemed not concerned about the problem. Nevertheless, in both cases, SPL was perceived as a complex, multifaceted phenomenon without a straightforward definition or recognition. Similar causes were identified by the English and Italian midwives; according to participants, SPL seemed to

be more frequent and complex where there was a concomitance of hindering factors such as women's exhaustion, anxiety, and the presence of interferences/unsupportive environment. Italian midwives appeared to be more aware that a negative midwife-mother rapport could contribute to generating SPL. Unlike English colleagues, they also contemplated that a number of SPLs may not be explained and remain seemingly *sine causa*. Interestingly, in both cases, the early stages of labour emerged as a crucial moment for the development of SPL; English midwives seemed to outline the potential for physical exhaustion in this stage, due to a possible tiredness or dehydration connected to a prolonged latent phase. Italian midwives highlighted early labour as a pivotal moment where women could experience a lack of preparation to the birth event; possible mismatches between expectations and reality were reported as having an impact on women's psychology and, in turn, labour progress.

Across cases, midwives used senses and intuition, as well as evidence to endeavour to recognise SPL. Frequently, a hunch or 'sentore' as called by the Italian midwives, of an abnormal progress led midwives to enhance their attentiveness even before having evidence of SPL. In both cases, most midwives considered the partogram and vaginal examinations as a means for objective evaluation of labour progress, although conflicting views and feelings regarding such aids strongly emerged.

With regards to practical approaches, midwives similarly endorsed evidence-based practices, such as continuity of care, one-to-one care, hydration and maternal mobility, to deal with SPL. The partnership with the woman and birth partners, as well as the care for the birth environment appeared to be pivotal. Differences emerged in the way some interventions were translated into practice in the two units, as illuminated, for instance by the different use of food/drinks or means to achieve women's relaxation in cases of SPL in the two case-sites.

Unlike English midwives, Italian midwives appeared to be more curious towards alternatives to their standard management; they also differed in

their frequent use of CT, mostly techniques of TCM. Midwives in the Italian AMU frequently experienced a negative interface with the host unit, whereas positive interactions were more likely to occur in the English FMU. In both cases, the level of collaboration between units seemed to influence choices. The approach to decision-making generally appeared to be more relaxed and flexible in the English site compared to the Italian one. Individual characteristics of women, their partners and midwives were similarly considered as paramount for choices in both cases. Therefore, it appeared that there were significant differences in the impact of contextual factors on midwives' decision-making and the way both choices and influences were mastered by midwives in different contexts.

As a final consideration, it appears necessary to outline here that some factors emerged as key, not only across cases, but also across themes within cases. From an attentive glance on the cross-case analysis, it seemed evident that recurrent elements underpinned all the features of the midwives' approaches to SPL in birth centres identified and discussed in this chapter. Individual experiences, behaviours and attitudes, relationships between individuals and contextual features (primarily embodied by characteristics of organisation, culture and society) appeared to be powerful factors in all areas of SPL, though at different levels. Each of these factors, indeed, could have a different weight for each area -from perception and recognition of SPL to its management- within each case. Ultimately, factors seemed to interplay in a very dynamic and flexible manner, thus illuminating the midwifery approach to SPL across cases as a result of a complex dynamic system. Based on this further level of analysis, it seemed to be possible to provide the following final assertion regarding midwives' approaches to SPL in birth centres.

Final Assertion:

Midwives' approaches to SPL are the result of a complex dynamic system whose main components are characteristics of individuals, relationships between them and contextual factors. The way these factors act in midwives' practice within birth centres is not fixed nor immutable.

This last assertion functions as a conclusion of the current chapter, leaving the following one to develop the discussion of what has been illustrated so far.

7 DISCUSSION

This chapter will discuss the main findings of the multiple case study conducted. After opening with a brief summary of the work, it will outline and examine the insights offered by this research in the light of contemporaneous literature. Some key strengths and limitations of the current study will be illustrated next and a reflective section will conclude the chapter.

7.1 Overview of the core findings

7.1.1 Overview of the findings from the Italian site

Findings from the exploration of the case at the Italian site were contextualised and conveyed in the following five main themes:

1. SPL as 'the' problem;
2. Recognition as an engaging challenge;
3. Untangling intertwined causes;
4. Struggling to deal with SPL;
5. Factors enabling or constraining decisions.

Most of the midwives in this birth centre seemed to consider SPL as their greatest issue. Reasons were predominantly found in SPL being a primary cause of transfers to the host unit, whose interface was mostly problematic, but also SPL being a potentially stressful phenomenon *per se*. Stressful components for midwives included experiencing the difficulties of understanding and controlling this phenomenon comprehensively.

In this site, the recognition of SPL appeared to be a highly engaging and challenging process for midwives. Midwives frequently started from 'sensing' a problem to confirming it by means of different strategies. These included staying with women and observing maternal behaviour (which

could provide cues for distinguishing a period of physiological rest from an arrest of labour), the employment of vaginal examinations and consultations with women and colleagues.

The attempt to identify, the main cause of SPL emerged to be crucial. In the complex aetiology of SPL, significance was attributed to foetal malposition/malpresentation, maternal factors (including mental and physical exhaustion/tiredness and personal hindering attitudes) and interferences external to women. The latent phase, was identified as a crucial moment in which women could experience exhaustion, at different levels. A negative experience of early labour was, hence, identified as a premise for the onset of SPL.

Dealing with SPL labour emerged as a struggle especially when trying to avoid transferring women. Midwives described and adopted several approaches in the AMU. Main strategies included building therapeutic alliances with all possible actors and factors involved in the process and trying to modify a stalled situation by changing the elements/conditions of it. The promotion of maternal mobility, relaxation or energisation (especially by mean of nutrition or adoption of CT) were highly endorsed practices.

Choices were argued to be guided by pragmatism and reflexivity, but they were also affected by individual characteristics, preferences and attitudes of both women, birth attendants, colleagues and midwives themselves. Moreover, feeling either under pressure or supported within the organisation by both people and policies was identified as being decisive for enabling midwives to take hard decisions in their approaches to SPL.

7.1.2 Overview of the findings from the English site

The findings from the exploration of the case in the English site were presented in this thesis after a contextualisation of the case, following the process used for the Italian case. Five main themes emerged from the within-case analysis regarding the English case:

1. SPL not being an issue;
2. Recognising SPL in the bigger picture;
3. Influencing the onset of SPL;
4. Giving women the best chance;
5. Managing influences through experience.

Midwives perceived that SPL was not an issue in this site. Midwives mostly considered SPL to be a rare event and indicated the likelihood of a deviation of a woman's labour progress from standards to be normal, given the individual nature of the human labour progress. Furthermore, some argued SPL to be an individual and/or context-dependent construct.

Midwives' recognition of SPL in this site was presented as a process involving both intuition and a search for objective evidence of abnormal progress. Observation, the use of vaginal examinations and the visual aid offered by the partogram emerged as the main means adopted for reaching a sound conclusion regarding the occurrence of SPL. Regardless of strategies, the importance of considering factors within a bigger picture, and thus adopting a holistic approach to SPL, was identified as an overarching theme in this site. Midwives considered SPL to generally result from the presence of multiple and concurrent factors. Key causes that were recognised included: a prolonged early labour phase; women becoming fatigued and exhausted; foetal malposition or disproportion; maternal stress and tiredness in general; and the presence of incumbent cultures, attitudes and behaviours related to both the woman and the surrounding people.

Interventions were made fundamentally on the remit of giving women the best chance of giving birth in the FMU. Usual practices that were identified included 'making a plan', 'taking an action' and documenting decisions. Mobility, hydration and nutrition, pain management (including water immersion and use of pethidine) as well as ARM appeared to represent tenets of the midwifery approach at the English site.

Contexts and people were perceived as significant in affecting midwives' decision-making. Midwives' experience and self-confidence appeared to be pivotal in the effective handling of influential factors.

7.1.3 Overview of the cross case findings

The cross case analysis enabled six assertions to be made regarding midwives' approaches to SPL.

The first assertion concerned midwives' view of SPL as a multifaceted phenomenon, whose definition of which, could involve subjective and objective elements and be highly variable depending on different contexts.

The second assertion focused on the causative mechanism of SPL which was described as a complex interaction of concurrent and intertwined factors. SPL was considered to be more complex when it was due to non-mechanical issues. The role of maternal physical and mental exhaustion and of early labour as a critical phase for the onset of SPL was acknowledged.

The third assertion defined midwives' recognition of SPL as a highly dynamic process, involving intuition and senses, as well as the scrutiny of single factors within a bigger picture. Midwives' approach ultimately aimed at being holistic and at reaching a sound conclusion regarding the presence of SPL as an abnormal labour progress. The presence of a midwifery 'rest or arrest' dilemma was suggested.

The fourth assertion related to midwives' practical management of SPL. Considerations were made on the *spectrum* of interventions employed by midwives in birth centres; part of these practices appeared to constitute universal fundamentals of midwifery management of SPL, while others were highly dependent on several factors.

The fifth assertion regarded midwives' decision-making. The presence, or absence of support, especially human relationships, emerged as pivotal. Organisational features, from the geography of the birth centre, to the

characteristics of the organisational culture, were also indicated as influential. The variable weight of factors in influencing decisions was presented, as well as the potential for midwives managing influences diversely in different contexts.

The sixth and final assertion conveyed midwives' approaches to SPL in birth centres as a complex dynamic system. This system appeared to be composed of some key factors, such as individual characteristics, relationships and contextual features, interplaying in various ways.

7.2 Discussion of core findings

7.2.1 The multifaceted aspects of SPL

SPL as a questionable issue in MLUs

In the current research, SPL represented the primary cause of maternal intrapartum transfers in both sites, confirming the relevance of this phenomenon in MLUs (McCourt *et al.*, 2011; Rowe *et al.*, 2013; Stapleton *et al.*, 2013; McCourt *et al.*, 2014). However, findings outlined how despite similar rates, and likely similar occurrences of SPL, in the Italian AMU and the English FMU, the midwives' perception of the relevance of SPL in their care differed considerably. This poses interesting questions on whether these dissonances could be attributed to differences in cultural elements (i.e. tendency to highlight the positive aspects and deny the negative ones or *vice versa*) or to other factors. Findings seem to suggest that organisational features, such as the geography of the birth centre, the level of collaboration with the host unit and the composition, typology and system of rotation of staffing, could have a role in influencing midwives' perceptions and understanding of SPL. McCourt *et al.* (2014) also identified the potential of these factors for affecting midwifery practice in AMUs. However, they did not specifically consider the impact of staffing models and all the other organisational features in MLUs on midwives' perspectives on labour in general and on SPL in particular. The current study represents,

hence, the first research to argue the potential of these kind of organisational factors of MLUs on midwives' perspectives on SPL. Moreover, perspectives appeared to be more negative where midwives considered their management as less successful than expected (e.g. at the Italian site) and more positive where they perceived their approach to be mostly successful (e.g. at the English site).

To conclude, it appears empirically supported that midwives approaches to SPL seemed affected by underlying influential mechanisms in accordance with the critical realist perspective adopted in this study. For instance, within the model of a stratified reality typical of CR, the relevance or irrelevance attributed by midwives to SPL could be seen as the empirical level of midwives' perception of the phenomenon. The geography, staffing and other institutional elements could be identified as factors acting at the actual level, while the organisational culture could be included as a key element of the domain/*stratum* of the real. This is just one example of how the findings of the current study confirm the importance of adopting CR as a perspective in midwifery research in general and in the area of dystocia in particular (Walsh and Evans, 2014).

SPL: a real phenomenon or a construct?

According to CR, 'a real world exists and acts independently of our knowledge or belief about it' (Benton and Craib, 2011, p.121). The fact that women experienced a SPL in both MLUs and, in some cases, were transferred to the host units (as evident from documentation in site, midwives' accounts and observations) regardless of whether midwives considered the issue relevant in their practice, could be used as an argument to assert SPL to be a real phenomenon.

Midwives in this current study however, also illuminated the potential for SPL being a construct. According to findings, a diagnosis of SPL might not reflect the real occurrence of an abnormal labour in a context, as perspectives, for instance, can be biased by the philosophy of care embedded in that setting. Authors have debated the different perspectives

on normal and abnormal labour progress resulting from having a medical/technocratic model or a midwifery social model as authoritative knowledge (Davis-Floyd and Davis, 1996; Jordan, 1997; Davis-Floyd and Sargent, 1997; Downe and McCourt, 2008; Downe and Dykes, 2009; Winter and Duff, 2009; Spandrio *et al.*, 2015a). However, these arguments might be used to assert that constructed elements are part of the reality of SPL, rather than to deny the existence of SPL as a real phenomenon.

SPL as a manifestation of women's uniqueness

Many midwives recognised SPL as not necessarily a problem, but a possible way of labouring for women. This concept of non-standard progress as an expression of normality rather than as a dysfunction, reflects the concept of 'birthing woman's uniqueness' that constitutes an important element of midwifery knowledge on childbirth (Davis-Floyd, 2001; Downe and McCourt, 2008; Winter and Duff, 2010; Davies, 2011; Walsh, 2012). A number of midwives in the current study considered the length of labour irrelevant in a situation of maternal and foetal wellbeing, demonstrating a focus on the process as a whole, 'it takes how long it takes' (Downe and Dykes, 2009, p.66). This assertion reflects a perspective, illustrated in the historical part of this thesis (see 2.8) that has characterised midwifery care for a long time in history, but that had been gradually changed following events such as the hospitalisation of births and the introduction of an industrialised concept of time (Mccourt, 2009). Midwives in this current study, hence, suggest MLUs to be contexts where a subconscious recovering of the antique midwifery perspective on labour progress and birth occurs.

The current multiple case study also outlined the difficulty recognised by midwives in distinguishing a condition of arrest from a situation of physiological rest of labour progress in a woman. This issue, presented in the current study as the 'rest or arrest' dilemma has been recognised by authors as an original contribution to the field (Patterson *et al.*, 2015). Findings suggest maternal behaviour to be crucial in offering cues to

midwives for making a judgment concerning the presence of a rest or of an arrest behind a SPL.

Many of the behavioural characteristics that participants related to a non-physiological slowing of labour resonated with those identified in literature. For instance, behaviour recently presented in an Italian textbook as signs of dysfunction of labour, such as a maternal 'difficulty in recovering', 'despair', 'immobility', 'refusal to be helped', or the presence of a 'disorganised request for help' (Spandrio *et al.*, 2015b, pp.377-378) mirror cues identified by the participants in the current study. Similarly, the behaviour identified by Simkin and Ancheta (2011, p.160) as indicators of an 'emotional dystocia' such as being 'jumpy' or 'hypervigilant', perfectly reflect what was accounted by some midwives, who talked about the woman 'champing at the bit' or 'being vigilant/cerebral'. However, the current study suggests some maternal behaviours are unlikely to be unequivocal indicators of an arrest. Examples of that include the fact that behaviours such as maternal 'restlessness' have also been reported as expressions of normality in certain transitional phases of labour (Duff, 2005).

It might be worth noting that many of the above mentioned behavioural cues appear to be attributable to a hormonal imbalance (i.e. abnormal levels of catecholamine) and a body-mind separation in the woman. This separation seemed evident especially from midwives' descriptions of women as unable to relax despite long pauses of uterine activity, or being distracted or even 'acting' to be in active labour regardless of what was occurring in their body. Interestingly, Kjaergaard *et al.* (2007) reported that women who experienced a non-progressive labour perceived a separation between their mind and body, a dualism that, together with numerous other conflicting feelings, negatively impacted on their sense of control. These kinds of findings highlight that the midwives' accounts are likely to also reflect the personal experience of women with SPL.

7.2.2 The holistic recognition of SPL and its challenges

The support of a holistic approach offered by guidelines and protocols

The midwifery approach to the recognition of SPL was, or at least aimed to be holistic. In the two sites that were explored, the adoption of a holistic perspective appeared to also be supported by the NICE guidelines (2007) and the internal protocols that were in use. However, midwives normally referred to protocols and guidelines when arguing about traditional diagnostic criteria, such as the cervical dilation rate, rather than mentioning them as providers of holistic parameters for the recognition of SPL. These findings suggest protocols and guidelines are not perceived by midwives as being helpful in providing holistic criteria, to the extent that was the case with regards to traditional medical criteria. This failure of protocols and guidelines to provide holistic criteria for the diagnosis of SPL, might be considered as another sign of the predominance of medical discourses within organisations. It might be also interpreted as a consequence of a lack of power, if not of a *vacuum per se*, of midwifery knowledge.

It appears interesting to note here that in the last decade milestones of medical teachings have been increasingly questioned, such as the pattern of cervical dilatation of 0.5-1 cm/hour as normal standard (Neal *et al.*, 2010, 2015a), the beginning of the labour curve at 4 centimetres of dilation (see Caughey, 2014; Caughey *et al.*, 2014; Karaçam *et al.*, 2014; Cohen and Friedman, 2015), or, as previously anticipated, the predictability of labour progress based on cervical dilation (see Incerti *et al.*, 2011; Ferrazzi *et al.*, 2015). However, these new perspectives appeared to be not so embedded in the MLUs as the traditional discourses on labour progress, showing that changes even within an authoritative knowledge can take time to modify professionals' knowledge and practice.

Midwifery intuition in the context of SPL

Despite the lack of details concerning holistic parameters, the guidelines and protocols in use in both MLUs stated clear criteria for the recognition

of SPL. However, this study suggests that midwives can identify a SPL not necessarily from the criteria stated in documents. In fact, findings showed a moment of 'sensing' SPL as a possible starting point of midwifery reasoning.

The terms adopted by midwives to describe their use of intuition, such as having a 'gut feeling' or 'sixth sense', have been previously reported as adopted by professionals (Cioffi and Markham, 1997). According to some participants, while defining SPL is hard, 'knowing' intuitively that a woman's labour is progressing abnormally is simple: 'you just know' it as a midwife (see 5.5.1). This finding resonates with the concept of intuition as innate/inner knowledge (Gove, 1961, p.445, cited in Muoni, 2012; Davis-Floyd and Davis, 1996; Kennedy, 2000; Fry, 2007). It also confirms that 'holistic practitioners', as midwives appeared to be in most cases, can proceed 'from the inside-out' in their diagnostic reasoning (Davis-Floyd, 2001, p.S18). Authors suggest midwifery intuition being not as an innate ability, but representing an acquired midwifery skill (Benner, 1984). In the current study the ability to use senses and intuition to identify a SPL was defined also as a 'clinical sensibility' (see 4.5.1), which appeared to be affected by clinical experience as well as by other factors such as personal inclinations or work-context (Brown, 2012). Berg and Dahlberg (2001) identified this 'developed ability to use ones senses' as a characteristic of midwives. Downe *et al.* (2007) situated this amongst the elements of expert intrapartum maternity care. Blaaka and Schauer Eri (2008, p. 347) indicated the ability of 'sensing where a woman is in labour' as a typical midwifery skill. However, to the researcher's knowledge, no authors have previously identified sensing SPL as part of the ability of midwifery care or expert midwifery care. This current study also outlines how trust in intuition tended to be higher in senior midwives compared to junior colleagues, who perceived themselves more inclined to rely on protocols while building up their experience.

Midwifery intuition as a non-rational process

Sensing SPL was linked, especially in the Italian AMU, to the presence of a 'sentore', an element that gave midwives a hunch that a situation of concern was arising. The 'sentore' served as *stimulus* prior to any clinical evidence of SPL for being more in-tune and attentive with the woman and the situation of her labour progress. In the literature, this role of intuition, as a means to a greater connection between midwife and the woman, has been discussed (Davis-Floyd and Davis, 1996; Mok and Stevens, 2005). However, what the 'sentore' element in this study seems to add is a perspective on midwifery intuition as not 'univocally an internal process', that completely originates from inside midwives, but a dynamism that can also be provoked/enhanced by factors coming from the reality external to midwives. The influence of external components on midwifery intuition seems to suggest the involvement, at some level, of midwives' use of reasoning in the process. It might be worth noting that reason here is considered as per the definition by the Italian intellectual Giussani, as a human openness to reality in its totality of factors, an awareness of reality organically related to one's entire self (Giussani and Zucchi, 1997). In this sense, the use of reasoning equals not that reductive use of rationality or logic frequently opposed to intuitive emotions or spiritual insights (Davis-Floyd and Sargent, 1997; Parratt and Fahy, 2008). It rather recalls the concept of intuition as a 'non-rational' (vs irrational) process argued by Bastick (1982) and Parratt and Fahy (2008). Ultimately, the 'sentore' could be seen as a midwifery connector between the internal feelings of the midwife and external reality of the woman.

In this current study, midwifery intuition appeared mainly involved in the process of recognition of SPL, rather than in areas of midwifery decision-making as suggested by authors (Muoni, 2012; Jefford and Fahy, 2015). Moreover, sensing or using intuition was not presented as a spiritual process (Davis-Floyd and Davis, 1996; Pembroke & Pembroke, 2007). Unlike what was observed in Davis-Floyd and Davis' study (1996) on the use of intuition amongst independent midwives, participants in the current

study considered intuition to be fallible and did not question whether they really used intuition if proved wrong. This possibility of a fallacy of intuitive insights has been recognised by Bastick (1982 cited in Davis-Floyd and Davis, 1996) as one of the multiple facets of intuition.

Seeking objectivity through the relationship with the woman

In the current study, midwives sought objective confirmations of the occurrence of SPL revealing midwives' incomplete trust in intuition, as well as the presence of an 'intrapartum uncertainty' regarding the boundaries between normal and abnormal (Page and Mander, 2014). One strategy endorsed by midwives to deal with this uncertainty of making an objective judgment on SPL was to seek answers within the relationship with the woman. Within this relationship, midwives looked at the woman's history, observed her body and uterine activity, her behaviour, her relationships in the environment, paid attention to any visible signs of abnormalities and sought the woman's perspective. Midwives utilised, though in a variable manner, a plethora of methods such as abdominal palpations (Stuart, 2000), identification of the 'purple line' (Byrne and Edmonds, 1990; Hobbs, 1998; Shepherd *et al.*, 2010), change in women's vocalisation (Kenner, 1993) for the assessment of labour progress. Strategies around which there is still a surprising dearth of research (Walsh, 2012).

The current study also identified that, 'staying with the woman' was necessary to grasp maternal cues of SPL. This meant ensuring a certain quality of midwifery presence in the room, a 'special way of being there or being with the other person' (Pembroke and Pembroke, 2008, p.321). Pembroke and Pembroke (2008) outlined how only a 'relational presence', attentive and receptive, is able to grasp what 'is really significant about the other', information that could not be attained from a superficial observation (p. 323). The current findings show the approach of 'being with' women as opposed to 'doing to'- often illustrated in the literature as a tenet of the midwife-mother relationship in midwifery care (Dickson, 1997; Fahy, 1998;

Kennedy, 2000; Hunter, 2002; Walsh, 2006, 2012; Hunter and Segrott, 2014) as crucial also in the specific context of SPL.

Seeking objectivity through conflicting paradigms

Findings show how midwives mostly relied on vaginal examinations and recordings on partograms as the 'real' means for achieving an objective judgment on SPL. This confirms the midwives' perception of vaginal examinations as a pivotal means for assessing labour progress in maternity services (Cheyne *et al.*, 2006; Freeman *et al.*, 2006). In the current study, certainty of SPL appeared to be related to the presence of two identical findings in two consecutive vaginal examinations together with the crossing of the action line on the partogram. Actually, an anticipated third examination seemed to represent, if findings still resulted unchanged, the definitive proof of an arrest of labour for numerous midwives. Interestingly, midwives mentioned the finding concerning the descent of the foetal head less frequently than the cervical dilation rate, although the former parameter was always considered; this seems to indicate a dominance of the dilation parameter within the assessment.

Interestingly authors have found little credit given to vaginal examinations by independent midwives in non-hospital settings (Winter, 2002). This suggests that practising midwives are not adopting a standard midwifery approach for assessing labour progress and practice can be variable and controversial. In the current study, midwives recognised the existence of variations and how their use of competing paradigms and approaches generated conflicting feelings. For example, conflicts were based on the acknowledgment of vaginal examinations and adoption of partograms as practices which routine use is not supported by evidence (Lavender *et al.*, 2012; Downe *et al.*, 2013), appears disrespectful to women, and more typical of a medical model. However, across cases, many midwives were reluctant to abandon these practices feeling, for example, the need of the visual aid offered by the partogram. This scenario which is emerging from the current research confirms that midwives often deal with, and move in a

continuum between two different beliefs systems (Blaaka and Schauer Eri, 2008).

7.2.3 Unravelling complexity: midwives' understanding of the causes of SPL

Recognising causes and categorising SPL

The midwives' recognition of SPL was never followed by an immediate midwives' performance of interventions, rather by a tentative identification of the causes behind the problem. For participants this meant trying to unravel the complex relationships between causative factors typical of labour dystocia (Simkin and Ancheta, 2011; Walsh and Evans, 2014). Attempting to identify a precise cause, amongst the many intertwined ones that could account for the poor labour progress that was being observed, appeared to be challenging for midwives. This challenge has also been recently outlined by guidelines (World Health Organisation, 2014). This struggle appeared to be reflected, for instance, by the difficulties midwives had in categorising the different manifestations of SPL when filling transfers, audit forms or providing reports. Having to fit cases into standard categories as suggested by the organisation, for facilitating the clinical governance, midwives made often arbitrary decisions concerning the diagnostic differences between one type of dystocia recorded and another (Neal *et al.*, 2015b). However, participants in the current study also seemed to suggest the use of few/dichotomous categories, such as functional vs mechanical dystocia, as unlikely to reflect adequately the aetiological differences between cases of SPL, thus the 'uniqueness' of labouring women with SPL. Throughout the years, authors have suggested different terminologies informed by what was considered the primary cause of SPL; these includes definitions such as 'emotional dystocia' (Simkin and Ancheta, 2011) or 'organisational dystocia' and, 'failure to wait' (Dekker, 2013). The current study poses questions on how to best categorise SPL in order to meet the need for standardisation connected to organisational and research

purposes but also to allow an immediate understanding of the different causative mechanisms that can characterise the different cases of SPL.

The perception of a different relevance and complexity between mechanical and functional dystocia

Across cases, medical participants and junior midwives tended to emphasise mechanical problems as causes of SPL. Conversely, senior midwives considered these factors to be less involved in the overall causative mechanisms of SPL. This can probably be connected to a gradual abandonment of a mechanistic view of the body, more typical of medical knowledge (Wagner, 1994, 2001; Davis-Floyd, 2001; Teijlingen, 2005; Hunter, 2006) in more expert midwives. Mechanical problems were primarily related to foetal characteristics, such as malposition or malpresentation, while cephalopelvic disproportion were less frequently recognised as a cause. This prevalence of malposition and malpresentation as causes of mechanical dystocia was confirmed by the documentation available in both sites and aligns to the data reported in the literature (Rowe *et al.*, 2012). Midwives seemed also to perceive the cases of SPL due to mechanical problems as considerably less complex than those characterised by anomalies of contractions in absence of mechanical issues. The midwives' perception of SPL due to anomalies of the uterine activity as more complex than obstructed labours has not emerged in previous studies. This current study suggests that this greater complexity is related to a greater number of intertwined factors that could be more difficult to identify in cases of a functional dystocia.

Maternal exhaustion as a crucial component in causing SPL

Maternal factors appeared to have a pivotal role within the possible interconnected causes of SPL. Interestingly, midwives showed relatively little consideration of pre-existing maternal factors, such as obesity, height or age, normally reported to be risk factors for dystocia (see Zhang *et al.*, 2007; Berghella *et al.*, 2008; Cedergren, 2009; Bogaerts *et al.*, 2013; Ferrazzi *et al.*, 2015). Conversely, great relevance was ascribed to maternal

intrapartum conditions (i.e. dehydration) and psycho-emotional factors. This however, might not indicate a lack of midwives' awareness of the importance of pre-existing maternal factors, rather a focus on those mechanisms that appeared to be more challenging.

Findings of the cross case analysis revealed the theme of maternal exhaustion to be dominant. Dehydration appeared to be a relevant risk factor (see Simkin and Ancheta, 2011; King and Pinger, 2014) while controversies emerged amongst participants concerning the role of fasting. O'Sullivan *et al.* (2009) illustrated the conflicting views existing in the literature concerning food intake in labour and concluded by excluding the role of food consumption in affecting labour progress. Other important contributors to physical exhaustion, and in turn, to the development of SPL, appeared to be women's tiredness and fatigue. Only a few authors have hinted at maternal problems with resting/sleeping as factors related to labour length (Lee and Gay, 2004); however, midwives in this current study were interested in the quality and quantity of maternal sleep in relation to SPL.

In the current study, early labour emerged as a crucial phase for the generation of maternal physical and psychological exhaustion. Prolonged early labour was related to bodily and mental exhaustion especially at the English site. The relationship between the prolonged latent phase and SPL is controversial in the literature. According to Friedman (1983) a prolonged latent phase is not associated with a subsequent development of dystocia. Counter evidence suggested a causal relationship between prolonged early labour and SPL (Chelmow *et al.*, 1993; Dencker *et al.*, 2010), but the quality of the studies involved have been questioned (Walsh, 2000; Royal College of Midwives, 2012). Simkin and Ancheta (2011) and Ekelin *et al.* (2015) reported maternal exhaustion as a possible cause of a prolonged early labour. However, the impact of prolonged early labour on the following phases ultimately remains unclear (Austin and Calderon, 1999; Greulich and Tarrant, 2007; cited in Royal College of Midwives, 2012).

The current study offers an original contribution to the debates on the role of (prolonged) early labour phase and SPL. Indeed, a number of midwives, especially from the Italian AMU, considered maternal exhaustion to be also connected to a woman's negative way of coping with early labour regardless of the length of this period. Exhaustive mechanisms included: women's struggle in finding 'their way' of coping with the latent phase; the presence of misleading expectations (often originating from the media); lack of preparation to the birth event, and an inability to stay with the natural rhythms of early labour. All these types of factors were perceived as responsible for a non-physiological depletion of mental and physical energy, resulting, in a slowing of labour. Hence, findings, suggest preparation to birth event and experience of early labour, independently from whether it resulted in prolonged time, as a key aspect to consider for the prevention of SPL.

The unsupportive environment

Midwives frequently mentioned individual characteristics of the women's birth partners, or birth attendants, being causes of SPL. Labour progress appeared hindered by the presence of unsupportive people regardless of them being the fathers-to-be, relatives or friends; although fathers, being normally present as companions, were frequently mentioned. Midwives' perspectives outlined the problem of continuous support in labour. Continuous support in labour has been associated with positive effects including a higher likelihood of spontaneous vaginal birth and shortening of the duration of labour compared to non-continuous support (Hodnett *et al.*, 2013). These effects have been mainly explained with women's reduction of anxieties, fears (all adrenaline-mediated factors) in favour of an enhancement of oxytocin release (Klaus *et al.*, 1986; Moberg, 2003; Uvnäs-Moberg, 2015). Midwives in the current study, thus, showed the counter side of these mechanisms, arguing the lack of continuous support and/or presence of anxious, unsupportive partners as a trigger for maternal anxiety, excessive adrenaline discharge, and discouragement. Midwives did not mention nor seem to credit other possible hindering aspects that

authors connected to the woman-birth partner relationship, such as possible restrictions made by partners on women's mobility, freedom to express emotions or ask for help (Goer and Romano, 2013). This could be partly explained by the fact that these situations seemed unlikely to occur in the context of birth centres.

Midwives also perceived themselves as possible contributors to an unsupportive environment. Anderson (2000) also outlined the difference a 'skilled and sensitive' midwife can make in the birth scenario by creating an atmosphere where women can 'feel safe enough to let it go'. Participants in the current study also perceived features such as midwife's lack of empathy and compassion, in the midwife-mother relationship, to be factors able to contribute to the onset of SPL. In this sense, Uvnäs-Moberg (2015) argued that professionals' excessive control, lack of empathy, or even rudeness, can slow down the birth process. Conversely, professionals' kindness, empathy and supportive behaviours trigger an optimal oxytocin release. The relevance of a 'lack of synergy' between the midwife and the woman, and sometimes also with her birth partner(s) in the aetiology of SPL, indicated by midwives across cases, also appears to be suggested in the work of Ragusa *et al.* (2016). In their prospective study, the authors investigated the differences between what they called a 'comprehensive' management of dystocia and the standard one adopted in an urban hospital. Interestingly, the alternative management included the change of the midwife in charge, where the midwife-mother relationship appeared to be non-optimal, revealing the authors' consideration of a problematic midwife-mother rapport in the causative mechanism of dystocia.

Inappropriate practices as cause of SPL

Findings in the current study suggested the adoption of inappropriate/misleading practices as possible causes of SPL. Midwives outlined the importance of avoiding early use of certain practices including an early start of the partogram (practice associated with a misdiagnosis of labour), of ARM (if used) or even an early woman's immersion in water.

Downe (1999) indicated the problem of starting the partogram too early as a well-known issue. The relationship between an early immersion in water (i.e. prior to 5 centimetre of cervical dilation) and a prolonged labour was suggested by Eriksson *et al.*(1997), though these findings are controversial as they are based on a small pilot study and conflict with findings reported by other authors (Cluett *et al.*, 2004). Midwives seemed to consider early water immersion as an aid for labour progress only in cases of high maternal stress and anxiety; in that context the relaxing properties of water were seen as facilitators of woman's rest and in turn of labour progress, (Eriksson *et al.*, 1997; Odent, 1997; Simkin and Ancheta, 2011). The current case study highlights the possibility of iatrogenic causes of SPL (Simkin and Ancheta, 2011) even in contexts with low rates of interventions such as MLUs.

7.2.4 Midwives' clinical management of SPL

Avoiding transfers or giving the woman the best chance?

In the current multiple case study, midwives utilised all their skills in order to overcome SPL and assisting the birth in the MLU. However, findings showed the possibility for midwives of being dominated in their approach by two main different preoccupations: giving the woman the best chance or avoiding transfers to the host unit. This research suggests these elements to coexist in each midwife and midwife-led setting and that care can be informed by what component results predominant. While in 'giving the woman the best chance' there is an evident focus on the woman and trust in her capacity to give birth, in line with a holistic paradigm (Davis-Floyd and Davis, 1996), the preoccupation related to avoiding transfers illuminates the struggle that midwives can experience in having to deal with pressures coming from the organisation. These pressures included avoiding transfers in order to ensure MLU to have the 'numbers' to justify their existence but also to avoid criticisms from the host unit. Similar dynamics have been reported in other works regarding MLUs (Deery *et al.*, 2010; McCourt *et al.*, 2014).

The non-standardised midwifery management

Midwives did not really embrace a standard management to SPL, if by 'standard' it is intended as 'an agreed way of doing something' (The British Standards Institutions, 2016). Indeed, regardless of the relevance of the phenomenon and the presence of a system of clinical governance to support practice with protocols in both sites, both midwifery teams did not agree collectively, nor had in mind a set sequence of actions to perform in case of SPL. This contrasts with the hospital practice where professionals usually conformed to a standard (medical) management of dystocia whose features appeared clearly stated and sequentially ordered.

In this study, midwives recognised not only their understanding but also their practical management of SPL being modified when they moved from home or hospital to practice in the birth centre. Findings of this study, thus, outlined that the midwifery management of SPL can take different forms in different contexts. They also illuminated a level of variability of midwifery management within the same MLU. Moreover, this study shows inter-professional variations also concerning the same approach. Evidence of this included midwives' different accounts of the technique for nipple stimulation or recommendations regarding the specific food and drinks to suggest for enhancing labour progress. Variations in practice were at times viewed as positive, associated with expressions of individualised care and of the richness of midwives' individual knowledge and expertise. They were also seen as a negative sign of a possible flaw in midwives' translation of the model and ethos of the birth centres.

Despite individual differences in terms of interventions adopted, findings showed the midwives' management to have typical patterns across cases. All midwives, in fact, first reflected on the causes of a SPL in the woman and then tailored their interventions to respond to them based also on their previous experience. English midwives used to set a comprehensive plan in advance and document it on the woman's record, while the Italian midwives seemed to clarify their strategy along the path and document interventions

uniquely at the time/after their occurrence. This difference appeared to be, at some level, connected to cultural differences. Having a structured, though flexible approach to clinical problems appeared to be more typical of the English culture and system than the Italian one. However, this can be only tentatively inferred by the current research.

Turning problems into solutions

The midwifery management seemed to act on SPL by intervening on the multiple levels of its complex system. Midwives mostly used the same factors that appeared to be involved in the causative mechanisms of the problem as resources for its resolution. These midwifery interventions, involved the woman herself, her birth partner(s), the environment and the interactions that played out within it. By recognising the causal factors' as potential interventions for resolution, midwives seemed to express, at some level, a salutogenic approach (see Downe and McCourt, 2008, pp.19–23).

In the salutogenic model, the capacity to use the available resources is pivotal, it requires the consideration of the whole situation, in order to move a pathological condition to a healthy one in the 'disease/health' *continuum*. This may also be defined as 'sense of coherence' (Antonovsky, 1996; Lindstrom, 2005; Downe and McCourt, 2008). In this perspective, midwives appeared to consider possible risk factors as possible 'salutary factors' (Antonovsky, 1996, p.14), elements to enhance or restore the physiology of the woman's labour progress. Examples of that might include the presence of birth attendants perceived by midwives in the current study as both a source of interference, thus of hindrance, but also of support, thus part of the solution. The importance of adopting new⁴¹ paradigms, including the salutogenic ones, for approaching SPL has been recently remarked by Schmid (2014). As mentioned, midwives, tended to act on the various components (e.g. relationships, environment, bodily needs) of that complex

⁴¹ Here the term 'new' means diverse from traditional medical-technocratic paradigms.

system underlying a woman's slowing of progress and not with a sole element (e.g. contractions). The reductive focus on one or few parts of the connected and interacting elements is unlikely to bear fruit, both in understanding and in resolving problems within a complex system (Ackoff, 1980; Merry, 1995; cited in Downe and McCourt, 2008). 'Change as opposed to stasis' has been indicated as a feature of 'effective dynamic system' (Downe and McCourt, 2008, p.16); however, the actual effectiveness of the midwifery dynamic approach was not part of the current study and cannot be appropriately inferred from findings.

7.2.5 A relationship-centred care

Relationships as component of midwives' clinical management

The midwifery management was focused on the needs of the woman (and the baby) providing a woman-centred care. Woman-centred care in midwifery has been defined as a philosophy, founded on respect of the woman and recognition of her value, that sees the relationship between the woman and the midwife as key for all aspects of care (Fahy, 2012). According to Fahy (2012, p.150) the midwifery woman-centred approach:

- focuses on a woman's health needs, her expectations and aspirations;
- encompasses the needs of the woman's baby, and includes the woman's family, her other important relationships and community, as identified and negotiated by the woman herself;
- is holistic in its approach and recognises each woman's social, emotional, physical, spiritual and cultural needs, expectations and context (as defined by the woman herself);
- recognises every woman's right to self-determination in attaining choice, control and continuity of care from one or more known caregivers;

- recognises every woman's responsibility to make informed decisions for herself, her baby and her family with assistance, when requested, from health professionals;
- is informed by scientific evidence, by collective and individual experience and by intuition;
- aims to follow each woman across the interface between institutions and the community, through pregnancy, labour and birth and the postnatal period so all women remain connected to their social support systems; the focus is on the woman, not on the institutions or the professionals involved; and
- includes collaboration and consultation between health professionals.

Many of the above elements characterised the midwifery care explored in the current study and some appeared to be only rhetorically affirmed. However, midwives in the current study seemed to extend their approach from this woman-centred to a relationship-centred model. The relationships that midwives had, built and/or used not only with the woman but with all the factors in the context appeared to be paramount in order to deal with SPL.

According to Beach *et al.*, (2006, p.S3), relationship-centred care (RCC) 'is an important framework for conceptualising health care, recognising that the nature and the quality of relationships are central to health care and the broader health care delivery system'. Smith *et al.* (2010, p.130) added on this by arguing that RCC is 'a way in which healthcare settings value, act on and sustain relationships that form the context and basis of care'. Unlike other frameworks, such as the 'midwifery partnership' one (see Guiland and Pairman, 1995; Pairman *et al.*, 2010), the RCC model recognises, as fundamental relationships, not only the ones that occur between women and midwives, but also the relationships between them and the women's significant others, between them and the other health care professionals, between the healthcare professionals and so on.

In the current study, midwives used the relationships they had built in the environment as a component of their care of SPL. In fact, midwives recognised and/or mentioned explicitly the traditional partners of the RCC (i.e. the woman, the birth attendants, the clinicians/colleagues) as allies in their management. However, in both MLUs, other factors, beyond individuals, such as time, ambience, and institutional elements were also seen in the midwives' therapeutic alliances. For instance, midwives interacted with time by patiently just letting it pass, or transforming it into a relaxing factor in order to manage SPL. It might be argued that relational factors, such as time, cannot have a participation in midwives' relationships equal to that of people, as for instance they cannot 'appreciate the importance of their relationships with one another' as partners in RCC are described to do so (Beach *et al.*, 2006, p.S3). However, findings such as those regarding midwives manipulating partograms to allow women to have more time can suggest that midwives had to respond to the time factor in their interaction and did not simply act on it. In other words, this current study suggests midwives to have a RCC, in which they use relationships with animate and inanimate objects as part of their approach, but recognises that the factors involved in midwives' interactions are not all equal partners. It is worth noting that midwives did not refer to the baby as an ally, which is probably indicative of them seeing the baby as an extension of the mother. However, this research suggests that the baby should be taken on some level into account in a RCC model as, for example, midwives' approaches were often informed by the reaction of the baby to the interventions used.

Findings suggest the ability of building therapeutic rapports to be central, confirming 'the capacity to form effective relationships [as] 'essential to good clinical care' in the RCC model (Suchman, 2006, p.S40).

The midwives' relational decision-making

The novel use of a case study approach in the current exploration illuminated the midwives' decision-making process throughout all the different aspects of SPL care. These included the judgment on the

occurrence of a rest or an arrest, the identification of a principal cause, the best practical approach to adopt or the necessity of a transfer to the host unit. In all these areas emerged the influence of many factors that authors previously have indicated, such as the midwife's individual characteristics (i.e. knowledge, beliefs, attitude, experience, trust in physiology) (Siddiqui, 2005; Everly, 2012; Wiklund *et al.*, 2012) and power (Blix-Lindström *et al.*, 2008), the woman's preferences and the birth attendants' behaviour (Everly, 2012), the team and inter-professional relationships (Everly, 2012; McCourt *et al.*, 2014), institutional factors (i.e. policy, guidelines and protocols), the birthplace and model of care (Freeman *et al.*, 2006; Everly, 2012). Findings of the current research showed also choices used for 'desperation' or as 'last resort', elements that appear to be not evident in previous literature.

Having the opportunity in the current study to observe how these elements interacted in the whole process, meant being able to see how relationships not only served as a component of midwifery management but also informed the whole process of midwifery decision-making related to SPL. As a result this study, supports Noseworthy *et al.*'s (2013) suggestion for a more relational model of midwifery decision-making.

Findings of the current multiple case study, suggested that in each case of SPL relational factors and their interactions could vary significantly. It was how the interactions themselves worked together that provided the platform which resulted in empowering or disempowering midwives as decision-makers. However, it also indicates that it is pivotal to understand the power dynamic of each relational factor within the network of interactions. Whilst the power of some relationships, including the midwife-woman and midwife-partners ones, were recognised to be powerful by midwives, participants seemed to ignore or underestimate the power of other factors, such as the spatial and configurational layout of the units. It has been previously identified in this thesis how the round shape of the Italian AMU compared to the boxed space of the English FMU seemed to contribute in creating different platforms of inter-professional sharing and

decision-making. The important role of space in the relational dynamics informing health care has also recently been outlined by the Italian architects Setola and Borgianni (2016). Authors interestingly introduced the term 'relationability' (Setola and Borgianni, 2016, p.236) to indicate this property of the spatial layout of determining the relationships occurring in a context.

7.3 Conceptualising midwives' approaches to SPL in birth centres

In the light of the findings of this study, the midwifery approach to SPL in birth centres appears to be a complex and dynamic system. As all systems, it is composed by elements whose single properties may not account for the properties of the approach as a whole (McCourt, 2005). As all complex systems, processes appear never linear, but dependent on a 'web or network of interconnections' (Downe and McCourt, 2008, p.15). Furthermore, the fact that each factor can have a different weighting in informing and influencing the manifestation of midwives' approaches to SPL in the birth centres highlights the dynamic component of this system. According to this research, the weight of each factor involved in generating midwives' approaches to SPL in MLUs cannot be defined *a priori*, it can only be understood empirically. This is crucial as the cross case analysis, for example, showed how contextual-institutional factors, such as the guidelines and protocols in use, or the characteristics of the interface with the host unit, appeared highly powerful in informing what was observable of midwives approaches in the Italian site. Yet, the same factors had a different weight in the English site where midwives' confidence appeared to be frequently the foundation of midwives' behaviour.

The conceptualisation of midwives' approaches to SPL as a complex dynamic system, hence, outlines the midwifery approach as a complex reality composed by a network of interactions and multiple *strata*. It also suggests that components of these strata might move between layers and elements belonging to the 'real' stratum of the midwifery approach in one

case could lay in the actual layer in another, depending on the dynamics occurring in a context. This study identifies some recurrent key factors such as individuals' characteristics (i.e. the woman's, the midwife's, the partners' ones) or interpersonal rapports (i.e. woman-midwife, midwife-team partner, midwife-hospital staff relationship) or contextual factors (i.e. institutional policies, organisational and broader culture) able to influence the approaches adopted by midwives for dealing with SPL. In the light of the current research these factors need to be always considered at some level in further investigation in this area.

7.4 Strengths and limitation of this study

The limitations of this study include first of all the absence of users' perspectives (i.e. women and families) in favour of a midwifery one. The voice of women and partners was interpreted through a midwifery lens which might not reflect the women's experiences. The current study also lacks in providing another important perspective in the context of SPL in MLUs, that is, the perspective of the host unit staff. Although insights were tentatively sought through the involvement of a few lead doctors.

Moreover, the contexts of the investigation chosen may only be relevant to other western cultures. The phenomenon of SPL, the characteristics of women and attendants, of midwives and midwifery approaches are likely to differ in different areas and societies of the world and important perspectives will undoubtedly have been missed.

Both the qualitative and case study approach are renowned for being likely to produce an overwhelming amount of data. This study comprises issues normally acknowledged as limitations of qualitative research. Such as the necessity of making an arbitrary selection of material, being impossible to present in one final product only the entirety of insights achieved through the qualitative enquiry.

There are several strengths that can be identified in the current research. This study contributes to midwifery research, both from a methodological

and topical point of view. The use of the case study is increasing in midwifery research but is still not frequent, and the current multiple case study can be used by authors as another platform to be considered.

Interesting methodological components of this multiple case study include the choice of an issue rather than individuals as cases and the presentation of findings in the form of narrative assertions. Given the adoption of a case study approach, findings are supported by multiple sources of evidence. Moreover, the presence of multiple cases and the performance of a cross case analysis gave the opportunity to capture universal features of the midwifery approach to SPL, as well as differences related to specific contexts.

This study also shows the relevance of adopting a CR approach as an underpinning philosophical approach in midwifery research. The exploration of midwives' approaches to SPL benefitted from the use of a critical realist lens, by seeking the possible mechanisms underpinning visible empirical phenomena, keeping the researcher's mind open and critical and providing an in-depth knowledge of a complex issue. Another strength of the current work is that it offers cross-cultural perspectives, an element that is highly suggested but still infrequent across all forms of midwifery research.

7.5 Final reflexive accounts

This thesis not only narrates an exploration of midwives' approaches to SPL in birth centres but it also represents a passionate doctoral journey. For this reason, in concluding this chapter some final reflexive accounts will be made by returning to the researcher's 'I' voice, which was also present at the beginning of this manuscript. I started the current journey desiring to contribute to midwifery knowledge, research and practice on the topic of approaches to SPL. What I did not know at the beginning of this path was how informative the whole research process would have been to me and the impact I would have on the research process itself.

This research has given me the opportunity of seeing different contexts, models of care and encountering different cultures. I entered familiar places as a stranger and stranger places became familiar, I experienced many of the dilemmas anticipated for being at the same time an insider and an outsider in this research. Given my professional background, avoiding judgments on professionals' decisions and behaviour was hard at times. The reflexive attitude and the strong focus on keeping an ethical conduct in this research was pivotal. Many times I was amazed and surprised by the insights offered by participants; other times I experienced difficult interactions with midwives appearing resistant to disclose their perspectives. I relied also on my body language to find a way to enter in a communicative relationship with participants, for instance making attentive choices on my look during the fieldwork or reflecting on where I positioned myself during the interactions.

This study led me to face also several challenges related to language. Several times and at different levels I have felt the struggles connected to communicating in another language. Often I found equally fascinating and frustrating my search for the best ways of communicating what I wanted, whether this regarded the interaction with participants, with supervisors and peers or the matter of writing. On many occasions I have had to deal with the unexpected in several forms, including the death of a dear friend during data collection (who manifested how greatly a man can live and die when dominated and fulfilled by love). As well as the necessity of going back to clinical practice whilst writing the thesis and coping with the changes that occurred in my Italian context since I first moved to England to start the PhD programme. These challenges have informed me as a person and as a researcher, as I had to use all my resilience (and bring it at unexpected high levels), manage time more efficiently, keep myself focused on the task, seek help. At the end of this doctoral journey not only has my knowledge and expertise in the field increased but also the self-awareness of my strengths and limitations.

I conducted this research to answer a personal curiosity and to offer a contribution to the midwifery community for the benefit of women, babies and families, and valuing the work of midwives, health care professionals, and of all those committed to supporting and providing the best possible care in maternity services. I enjoyed conducting this research, I suffered its challenges, I appreciated the lessons it provided, became stronger, and loved the discoveries it allowed. Concluding, the final result of this doctoral work is an original exploration on a complex topic and a research journey intensively lived.

8 CONCLUSION

This study offers many original insights into midwives' approaches to SPL in birth centres. It demonstrates the presence of universal midwifery issues, as well as of the uniqueness of individual experiences of approaches to SPL in birth centres. This insight was possible for having explored midwives' approaches to SPL in two different models of MLUs, embedded in two different socio-cultural systems using a multiple case study approach.

The underpinning critical realist standpoint was crucial in illuminating the different levels and facets of the complex phenomenon of interest. The knowledge of the midwifery approach to SPL in birth centre gained by triangulating information, and seeking to identify the mechanisms behind behaviours in this study offered a platform for deeper understanding that was lacking in literature.

The current research confirms what seemed to emerge from the historical review conducted, that is, that much of the current problems connected to SPL originate from decades of technocratic approaches to childbirth. At a certain point in the history, the whole and unique process of labour and birth was fragmented into single components, and the woman's care, at the most, became the care of the several aspects of her labour (i.e. the physical, the psychological, the social aspect). In the current study midwives adopted or attempted to adopt a holistic approach to SPL. This holistic perspective appeared to be required by the complexity of the phenomenon of SPL, but also by the midwifery model endorsed in the birth centres. However, on occasions midwifery paradigms (i.e. holistic ones) appeared to co-exist with elements of the technocratic/medical model. Examples included midwives' consideration of their use of intuition as helpful to 'sense' a SPL but not as reliable as the use of partogram or vaginal examinations for assessing the (ab)normality of a woman's labour progress and achieving a sound diagnosis of SPL. This suggests that the strong midwifery ethos advocated in birth centres may not necessarily be translated in the midwives'

approaches to SPL. Moreover, it indicates that midwives may have not always found within their model of care real alternatives to the medical approach.

This study reveals how SPL can be identified by midwives as a real issue, a constructed problem, or an expression of normality. Distinguishing whether behind the manifestations of SPL lies either a physiological rest, or a pathological arrest of labour appears to be difficult in the light of the findings of the current research, although cues can be gained from the relationship with the woman, by observing behavioural characteristics. The midwife-woman relationship, as well as the relationships with birth attendants, colleagues and all actors and factors in the environment appear to be crucial not only for the recognition, but the clinical management and the decision-making related to SPL. These kind of findings, show midwives' approaches to SPL to reflect a relational or RCC model. Moreover, in midwives' practical management of SPL, factors that could be involved in causing SPL appeared to be perceived also as a potential resource for solving it, showing midwives' perception of risk factors being potential salutary factors hinting at a salutogenetic perspective.

In this research, context appears to be an active element through: creating as well as solving SPL; empowering and disempowering midwives, women and families; and facilitating or inhibiting the delivery of the best possible care. These properties showed that environmental aspects can enhance labour with their features (i.e. home-like setting) but also create and influence relationships between the actors involved in SPL care with their configuration.

Collectively, hence, contextual factors, individual characteristics of actors, and the relationships occurring in the environment appear to be crucial components at several levels, of the midwifery approach investigated. The current study argues the midwives' approaches to SPL in birth centres to form a complex dynamic system. Within this system, the manifestation of midwives' approaches to SPL at an empirical level is informed by the way

the above mentioned primary factors interact and locate at an actual and real level. A number of key recommendations for practice, education and research can be drawn from the current study. The key ones will now be outlined.

8.1 Recommendations for practice, education and further research

8.1.1 Recommendations for practice

The current work outlines the relevance of the phenomenon of SPL at several levels in maternity services and in the specific context of MLUs. Multidisciplinary workshops should be conducted regarding the way SPL is conceptualised in the specific service and discussions should include the notion of SPL, not only as a pathology but also as a possible individual way of labouring for a woman. Within these workshops, after recalling the debates and recommendations around the routine use of partograms, participants might be provided with different models of partograms (i.e. the WHO model, Neal *et al.*'s graph) to be used to record a same labour progress scenario, so as to aid reflections on the different paradigms behind different tools adopted.

Managers and leaders of midwives should evaluate whether the midwives who will be allocated to MLUs are familiar with alternative ways to vaginal examinations to assess labour progress without taking for granted this skill in the midwifery staff. Training sessions, as well as the possibility of working in partnership with expert midwives in this area (for at least 6 months) should be guaranteed to midwives whose knowledge on alternative means for assessing labour appears to be lacking. MLUs should be provided by an adequate level of staffing in order to ensure the provision of one-to-one care and continuous support; attention should be paid to the composition and rotation of staff.

The rate of transfers from non-hospital settings to hospitals due to SPL should be monitored and reports periodically presented to all members of staff. Where present, tensions in the interface with the host unit faced and addressed. Possible ways to include a rotation of staff that can ensure a continuity of practice in each setting for long period, new allocated midwives partnered by midwives more integrated in the midwife-led model, and multidisciplinary meetings where typical conflictual interactions between units are acted before professionals so as to stimulate reflections through art.

A particular attention should be paid to the antenatal preparation of women to the birth event and on the care offered in the early labour stage. Healthcare professionals should prepare women and their partners to deal with natural times of labour that might differ from standards proposed and focus on the overall process. In order to help women and partners to understand that different rhythms can be just an expression of individual uniqueness, antenatal classes could involve dancing to different styles of music (so to experience the impact of different rhythms on body), helping participants to focus by using examples from daily life. Examples can include activities such as baking, colouring one's hair (covering grey hair), and having a relaxing massage.

8.1.2 Recommendations for education

Lecturers should consider wisely the textbooks and other didactic material to adopt being them vehicles of authoritative knowledge; choices should favour material that can help midwives to move from a technocratic model of care to a holistic perspective on labour and its progress. Salutogenetic principles should be included in the teaching. Teaching sessions could be used to present a comparison between different discourses on labour progress in different contemporaneous manuals for midwives. Texts that can be used for this purpose in England include Mayes and Myles' textbook, McCourt's 'Childbirth, Midwifery and concepts of time', (Mccourt, 2009), while in the Italian context the traditional 'Pescetto' manual (Pescetto *et al.*,

2009)⁴² and the new 'La fisiologia della nascita' textbook (Spandrio *et al.*, 2015a) could be adopted. All student midwives should be invited to read 'the labor progress handbook' of Simkin and Ancheta (2011) and (in absence of the Italian version of this book) key contents of this text should be translated in Italian language and offered to student midwives in Italy.

The book 'the Roar Behind the Silence' (Byrom and Downe, 2015) could be used to support messages around the influence of fears and culture on midwifery practice, the importance of compassion and kindness (thus of collaborative and positive relationships) in maternity services, the link between support and labour progress and the importance of MLUs as context to promote and safeguard internationally in order to nurture the midwifery philosophy and practice. This text could also provide students with several examples of problems turned into solutions, an approach that in this study appeared to be relevant for midwives' care.

Future midwives should be trained to have a critical approach to guidelines and protocols; students could work in groups, compare different protocols and guidelines concerning labour progress/SPL identifying the diagnostic criteria, the management and other key recommendations offered, and highlight differences and similarities within presentations to be performed during teaching sessions. Within this exercise, students could specifically look at the presence or absence of elements in line with a midwifery model of care vs a medical model of care.

Midwifery schools should ensure that future midwives have access to the whole range of different contexts (i.e. hospital, home and MLUs) as placement areas prior to their graduation. Assisting in order to see the phenomenon of labour progress and SPL under different perspectives. Where specific services are not available locally, national and international

⁴² Elements of the influence played by the Pescetto manual on the Italian culture concerning labour have been discussed by Iannuzzi and Borrelli (2014).

placements should be considered. Placements should involve a minimum period of 2 months per setting.

8.1.3 Recommendations for further research

The case study methodology adopted for the current research could be employed for conducting a new multiple case study. Study designs could include a multiple case study where single episodes of SPL in a context are identified as 'cases'. Information about the case could be gained by triangulating the woman and partner's perspective, the perspective of the midwives in charge and of the hospital team, if any, involved in the management of that episode of SPL. Clinical records related to the cases and observations could be included in the multiple sources to utilise. This kind of design could help elicit the different perspectives on a challenging event and see areas of divergences and convergences of information.

Testing the effectiveness of midwives' approaches to SPL represented not an objective of the current research. Therefore, further research is needed in order to understand which amongst the possible different approaches used by midwives could be more beneficial for women and families. RCTs, for instance, could compare the intake of different types of food and drink in cases of SPL and evaluate outcomes that should include indicators such as the spontaneous increase of uterine activity, vaginal birth in the context chosen by the woman and woman's satisfaction. This kind of study might help in identifying whether specific drinks or snacks could be used as part of non-pharmacological treatments of SPL.

Future studies could build on the current knowledge and in deepening the understanding of maternal behaviours in relation to labour progress and in particular to SPL. Specific surveys involving midwives practising in different contexts of care and different countries could investigate the behaviour most commonly related by midwives to a rest period and to an arrest of labour progress. This could help in improving the knowledge of the means for assessing labour progress alternative to vaginal examination,

elaborating on the work done by Duff and the insights provided by the current research.

Finally, further research should be conducted to explore the impact of organisational and contextual elements such as geography of MLUs, configurational layouts, level and models of staffing, or rotational schemes between units on approaches to SPL. In particular, different organisations should be compared in order to assess which of these components could weight more in giving women the best chance of overcoming SPL, facilitating collaborative interactions between professionals and limiting women's transfers from MLUs to the host units. As a starting point, MLUs with very high and very low rates of women's transfers for SPL could be compared at a national and international level.

8.2 Concluding comments

This doctoral work started with the recognition of SPL as a relevant issue for maternal, infant and public health and for maternity services including MLUs. At the time of its conclusion the relevance of SPL appears even greater. The increasing research on the epigenetic related to childbirth, for instance, pushed debates on SPL further suggesting the current global epidemic of CS and overuse of interventions, such as augmentation of labour, to be potential triggers for genome alterations, and in turn, for development of chronic diseases and a great impact on Health and Social systems (Dahlen *et al.*, 2013, 2014). Finding alternatives to management of SPL leading to such consequences has, thus, become extremely urgent.

This study contributes to the dearth of research concerning alternatives to standard medical management by having explored midwives' approaches to SPL in birth centres. This multiple case study enlightens aspects of SPL of labour and of midwives' approaches to it that were previously obscured or unknown, such as midwives' perceptions of the relevance of the issue of SPL, the use of midwifery intuition in the context of SPL, or the relational

dimension of midwifery practical management and decision-making processes.

According to findings, individual characteristics of women, birth attendants, midwives, colleagues and hospital staff, as well as contextual elements and the relationships between factors in the environment represent the main components of those underpinning mechanisms that shape midwives' practice. Midwives' approaches to SPL are, thus, conceptualised as the result of a complex and dynamic system dependent on the interaction of these factors. What factors act in whose domain of reality (*empirical, actual or real*) -or in other words, the weight of each factor in the dynamic- cannot be defined *a priori* but has to be discovered by looking at the interactions in the context. The current exploration has provided novel insights concerning the topic of SPL, as well as on the use of case study methodology and CR in midwifery research. It represents, hence, an important platform for future investigations.

REFERENCES

Abramov, Y., Ezra, Y., Elchalal, U., Ben-Shachar, I., Fasouliotis, S. J. and Barak, V. (2004). Markedly elevated levels of inflammatory cytokines in maternal serum and peritoneal washing during arrested labor. *Acta obstetrica et gynecologica Scandinavica*, 83 (4), article, Wiley Online Library, p.358–363.

Ackermann, R. (1982). Context Dependent Knowledge. *Philosophy and Phenomenological Research*, 42, Journal Article, p.425–433.

Ackoff, R. L. (1980). The systems revolution. In: Lockett, M. and Spear, R. (eds.), *Organisations as systems*, Milton Keynes: Open University Press.

ACOG. (2003). Dystocia and augmentation of labor. *Practice bulletin*, (49), JOUR, p.1445–1454.

Adams, J. (2006). An exploratory study of complementary and alternative medicine in hospital midwifery: models of care and professional struggle. *Complementary Therapies in Clinical Practice*, 12 (1), article, Elsevier, p.40–47.

Akerud, H., Ronquist, G. and Wiberg-Itzel, E. (2009). Lactate distribution in culture medium of human myometrial biopsies incubated under different conditions. *American journal of physiology. Endocrinology and metabolism*, 297, article, p.E1414--E1419. [Online]. Available at: doi:10.1152/ajpendo.00458.2009.

Albers, L. L. (1999). The duration of labor in healthy women. *Journal of perinatology: official journal of the California Perinatal Association*, 19, article, p.114–119. [Online]. Available at: doi:10.1038/sj.jp.7200100.

Algovik, M. and Lagercrantz, J. (1999). No mutations found in candidate genes for dystocia. *Human ...*, 14 (10), p.2451–2454. [Online]. Available at: <http://humrep.oxfordjournals.org/content/14/10/2451.short> [Accessed:

19 December 2014].

Algovik, M., Nilsson, E., Cnattingius, S., Lichtenstein, P., Nordenskjöld, A. and Westgren, M. (2004). Genetic influence on dystocia. *Acta obstetricia et gynecologica Scandinavica*, 83 (9), article, Wiley Online Library, p.832–837.

Allaire, A. D., Moos, M.-K. and Wells, S. R. (2000). Complementary and Alternative Medicine in Pregnancy: A Survey of North Carolina Certified Nurse Midwives. *Obstetrics & Gynecology*, 95 (1), article, LWW, p.19–23.

Allen, D. (2010). Fieldwork and participant observation. *The Sage Handbook of Qualitative Methods in Health Research*. London: Sage Publications, JOUR, p.353–372.

Altheide, D. and Schneider, C. (2012). *Qualitative media analysis*. p.75–82. [Online]. Available at: <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Qualitative+Media+Analysis#0> [Accessed: 19 December 2014].

Anderson, F. W. J. and Johnson, C. T. (2005). Complementary and alternative medicine in obstetrics. *International Journal of Gynecology & Obstetrics*, 91 (2), article, Elsevier, p.116–124.

Anderson, T. (2000). *Feeling safe enough to let go: the relationship between a woman and her midwife during the second stage of labour*. Palgrave Macmillan, Houndmills.

Anderson, T. (2004). The Impact of the Age of Risk for Antenatal Education. In: *NCT Conference*, 2004, Coventry.

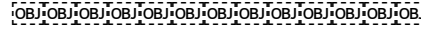
Anon. (2008). *Case Study: A Strategic Research Methodology* Khairul Baharein Mohd Noor. 5 (11), p.1602–1604.

Antonovsky, A. (1996). The salutogenic model as a theory to guide health promotion. *Health Promotion International*, 11 (1), p.11–18. [Online]. Available at: doi:10.1093/heapro/11.1.11.

Appleton, J. and Cowley, S. (1997). Analysing clinical practice guidelines. A method of documentary analysis. *Journal of Advanced Nursing*, p.1008–1017. [Online]. Available at: <http://onlinelibrary.wiley.com/doi/10.1046/j.1365-2648.1997.19970251008.x/abstract> [Accessed: 19 December 2014].

Austin, D. A. and Calderon, L. (1999). Triaging patients in the latent phase of labor. *Journal of nurse-midwifery*, 44 (6), JOUR, Wiley Online Library, p.585–591.

Bailey, R. E. (1972). *Mayes' midwifery: a textbook for midwives*. 8th ed. London: Bailliere Tindall.

Basili, F., Di Rosa, A., Montorio, V. and Tamburini, C. (2014).  Certificato di assistenza al parto (CeDAP). Analisi dell'evento nascita - Anno 2011. *Ministero della Salute*. [Online]. Available at: http://www.salute.gov.it/imgs/C_17_pubblicazioni_1551_allegato.pdf\npapers2://publication/uuid/D9792949-B87C-4E94-AC44-E832266079D7.

Bastick, T. (1982). *Intuition: How we think and act*. John Wiley and sons.

Baxter, P. and Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13 (4), p.544–559. [Online]. Available at: doi:citeulike-article-id:6670384.

Bayles, B. P. (2007). Herbal and other complementary medicine use by Texas midwives. *Journal of Midwifery & Women's Health*, 52 (5), article, Wiley Online Library, p.473–478.

Beach, M. C., Inui, T., Frankel, R., Hall, J., Haidet, P., Roter, D., Beckman, H., Cooper, L. A., Miller, W., Mossbarger, D., Safran, D., Sluyter, D., Stein, H. and Williamson, P. (2006). Relationship-centered care: A constructive reframing. *Journal of General Internal Medicine*, 21 (SUPPL. 1). [Online]. Available at: doi:10.1111/j.1525-1497.2006.00302.x.

Beauchamp, T. L., Walters, L., Kahn, J. P. and Mastroianni, A. C. (2007). *Contemporary Issues in Bioethics*. 7th ed. Wadsworth Publishing.

Benbasat, I., Goldstein, D. K. and Mead, M. (1987). The Case Research Strategy in Studies of Information Systems. *MIS Quarterly*, 11 (3), JOUR, Management Information Systems Research Center, University of Minnesota, p.369–386. [Online]. Available at: doi:10.2307/248684.

Benner, P. (1984). *From Novice to Expert: Excellence and Power in Clinical Nursing Practice*. Menlo Park, California: Addison-Wesley.

Benton, T. and Craib, I. (2011). *Philosophy of social science: The philosophical foundations of social thought*. Palgrave Macmillan.

Berg, M. and Dahlberg, K. (2001). Swedish midwives' care of women who are at high obstetric risk or who have obstetric complications. *Midwifery*, 17 (4), JOUR, Elsevier, p.259–266.

Berghella, V., Baxter, J. K. and Chauhan, S. P. (2008). Evidence-based labor and delivery management. *American journal of obstetrics and gynecology*, 199 (5), p.445–454. [Online]. Available at: doi:10.1016/j.ajog.2008.06.093 [Accessed: 13 December 2014].

Berg-Lekås, M.-L., Högberg, U. and Winkvist, A. (1998). Familial occurrence of dystocia. *American journal of obstetrics and gynecology*, 179 (1), article, Elsevier, p.117–121.

Betts, D. (2009). Inducing labour with acupuncture-crucial considerations. *J Chinese Med*, 90 (1), article, p.20–25.

Bhaskar, R. (1998). Philosophy and scientific realism. In: Archer, M., Bhaskar, R., Collier, A., Lawson, T. and Norrie, A. (eds.), *Critical realism: Essential readings*, Routledge, p.16–47.

Bick, D. E., Rycroft-Malone, J. and Fontenla, M. (2009). A case study evaluation of implementation of a care pathway to support normal birth in one English birth centre: anticipated benefits and unintended

consequences. *BMC pregnancy and childbirth*, 9 (1), article, BioMed Central Ltd, p.47. [Online]. Available at: doi:10.1186/1471-2393-9-47 [Accessed: 13 December 2014].

BirthChoice UK. (2016). *2014/2015 Maternity services in England*. [Online]. Available at: <http://www.birthchoicework.com/Professionals/BirthChoiceUKFrame.htm>? <http://www.birthchoicework.com/Professionals/MainIndex.htm> [Accessed: 10 April 2016].

Blaaka, G. and Schauer Eri, T. (2008). Doing midwifery between different belief systems. *Midwifery*, 24 (3), p.344–352. [Online]. Available at: doi:10.1016/j.midw.2006.10.005 [Accessed: 7 February 2016].

Blix-Lindström, S., Johansson, E. and Christensson, K. (2008). Midwives' navigation and perceived power during decision-making related to augmentation of labour. *Midwifery*, 24 (2), p.190–198. [Online]. Available at: doi:10.1016/j.midw.2006.12.002 [Accessed: 13 December 2014].

Bogaerts, A., Witters, I., Van den Bergh, B. R. H., Jans, G. and Devlieger, R. (2013). Obesity in pregnancy: Altered onset and progression of labour. *Midwifery*, 29 (12), Elsevier, p.1303–1313. [Online]. Available at: doi:10.1016/j.midw.2012.12.013.

Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Sage.

Boyle, A., Reddy, U. M., Landy, H. J., Huang, C.-C., Driggers, R. W. and Laughon, S. K. (2013). Primary cesarean delivery in the United States. *Obstetrics and gynecology*, 122 (1), p.33–40. [Online]. Available at: doi:10.1097/AOG.0b013e3182952242 [Accessed: 18 December 2014].

Braithwaite, J., Hyde, P. and Pope, C. (2010). *Culture and climate in health care organisations*. Palgrave Macmillan.

Brown, A. (2012). Assessment strategies for teaching empathy , intuition

and sensitivity on the labour ward. *Evidence Based Midwifery*, 10 (2), p.64–70.

Bugg, G. J., Stanley, E., Baker, P. N., Taggart, M. J. and Johnston, T. a. (2006). Outcomes of labours augmented with oxytocin. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 124 (1), article, Elsevier, p.37–41. [Online]. Available at: doi:10.1016/j.ejogrb.2005.04.015 [Accessed: 18 December 2014].

Bugg, G., Siddiqui, F. and Thornton, J. (2011). Oxytocin versus no treatment or delayed treatment for slow progress in the first stage of spontaneous labour. *Cochrane Database Systematic Review*, (7). [Online]. Available at: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD007123.pub2/pdf/standard> [Accessed: 19 December 2014].

Burns, E., Fenwick, J., Schmied, V. and Sheehan, A. (2012). Reflexivity in midwifery research: the insider/outsider debate. *Midwifery*, 28 (1), Elsevier, p.52–60. [Online]. Available at: doi:10.1016/j.midw.2010.10.018 [Accessed: 13 December 2014].

Burns, N. (1989). Standards for Qualitative Research. *Nursing Science Quarterly* , 2 (1), JOUR, p.44–52. [Online]. Available at: doi:10.1177/089431848900200112.

Burr, V. (1995). An introduction to social constructionism. *London: Routledge*, JOUR.

Byrne, D. and Edmonds, D. K. (1990). Clinical method for evaluating progress in first stage of labour. *The Lancet*, 335 (8681), JOUR, Elsevier, p.122.

Byrom, S. and Downe, S. (2015). *The Roar Behind the Silence: why kindness, compassion and respect matter in maternity care*. Pinter & Martin.

Cahill, A. G. and Tuuli, M. G. (2013). Labor in 2013: the new frontier. *American journal of obstetrics and gynecology*, 209 (6), JOUR, Elsevier,

p.531–534.

Caldeyro-Barcia, R. (1979). The Influence of Maternal Bearing down Efforts during Second Stage on Fetal Wellbeing. *Birth and the Family Journal*, 6 (1), JOUR, Wiley Online Library, p.17–21.

Caldeyro-Barcia, R., Noriega-Guerra, L., Cibils, L. A., Alvarez, H., Poseiro, J. J., Pose, S. V, Sica-Blanco, Y., Mendez-Bauer, C., Fielitz, C. and Gonzalez-Panizza, V. H. (1960). Effect of position changes on the intensity and frequency of uterine contractions during labor. *American Journal of Obstetrics and Gynecology*, 80 (2), JOUR, Elsevier, p.284–290.

Campbell, R. and Wasco, S. (2000). Feminist approaches to social science: Epistemological and methodological tenets. *American journal of community psychology*, 28 (6), p.773–791. [Online]. Available at: <http://link.springer.com/article/10.1023/A:1005159716099> [Accessed: 19 December 2014].

Care Quality Commission. (2013). *National findings from the 2013 survey of women ' s experiences of maternity care*. [Online]. Available at: <http://www.cqc.org.uk/content/maternity-services-survey-2013>.

Carter, S. and Henderson, L. (2005). Approaches to qualitative data collection in social science. *Handbook of Health Research Methods: Investigation, Measurement and Analysis*. Open University Press, McGraw-Hill Education, Maidenhead, Berkshire, United Kingdom, JOUR, p.215–230.

Carter, S. M. and Little, M. (2007). Justifying knowledge, justifying method, taking action: Epistemologies, methodologies, and methods in qualitative research. *Qualitative health research*, 17 (10), article, SAGE Publications, p.1316–1328. [Online]. Available at: doi:10.1177/1049732307306927.

Caughey, A. B. (2014). Can We Safely Reduce Primary Cesareans with Greater Patience ? *Birth*, (September), p.217–219.

Caughey, A. B., Cahill, A. G., Guise, J.-M., Rouse, D. J. and Gynecologists, A. C.

of O. and. (2014). Safe prevention of the primary cesarean delivery. *American journal of obstetrics and gynecology*, 210 (3), JOUR, Elsevier, p.179–193.

Cedergren, M. I. (2009). Non-elective caesarean delivery due to ineffective uterine contractility or due to obstructed labour in relation to maternal body mass index. *European journal of obstetrics, gynecology, and reproductive biology*, 145 (2), p.163–166. [Online]. Available at: doi:10.1016/j.ejogrb.2009.05.022 [Accessed: 18 December 2014].

Chelmow, D., Kilpatrick, S. J. and Laros, R. K. (1993). Maternal and neonatal outcomes after prolonged latent phase. *Obstetrics & Gynecology*, 81 (4), JOUR, LWW, p.486–491.

Cheyne, H., Abhyankar, P. and McCourt, C. (2013). Empowering change: Realist evaluation of a Scottish Government programme to support normal birth. *Midwifery*, 29 (10), Elsevier, p.1110–1121. [Online]. Available at: doi:10.1016/j.midw.2013.07.018.

Cheyne, H., Dowding, D. W. and Hundley, V. (2006). Making the diagnosis of labour: midwives' diagnostic judgement and management decisions. *Journal of Advanced Nursing*, 53 (6), JOUR, Blackwell Publishing Ltd, p.625–635. [Online]. Available at: doi:10.1111/j.1365-2648.2006.03769.x.

Chiseri-strater, E. (1996). and Reflexivity in Case Study and Ethnographic. *Ethics and Representation in Qualitative Studies of*, JOUR, ERIC, p.115.

Cho, J. and Trent, A. (2006). Validity in qualitative research revisited. *Qualitative research*, 6 (3), JOUR, Sage Publications, p.319–340.

Cioffi, J. and Markham, R. (1997). Clinical decision-making by midwives: managing case complexity. *Journal of advanced nursing*, 25 (2), p.265–272. [Online]. Available at: doi:10.1046/j.1365-2648.1997.1997025265.x.

Citkovitz, C., Klimenko, E., Bolyai, M., Applewhite, L., Julliard, K. and Weiner, Z. (2009). Effects of Acupuncture During Labor and Delivery in a US Hospital

Setting: A Case–Control Pilot Study. *The Journal of Alternative and Complementary Medicine*, 15 (5), article, Mary Ann Liebert, Inc. 140 Huguenot Street, 3rd Floor New Rochelle, NY 10801 USA, p.501–505.

Clark, S. L., Simpson, K. R., Knox, G. E. and Garite, T. J. (2009). Oxytocin: new perspectives on an old drug. *American Journal of Obstetrics and Gynecology*, 200 (1), p.1–6. [Online]. Available at: doi:10.1016/j.ajog.2008.06.010.

Cluett, E. R. and Burns, E. (2009). Immersion in water in labour and birth. *Cochrane Database Syst Rev*, 2 (CD000111), article, Wiley Online Library.

Cluett, E. R., Pickering, R. M., Getliffe, K. and St George Saunders, N. J. (2004). Randomised controlled trial of labouring in water compared with standard of augmentation for management of dystocia in first stage of labour. *BMJ (Clinical research ed.)*, 328 (7435), p.314. [Online]. Available at: doi:10.1136/bmj.37963.606412.EE [Accessed: 13 December 2014].

Coco, A., Derksen-Schrock, A., Coco, K., Raff, T., Horst, M. and Hussar, E. (2010). A randomized trial of increased intravenous hydration in labor when oral fluid is unrestricted. *Family medicine*, 42 (1), article, p.52.

Cohen, W. R. and Friedman, E. a. (2015). Perils of the new labor management guidelines. *American Journal of Obstetrics and Gynecology*, 212 (4), Elsevier Inc., p.420–427. [Online]. Available at: doi:10.1016/j.ajog.2014.09.008.

Corbin, J. and Morse, J. M. (2003). The unstructured interactive interview: Issues of reciprocity and risks when dealing with sensitive topics. *Qualitative inquiry*, 9 (3), article, Sage Publications, p.335–354.

Cotterill, P. (1992). Interviewing women: Issues of friendship, vulnerability, and power. In: *Women's Studies International Forum*, 15 (5), 1992, Elsevier, p.593–606.

Creswell, J. W., Hanson, W. E., Clark Plano, V. L. and Morales, a. (2007). Qualitative Research Designs: Selection and Implementation. *The*

Counseling Psychologist, 35 (2), p.236–264. [Online]. Available at: doi:10.1177/0011000006287390 [Accessed: 15 July 2014].

Cunningham, F., Hauth, J., Leveno, K., Gilstrap, L. I., Bloom, S. L. and Wenstrom, K. (2010). *Williams obstetrics*. 23rd ed. [Online]. Available at: doi:10.1097/00001888-193609000-00027.

Curtis, P. (1999). Breast stimulation to augment labor: History, mystery, and culture. *Birth*, 26 (2), article, Wiley Online Library, p.123–126.

Curtis, P., Resnick, J. C., Evens, S. and Thompson, C. J. (1999). A comparison of breast stimulation and intravenous oxytocin for the augmentation of labor. *Birth*, 26 (2), article, Wiley Online Library, p.115–122.

Dahlen, H. G., Downe, S., Kennedy, H. P. and Foureur, M. (2014). Is society being reshaped on a microbiological and epigenetic level by the way women give birth? *Midwifery*, 30 (12), Elsevier, p.1149–1151. [Online]. Available at: doi:10.1016/j.midw.2014.07.007.

Dahlen, H. G., Kennedy, H. P., Anderson, C. M., Bell, A. F., Clark, A., Foureur, M., Ohm, J. E., Shearman, A. M., Taylor, J. Y. and Wright, M. L. (2013). The EPIIC hypothesis: intrapartum effects on the neonatal epigenome and consequent health outcomes. *Medical hypotheses*, 80 (5), JOUR, Elsevier, p.656–662.

Daly, J., Kellehear, A. and Gliksman, M. (1997). *The public health researcher: A methodological approach*. GEN, Melbourne, Australia: Oxford University Press.

Darke, P., Shanks, G. and Broadbent, M. (1998). Successfully completing case study research: combining rigour, relevance and pragmatism. *Information Systems Journal*, 8 (4), p.273–289. [Online]. Available at: doi:10.1046/j.1365-2575.1998.00040.x.

Davies, S. (2011). A longer labour and birth... one size does not fit all! In: *Promoting Normal Birth: Research, Reflections & Guidelines (British Edition)*,

Fresh Heart Publishing, p.44.

Davis-Floyd, R. (2001). The technocratic, humanistic, and holistic paradigms of childbirth. *International Journal of Gynecology & Obstetrics*, 75, JOUR, Elsevier, p.S5–S23.

Davis-Floyd, R. and Davis, E. (1996). Intuition as authoritative knowledge in midwifery and homebirth. *Medical anthropology quarterly*, 10 (2), JOUR, Wiley Online Library, p.237–269.

Davis-Floyd, R. E. (1994). The technocratic body: American childbirth as cultural expression. *Social Science & Medicine*, 38 (8), article, Elsevier, p.1125–1140.

Davis-Floyd, R. E. and Sargent, C. F. (1997). *Childbirth and authoritative knowledge: Cross-cultural perspectives*. University of California Press.

Deery, R. (2010). *Obstetric Led Care*: 1 (3), p.1–4.

Deery, R., Hughes, D. and Kirkham, M. (2010). *Tensions and Barriers in Improving Maternity Care: The Story of a Birth Centre*. Radcliffe Publishing.

Dekker, R. (2013). *Friedman's Curve and Failure to Progress: A Leading Cause of Unplanned C-sections*. [Online]. Available at: <http://evidencebasedbirth.com/friedmans-curve-and-failure-to-progress-a-leading-cause-of-unplanned-c-sections/> [Accessed: 6 March 2016].

Dencker, A., Berg, M., Bergqvist, L., Ladfors, L., Thorsén, L. S. and Lilja, H. (2009). Early versus delayed oxytocin augmentation in nulliparous women with prolonged labour—a randomised controlled trial. *BJOG: An International Journal of Obstetrics & Gynaecology*, 116 (4), article, Wiley Online Library, p.530–536.

Dencker, A., Berg, M., Bergqvist, L. and Lilja, H. (2010). Identification of latent phase factors associated with active labor duration in low-risk nulliparous women with spontaneous contractions. *Acta obstetrica et gynecologica Scandinavica*, 89 (8), JOUR, Taylor & Francis, p.1034–1039.

Department of Health. (1993). *Changing Childbirth: Report of the Expert Maternity Group*. HM Stationery Office.

Department of Health. (2005). *Research Governance Framework for Health and Social Care*.

Department of Health. (2007). *Maternity Matters: Choice, access and continuity of care in a safe service*.

Dey, I. (2003). *Qualitative data analysis: A user friendly guide for social scientists*. Routledge.

Dickson, N. (1997). A theory of caring for midwifery. *Australian College of Midwives Incorporated Journal*, 10 (2), JOUR, Elsevier, p.23–28.

Dickson-Swift, V., James, E. L., Kippen, S. and Liamputtong, P. (2007). Doing sensitive research: what challenges do qualitative researchers face? *Qualitative Research*, 7 (3), p.327–353. [Online]. Available at: doi:10.1177/1468794107078515 [Accessed: 9 July 2014].

DM n 740/94. (1995). *Decreto Ministeriale 14 settembre 1994, n° 740 Regolamento concernente l'individuazione della figura e del relativo profilo professionale dell'Ostetrica/o*. Gazzetta Ufficiale del 9 gennaio 1995, n° 6).

Donna, S. (2011). *Promoting Normal Birth: Research, Reflections & Guidelines*. Fresh Heart Publishing.

Downe, S. (1999). Evidence and experience. *British Journal of Midwifery*, 7 (10).

Downe, S. and Dykes, F. (2009). Counting time in pregnancy and labour. *Childbirth, midwifery and concepts of time*, JOUR, Berghahn Books, London, p.61–83.

Downe, S., Gyte, G. M. L., Dahlen, H. G. and Singata, M. (2013). Routine vaginal examinations for assessing progress of labour to improve outcomes for women and babies at term. *The Cochrane database of systematic reviews*,

7, p.CD010088. [Online]. Available at: doi:10.1002/14651858.CD010088.pub2 [Accessed: 7 February 2016].

Downe, S. and McCourt, C. (2008). From being to becoming: reconstructing childbirth. *Normal childbirth: Evidence and debate*, JOUR, Elsevier Health Sciences, p.3.

Downe, S., Simpson, L. and Trafford, K. (2007). Expert intrapartum maternity care: a metasynthesis. *Journal of advanced nursing*, 57 (2), JOUR, Wiley Online Library, p.127–140.

Duff, M. (2005). *A study of labour*. PhD dissertation, University of Technology, Sidney.

Dyson, S. and Brown, B. (2005). *Social theory and applied health research*. McGraw-Hill Education (UK).

Easton, G. (2010). Critical realism in case study research. *Industrial Marketing Management*, 39 (1), Elsevier Inc., p.118–128. [Online]. Available at: doi:10.1016/j.indmarman.2008.06.004 [Accessed: 9 July 2014].

Eisenhardt, M. (1989). *Building Theories from Case*. 14 (4), p.532–550.

Ekelin, M., Svensson, J., Evehammar, S. and Kvist, L. J. (2015). Sense and sensibility: Swedish midwives' ambiguity to the use of synthetic oxytocin for labour augmentation. *Midwifery*, 31 (3), JOUR, Lecturer, Department of Health Sciences, Lund University, PO Box 157, S-221 00 Lund, Sweden: Elsevier Inc., p.e36–42 1p. [Online]. Available at: doi:10.1016/j.midw.2014.12.006.

El-Hamamy, E. and Arulkumaran, S. (2005). Poor progress of labour. *Current Obstetrics & Gynaecology*, 15 (1), article, Elsevier, p.1–8.

Ellis, C. (2007). Telling Secrets, Revealing Lives: Relational Ethics in Research With Intimate Others. *Qualitative Inquiry*, 13 (1), p.3–29. [Online]. Available at: doi:10.1177/1077800406294947 [Accessed: 1 December 2014].

Elwood, S. A. and Martin, D. G. (2000). 'Placing' Interviews: Location and Scales of Power in Qualitative Research. 52 (July 1999), p.649–657.

Enkin, M., Keirse, M., Neilson, J. and Crowther, C. (2000). Monitoring the progress of labour. *A guide to effective care in pregnancy and childbirth, 3rd edn.* Oxford University Press, Oxford, JOUR, p.280–288.

Eriksson, M., Mattsson, L.-Å. and Ladfors, L. (1997). Early or late bath during the first stage of labour: a randomised study of 200 women. *Midwifery*, 13 (3), JOUR, Elsevier, p.146–148.

Eslamian, L., Marsoosi, V. and Pakneeyat, Y. (2006). Increased intravenous fluid intake and the course of labor in nulliparous women. *International Journal of Gynecology & Obstetrics*, 93 (2), article, Elsevier, p.102–105.

Everly, M. C. (2012). Facilitators and barriers of independent decisions by midwives during labor and birth. *Journal of Midwifery & Women's Health*, 57 (1), article, Wiley Online Library, p.49–54.

Fahimi, F., Hrgovic, I., El-Safadi, S. and Münstedt, K. (2011). Complementary and alternative medicine in obstetrics: a survey from Iran. *Archives of gynecology and obstetrics*, 284 (2), article, Springer, p.361–364.

Fahy, K. (1998). Being a midwife or doing midwifery? *Australian College of Midwives Incorporated Journal*, 11 (2), JOUR, Elsevier, p.11–16.

Fahy, K. (2012). What is woman-centred care and why does it matter? *Women and Birth*, 25 (4), p.149–151. [Online]. Available at: doi:10.1016/j.wombi.2012.10.005.

Fasan, J., Zavarise, D., Palese, a and Marchesoni, D. (2012). Midwifery students' perceived independence within the core competencies expected of the midwifery community upon graduation: an Italian study. *International nursing review*, 59 (2), p.208–214. [Online]. Available at: doi:10.1111/j.1466-7657.2011.00965.x.

Feagin, J. R., Orum, A. M. and Sjoberg, G. (1991). *A case for the case study.*

UNC Press Books.

Ferrazzi, E., Milani, S., Cirillo, F., Livio, S., Piola, C., Brusati, V. and Paganelli, A. (2015). Progression of cervical dilatation in normal human labor is unpredictable. *Acta Obstetrica et Gynecologica Scandinavica*, 94 (10), p.1136–1144. [Online]. Available at: doi:10.1111/aogs.12719.

Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry*, 12 (2), p.219–245. [Online]. Available at: doi:10.1177/1077800405284363 [Accessed: 9 July 2014].

France, G., Taroni, F. and Donatini, A. (2005). The Italian health-care system. *Health economics*, 14 (Suppl 1), p.S187-202. [Online]. Available at: doi:10.1002/hec.1035 [Accessed: 18 December 2014].

Freeman, L. M., Adair, V., Timperley, H. and West, S. H. (2006). *The influence of the birthplace and models of care on midwifery practice for the management of women in labour*. [Online]. Available at: doi:10.1016/j.wombi.2006.10.001.

Friedman, E. A. (1954). The graphic analysis of labor. *American Journal of Obstetrics and Gynecology*, 68 (6), article, Elsevier, p.1568–1575.

Friedman, E. A. (1955). Primigravid labor a graphicostatistical analysis. *Obstetrics and Gynecology*, 6 (6), p.567–589.

Friedman, E. A. (1956). Cervimetry: an objective method for the study of cervical dilatation in labor. *American journal of obstetrics and gynecology*, 71 (6), JOUR, p.1189–1193.

Friedman, E. A. (1978). *Labor: Clinical evaluation and management*. 2nd ed. Appleton-Century-Crofts.

Friedman, E. A. (1983). Dysfunctional labour. In: Cohen, W. and Friedman, E. (eds.), *Management of Labour*, University Press, Baltimore.

Friedman, E. A. and Kroll, B. H. (1969). Computer analysis of labour

progression. *Journal of Obstetrics and Gynaecology of the British Commonwealth*, 76 (12), JOUR, Wiley Online Library, p.1075–1079.

Fry, J. (2007). *Are there other ways of knowing ? An exploration of intuition as a source of authoritative knowledge in childbirth*. p.325–328.

Garite, T. J., Weeks, J., Peters-Phair, K., Pattillo, C. and Brewster, W. R. (2000). A randomized controlled trial of the effect of increased intravenous hydration on the course of labor in nulliparous women. *American journal of obstetrics and gynecology*, 183 (6), article, Elsevier, p.1544–1548.

Gibbert, M., Ruigrok, W. and Wicki, B. (2008). *RESEARCH NOTES AND COMMENTARIES WHAT PASSES AS A RIGOROUS CASE STUDY?* 1474 (July 2005), p.1465–1474. [Online]. Available at: doi:10.1002/smj.

Gifford, D. S., Morton, S. C., Fiske, M., Keeseey, J., Keeler, E. and Kahn, K. L. (2000). Lack of progress in labor as a reason for cesarean. *Obstetrics and Gynecology*, 95 (4), p.589–595. [Online]. Available at: doi:10.1016/S0029-7844(99)00575-X.

Gilbert, K. R. (2001). Why are we interested in emotions. In: Gilbert, K. R. (ed.), *The emotional nature of qualitative research*, p.3–15.

Gillham, B. (2000). *Case study research methods*. Bloomsbury Publishing.

Gillon, R. (1994). Medical ethics: four principles plus attention to scope. *Bmj*, 309 (July). [Online]. Available at: http://www.bmj.com/content/309/6948/184?ath_user=uce.e265c20052a6f705&ath_ttok= [Accessed: 19 December 2014].

Giussani, L. and Zucchi, J. (1997). *The Religious Sense*. McGill-Queen's Press - MQUP. [Online]. Available at: https://books.google.com/books?id=WYF3Y_zT8zoC&pgis=1 [Accessed: 25 February 2016].

Goer, H. and Romano, A. (2013). *Optimal care in childbirth: The case for a physiologic approach*. Pinter & Martin Ltd.

Goulding, C. (2005). Grounded theory, ethnography and phenomenology: A comparative analysis of three qualitative strategies for marketing research. *European Journal of Marketing*, 39 (3/4), p.294–308. [Online]. Available at: doi:10.1108/03090560510581782 [Accessed: 11 September 2014].

Gove, P. B. (1961). *Webster's third new international dictionary of the English language*. Merriam-Webster.

Greenberg, M. B., Cheng, Y. W., Sullivan, M., Norton, M. E., Hopkins, L. M. and Caughey, A. B. (2007). Does length of labor vary by maternal age? *American journal of obstetrics and gynecology*, 197 (4), article, Elsevier, p.428--e1.

Greulich, B. and Tarrant, B. (2007). The latent phase of labor: diagnosis and management. *Journal of Midwifery & Women's health*, 52 (3), JOUR, Wiley Online Library, p.190–198.

Groeschel, N. and Glover, P. (2001). The partograph. Used daily but rarely questioned. *Australian Journal of Midwifery*, 14 (3), p.22–27. [Online]. Available at: doi:10.1016/S1445-4386(01)80021-5.

Guba, E. G. and Lincoln, Y. S. (1994). Competing Paradigms in Qualitative Research. *Handbook of qualitative research*, p.105–117. [Online]. Available at:
doi:http://www.uncg.edu/hdf/facultystaff/Tudge/Guba%20&%20Lincoln%201994.pdf.

Guilland, K. and Pairman, S. (1995). *Midwifery Partnership: a model for practice*. Victoria University: New Zealand.

Guillemin, M. and Gillam, L. (2004). Ethics, Reflexivity, and 'Ethically Important Moments' in Research. *Qualitative Inquiry*, 10 (2), p.261–280. [Online]. Available at: doi:10.1177/1077800403262360 [Accessed: 24 July 2014].

Hall, H. G., McKenna, L. G. and Griffiths, D. L. (2011). Midwives' support for complementary and alternative medicine: a literature review. *Women and*

Birth, 25 (1), article, Elsevier, p.4–12.

Harding, D. and Foureur, M. (2009). New Zealand and Canadian Midwives' Use of Complementary and Alternative Medicine (CAM). *New Zealand College of Midwives Journal*, (40), article, New Zealand College of Midwives, p.7–12.

Hartley, J. (2004). Case study research. In: Cassell, C. and Symon, G. (eds.), *Essential guide to qualitative methods in organizational research*, Cassell, C, SAGE Publications, p.323.

Henderson, C. and Macdonald, S. (2004). *Mayes midwifery*. 13th ed. Baillière Tindall.

Herod, A. (1999). Reflections on interviewing foreign elites: praxis, positionality, validity, and the cult of the insider. *Geoforum*, 30, p.313–327. [Online]. Available at: <http://www.sciencedirect.com/science/article/pii/S001671859900024X> [Accessed: 19 December 2014].

Higgins, I. (1998). Reflections on conducting qualitative research with elderly people. *Qualitative Health Research*, 8 (6), JOUR, Sage Publications, p.858–866.

Hinshaw, K., Simpson, S., Cummings, S., Hildreth, A. and Thornton, J. (2008). A randomised controlled trial of early versus delayed oxytocin augmentation to treat primary dysfunctional labour in nulliparous women. *BJOG: An International Journal of Obstetrics & Gynaecology*, 115 (10), article, Wiley Online Library, p.1289–1296.

Hobbs, L. (1998). Assessing cervical dilatation without VEs. Watching the purple line. *The practising midwife*, 1 (11), JOUR, p.34–35.

Hodnett, E. D., Downe, S., Walsh, D. and Weston, J. (2010). *Alternative versus conventional institutional settings for birth (Cochrane Review)*. article, The Cochrane Library.

Hodnett, E. D., Gates, S., Hofmeyr, G. J. and Sakala, C. (2013). Continuous support for women during childbirth. *Cochrane Database of Systematic Reviews*, (7). [Online]. Available at: doi:10.1111/j.0730-7659.2005.00336.x.

Hodnett, E., Gates, S., Hofmeyr, G. and Sakala, C. (2012). Continuous support for women during childbirth. *Cochrane Database of Systematic Review*, (10). [Online]. Available at: doi:10.1002/14651858.CD003766.pub4.

Holloway, I. and Wheeler, S. (2013). *Qualitative research in nursing and healthcare*. John Wiley & Sons.

Hollowell, J., Puddicombe, D., Rowe, R., Linsell, L., Hardy, P., Stewart, M., Newburn, M., McCourt, C., Sandall, J. and Macfarlane, A. J. (2011). *The Birthplace national prospective cohort study: perinatal and maternal outcomes by planned place of birth Birthplace in England research programme*. JOUR, HMSO.

Houston, S. (2001). Beyond Social Constructionism: Critical Realism and Social Work. *British Journal of Social Work*, 31 (6), p.845–861. [Online]. Available at: doi:10.1093/bjsw/31.6.845.

Hubbard, G., Backett-Milburn, K. and Kemmer, D. (2001). Working with emotion: Issues for the researcher in fieldwork and teamwork. *International Journal of Social Research Methodology*, 4 (2), p.119–137. [Online]. Available at: doi:10.1080/13645570116992.

Hunter, B. and Segrott, J. (2014). Renegotiating inter-professional boundaries in maternity care: Implementing a clinical pathway for normal labour. *Sociology of Health and Illness*, 36 (5), p.719–737. [Online]. Available at: doi:10.1111/1467-9566.12096.

Hunter, L. P. (2006). Women give birth and pizzas are delivered: Language and Western childbirth paradigms. *Journal of Midwifery and Women's Health*, 51 (2), p.119–124. [Online]. Available at: doi:10.1016/j.jmwh.2005.11.009.

Iannuzzi, L. and Borrelli, S. E. (2014). *Early labour midwifery care in Italy : local and cross-cultural challenges*. 12, p.133–136.

Iannuzzi, L. and Morano, S. (2015). Italy where is your beauty? In: Byrom, S. and Downe, S. (eds.), *The Roar Behind the Silence: why kindness, compassion and respect matter in maternity care*, Pinter & Martin.

ICH Harmonised Tripartite Guideline. (1996). Guideline for good clinical practice E6(R1). *ICH Harmonised Tripartite Guideline*, (4), p.i-53. [Online]. Available at: doi:10.1056/NEJMp1012246.

Incerti, M., Locatelli, A., Ghidini, A., Ciriello, E., Consonni, S. and Pezzullo, J. C. (2011). Variability in Rate of Cervical Dilatation in Nulliparous Women at Term. *Birth*, 38 (1), p.30–35. [Online]. Available at: doi:10.1111/j.1523-536X.2010.00443.x.

ISTAT. (2014). *Natalità e fecondità della popolazione residente*.

Italian Health Policy Brief. (2013). *COUNTRY REPORT ITALIA 2013 Le sfide decisionali per la salute e l'assistenza sanitaria in Italia*.

Jeffcoate, T., Baker, K. and Martin, R. (1952). Inefficient uterine action. *Obstetrical & Gynecological ...*, 7 (6), p.794–796. [Online]. Available at: http://journals.lww.com/obgynsurvey/Abstract/1952/12000/Inefficient_Uterine_Action.17.aspx [Accessed: 19 December 2014].

Jefford, E. and Fahy, K. (2015). Midwives' clinical reasoning during second stage labour: Report on an interpretive study. *Midwifery*, 31 (5), Elsevier, p.519–525. [Online]. Available at: doi:10.1016/j.midw.2015.01.006.

Jordan, B. (1993). *Birth in four cultures: A crosscultural investigation of childbirth in Yucatan, Holland, Sweden, and the United States*. Waveland Press.

Jordan, B. (1997). Authoritative knowledge and its construction. In: Davis-Floyd, R. E. and Sargent, C. F. (eds.), *Childbirth and authoritative knowledge: Cross-cultural perspectives*, Univ of California Press, p.55–79.

Kaplan, B. and Duchon, D. (1988). Combining qualitative and quantitative methods in information systems research: a case study. *MIS quarterly*, (December), p.571–587. [Online]. Available at: <http://www.jstor.org/stable/249133> [Accessed: 19 December 2014].

Karaçam, Z., Walsh, D. and Bugg, G. J. (2014). Evolving understanding and treatment of labour dystocia. *European journal of obstetrics, gynecology, and reproductive biology*, 182, p.123–127. [Online]. Available at: [doi:10.1016/j.ejogrb.2014.09.011](https://doi.org/10.1016/j.ejogrb.2014.09.011).

Karnieli-Miller, O., Strier, R. and Pessach, L. (2009). Power relations in qualitative research. *Qualitative health research*, 19 (2), p.279–289. [Online]. Available at: [doi:10.1177/1049732308329306](https://doi.org/10.1177/1049732308329306) [Accessed: 24 November 2014].

Kavanagh, J., Kelly, A. J. and Thomas, J. (2005). Breast stimulation for cervical ripening and induction of labour. *Cochrane Database Syst Rev*, 3, article, Wiley Online Library.

Kavitha, A., Chacko, K. P., Thomas, E., Rathore, S., Christopher, S., Biswas, B. and Mathews, J. E. (2012). A randomized controlled trial to study the effect of IV hydration on the duration of labor in nulliparous women. *Archives of gynecology and obstetrics*, 285 (2), article, Springer, p.343–346.

Keating, A. and Fleming, V. E. M. (2009). Midwives' experiences of facilitating normal birth in an obstetric-led unit: a feminist perspective. *Midwifery*, 25 (5), Elsevier, p.518–527. [Online]. Available at: [doi:10.1016/j.midw.2007.08.009](https://doi.org/10.1016/j.midw.2007.08.009) [Accessed: 13 December 2014].

Kennedy, H. P. (2000). A model of exemplary midwifery practice: Results of a Delphi study. *Journal of Midwifery & Women's Health*, 45 (1), JOUR, Wiley Online Library, p.4–19.

Kenner, A. N. (1993). Communication of Pain: Vocalization as an Indicator of the Stage of Labour. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 33 (4), JOUR, Wiley Online Library, p.384–385.

Kenyon, S., Ullman, R., Mori, R. and Whittle, M. (2007). *Care of healthy women and their babies during*. 335, article, p.667.

Kinard, E. (1996). Conducting Research on Child Maltreatment: Effects on Researchers. *Violence and Victims*, 11 (1), p.69.

King, T. L. and Pinger, W. (2014). Evidence-Based Practice for Intrapartum Care: The Pearls of Midwifery. *Journal of Midwifery & Women's Health*, 59 (6), p.572–585. [Online]. Available at: doi:10.1111/jmwh.12261.

Kirkham, M. (2003). *Birth centres: a social model for maternity care*. Elsevier Health Sciences.

Kitzinger, J. (1994). The methodology of focus groups: the importance of interaction between research participants. *Sociology of health & illness*, 16 (1), article, Wiley Online Library, p.103–121.

Kitzinger, J. (1995). Qualitative research. Introducing focus groups. *BMJ: British medical journal*, 311 (7000), article, BMJ Group, p.299–302.

Kjaergaard, H., Foldgast, A. M. and Dykes, A.-K. (2007). Experiences of non-progressive and augmented labour among nulliparous women: a qualitative interview study in a Grounded Theory approach. *BMC pregnancy and childbirth*, 7, p.15. [Online]. Available at: doi:10.1186/1471-2393-7-15.

Kjaergaard, H., Olsen, J., Ottesen, B. and Dykes, A.-K. (2009). Incidence and outcomes of dystocia in the active phase of labor in term nulliparous women with spontaneous labor onset. *Acta obstetrica et gynecologica Scandinavica*, 88 (4), p.402–407. [Online]. Available at: doi:10.1080/00016340902811001 [Accessed: 18 December 2014].

Kjaergaard, H., Olsen, J., Ottesen, B., Nyberg, P. and Dykes, A.-K. (2008). Obstetric risk indicators for labour dystocia in nulliparous women: a multi-centre cohort study. *BMC pregnancy and childbirth*, 8 (1), p.45. [Online]. Available at: doi:10.1186/1471-2393-8-45.

Klaus, M. H., Kennell, J. H., Robertson, S. S. and Sosa, R. (1986). Effects of

social support during parturition on maternal and infant morbidity. *British medical journal (Clinical research ed.)*, 293 (6547), p.585–587. [Online]. Available at: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1341377&tool=pmcentrez&rendertype=abstract> [Accessed: 7 February 2016].

Knight, R. L., Rice, G. E. and Permezel, M. (2005). Are alterations in plasma protease concentrations during labor associated with poor obstetric outcomes? *American journal of obstetrics and gynecology*, 193 (1), article, Elsevier, p.283–288.

Koro-Ljungberg, M. (2008). Validity and validation in the making in the context of qualitative research. *Qualitative health research*, 18 (7), p.983–989. [Online]. Available at: doi:10.1177/1049732308318039 [Accessed: 10 December 2014].

Kvale, S. (2006). Dominance Through Interviews and Dialogues. *Qualitative Inquiry*, 12 (3), p.480–500. [Online]. Available at: doi:10.1177/1077800406286235 [Accessed: 12 August 2014].

Lauria, L., Lamberti, A. and Buoncristiano, M. (2012). *Percorso nascita: promozione e valutazione della qualità di modelli operativi. Le indagini del 2008-2009 e del 2010-2011.*

Lavender, T. and Chapple, J. (2004). An exploration of midwives' views of the current system of maternity care in England. *Midwifery*, 20 (4), p.324–334.

Lavender, T., Hart, A. and Smyth, R. (2012). Effect of partogram use on outcomes for women in spontaneous labor at term. *Cochrane database of systematic reviews*, 4 (7), p.1–79. [Online]. Available at: doi:10.1002/14651858.CD005461.pub4.

Lavender, T., Hart, A., Walkinshaw, S., Campbell, E. and Alfirevic, Z. (2005). Progress of first stage of labour for multiparous women: an observational study. *BJOG: an international journal of obstetrics & gynaecology*, 112 (12),

article, Wiley Online Library, p.1663–1665.

Lawrence, A., Lewis, L., Hofmeyr, G. J., Dowswell, T. and Styles, C. (2009). Maternal positions and mobility during first stage labour. *Cochrane Database Syst Rev*, 2 (CD003934), article.

Laws, K. and McLeod, R. (2004). Case study and grounded theory : Sharing some alternative qualitative research methodologies with systems professionals. *Proceedings of the 22nd International Conference of the System Dynamics Society*, (Forrester 1961), p.1–25. [Online]. Available at: http://www.systemdynamics.org/conferences/2004/SDS_2004/PAPERS/220MCLEO.pdf [Accessed: 29 March 2016].

Lee, K. A. and Gay, C. L. (2004). Sleep in late pregnancy predicts length of labor and type of delivery. *American Journal of Obstetrics and Gynecology*, 191 (6), JOUR, p.2041–2046. [Online]. Available at: doi:<http://dx.doi.org/10.1016/j.ajog.2004.05.086>.

Lee, M. K., Chang, S. B. and Kang, D.-H. (2004). Effects of SP6 acupressure on labor pain and length of delivery time in women during labor. *Journal of Alternative & Complementary Medicine*, 10 (6), article, Mary Ann Liebert, Inc. 2 Madison Avenue Larchmont, NY 10538 USA, p.959–965.

Lindstrom, B. (2005). Salutogenesis. *Journal of Epidemiology & Community Health*, 59 (6), p.440–442. [Online]. Available at: doi:[10.1136/jech.2005.034777](https://doi.org/10.1136/jech.2005.034777).

Longhurst, R. (2003). Semi-structured interviews and focus groups. *Key methods in geography*, JOUR, p.117–132.

Lowe, N. K. (2007). A review of factors associated with dystocia and cesarean section in nulliparous women. *Journal of Midwifery & Women's Health*, 52 (3), JOUR, Wiley Online Library, p.216–228.

Lowe, N. K. and Corwin, E. J. (2011). Proposed biological linkages between obesity, stress, and inefficient uterine contractility during labor in humans.

Medical hypotheses, 76 (5), article, Elsevier, p.755–760.

Macdonald, S. (2011). *Mayes' Midwifery: A Textbook for Midwives*. 14th ed. Elsevier Health Sciences.

MacKenzie Bryers, H. and van Teijlingen, E. (2010). Risk, theory, social and medical models: A critical analysis of the concept of risk in maternity care. *Midwifery*, 26 (5), Elsevier, p.488–496. [Online]. Available at: doi:10.1016/j.midw.2010.07.003.

Malterud, K. (2001). Qualitative research: standards, challenges, and guidelines. *The lancet*, 358 (panel 2), p.483–488. [Online]. Available at: <http://www.sciencedirect.com/science/article/pii/S0140673601056276> [Accessed: 19 December 2014].

Marecek, J. (1989). INTRODUCTION: Special Issue on Theory and method in feminist psychology. *Psychology Of Women Quarterly*, 13 (4), p.367–377.

Mark, S. P., Croughan-Minihane, M. S. and Kilpatrick, S. J. (2000). Chorioamnionitis and uterine function. *Obstetrics & Gynecology*, 95 (6, Part 1), article, LWW, p.909–912.

Mårtensson, L., Kvist, L. J. and Hermansson, E. (2011). A national survey of how acupuncture is currently used in midwifery care at Swedish maternity units. *Midwifery*, 27 (1), article, Elsevier, p.87–92.

Mason, J. (2002). *Qualitative Researching*. SAGE Publications.

Mauthner, N. S. and Doucet, A. (2003). Reflexive Accounts and Accounts of Reflexivity in Qualitative Data Analysis. *Sociology*, 37 (3), p.413–431. [Online]. Available at: doi:10.1177/00380385030373002 [Accessed: 9 October 2014].

Mayes, M. (1930). *An Introduction to Midwifery: Elementary Anatomy, Physiology, and Ante-natal Hygiene*. 1st ed. London: The Scientific Press, Faber and Faber.

Mayes, M. and Bailey, R. (1976). *Mayes' midwifery: A textbook for midwives*. 9th ed. London: Bailliere Tindall.

McCourt, C. (2005). Research and theory for nursing and midwifery: Rethinking the nature of evidence. *Worldviews on Evidence-Based Nursing*, 2 (2), p.75–83. [Online]. Available at: doi:10.1111/j.1741-6787.2005.05003.x.

McCourt, C. (2009). *Childbirth, midwifery and concepts of time*. Berghahn Books.

McCourt, C., Rance, S. and Rayment, J. (2011). *Birthplace qualitative organisational case studies: how maternity care systems may affect the provision of care in different birth settings Birthplace in England research programme . Final report part 6*. (November).

McCourt, C., Rayment, J., Rance, S. and Sandall, J. (2014). An ethnographic organisational study of alongside midwifery units: a follow-on study from the Birthplace in England programme. *Health Services and Delivery Research*, 2 (7), p.1–100. [Online]. Available at: doi:10.3310/hsdr02070 [Accessed: 19 December 2014].

McGuinness, B. J. and Trivedi, A. N. (1999). Maternal height as a risk factor for Caesarean section due to failure to progress in labour. *Australian and New Zealand journal of obstetrics and gynaecology*, 39 (2), article, Wiley Online Library, p.152–154.

McIntosh, T. (2012). *A social history of maternity and childbirth: key themes in maternity care*. Routledge.

McLachlan, H. L., Forster, D. A., Davey, M.-A., Lumley, J., Farrell, T., Oats, J., Gold, L., Waldenström, U., Albers, L. and Biro, M. A. (2008). COSMOS: Comparing standard maternity care with one-to-one midwifery support: a randomised controlled trial. *BMC pregnancy and childbirth*, 8 (1), article, BioMed Central Ltd, p.35.

Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education. Revised and Expanded from*. ERIC.

Merry, U. (1995). *Coping with uncertainty: Insights from the new sciences of chaos, self-organization, and complexity*. Praeger Publishers/Greenwood Publishing Group.

Miles, M. B. and Huberman; A. M. (1984). *Qualitative Data Analysis: A Sourcebook of New Methods*. SAGE publications Inc.

Mir, R. and Watson, A. (2001). Critical realism and constructivism in strategy research: toward a synthesis. *Strategic Management Journal*, 22 (12), p.1169–1173. [Online]. Available at: doi:10.1002/smj.200 [Accessed: 24 November 2014].

Mitchell, M., Williams, J., Hobbs, E. and Pollard, K. (2006). The use of complementary therapies in maternity services: A survey. *British Journal of Midwifery*, 14 (10), article, p.576–582.

Moberg, K. U. (2003). *The oxytocin factor: Tapping the hormone of calm, love, and healing*. Da Capo Press.

Mok, H. and Stevens, P. (2005). Models of decision making. In: Raynor, M., Marshall, J. and Sullivan, A. (eds.), *Decision making in midwifery practice*, London: Churchill Livingstone, p.53–65.

Moravcsik, A. (2014). Transparency: The Revolution in Qualitative Research. *PS: Political Science & Politics*, 47 (1), p.48–53. [Online]. Available at: doi:10.1017/S1049096513001789.

Mori, R. and Tokumasu, H. (2011). High dose versus low dose oxytocin for augmentation of delayed labour. *Cochrane Database of ...*, (7). [Online]. Available at: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD007201.pub2/pdf/standard> [Accessed: 19 December 2014].

Moynihan, A. T., Hehir, M. P., Glavey, S. V, Smith, T. J. and Morrison, J. J.

(2006). Inhibitory effect of leptin on human uterine contractility in vitro. *American journal of obstetrics and gynecology*, 195 (2), article, Elsevier, p.504–509.

Mulhall, A. (2003). In the field: notes on observation in qualitative research. *Journal of Advanced Nursing*, 41 (3), p.306–313. [Online]. Available at: doi:10.1046/j.1365-2648.2003.02514.x.

Münstedt, K., Brenken, A. and Kalder, M. (2009). Clinical indications and perceived effectiveness of complementary and alternative medicine in departments of obstetrics in Germany: a questionnaire study. *European Journal of Obstetrics {&} Gynecology and Reproductive Biology*, 146 (1), article, Elsevier, p.50–54.

Münstedt, K., Thienel, J., Hrogovic, I., Hackethal, A., Kalder, M. and Misselwitz, B. (2011). Use of acupuncture and other CAM methods in obstetrics: an analysis of 409,413 deliveries from Hesse, Germany. *The Journal of Alternative and Complementary Medicine*, 17 (5), article, Mary Ann Liebert, Inc. 140 Huguenot Street, 3rd Floor New Rochelle, NY 10801 USA, p.421–426.

Muoni, T. (2012). Decision-making, intuition and the midwife: Understanding heuristics. *British Journal of Midwifery*, 20 (1), p.52–56.

Myles, M. (1953). *A textbook for midwives*. 1st ed. Edinburgh: Livingstone.

Myles, M. (1956). *A textbook for Midwives*. 2nd ed. Edinburgh: Livingstone.

Myles, M. (1961). *A textbook for Midwives*. 4th ed. Edinburgh: Livingstone.

Myles, M. (1971). *A textbook for Midwives*. 7th ed. Edinburgh: Livingstone.

Myles, M. (1981). *Textbook for Midwives: With Modern Concepts of Obstetric and Neonatal Care*. 9th ed. Edinburgh: Churchill Livingstone.

Myles, M. F. (1975). *Textbook for midwives: with modern concepts of obstetric and neonatal care*. 8th ed. Churchill Livingstone.

National Audit Office. (2013). Maternity services in England. *The Stationery Office*, (November). [Online]. Available at: <http://www.nao.org.uk/wp-content/uploads/2013/11/10259-001-Maternity-Services-Book-1.pdf>.

National Center for Complementary and Alternative Medicine. (2015). *Definition and categories of CAM*. [Online]. Available at: <http://nccam.nih.gov/health/whatiscam/>.

National Federation of Women's Institutes. (2013). *Support overdue: women's experiences of maternity services Executive Summary*. (May), London. [Online]. Available at: [http://sfx.scholarsportal.info/ryerson?sid=OVID:mwicdb&id=pmid:&id=doi:&issn=&isbn=&volume=&issue=&spage=&pages=&date=2013&title=London:+NFWI&atitle=Support+overdue:+women's+experiences+of+maternity+services+\[Executive+Summ](http://sfx.scholarsportal.info/ryerson?sid=OVID:mwicdb&id=pmid:&id=doi:&issn=&isbn=&volume=&issue=&spage=&pages=&date=2013&title=London:+NFWI&atitle=Support+overdue:+women's+experiences+of+maternity+services+[Executive+Summ).

National Institute for Health and Care Excellence. (2007). *CG55 Intrapartum care: NICE guideline*. [Online]. Available at: [doi:10.1016/j.jmwh.2007.02.011](https://doi.org/10.1016/j.jmwh.2007.02.011).

National Institute for Health and Care Excellence. (2014). *Intrapartum care care of healthy women and their babies during childbirth*. (March). [Online]. Available at: <http://www.nice.org.uk/guidance/index.jsp?action=folder&o=67642>.

National Maternity Review. (2016). *Better Births. Improving outcomes of maternity services in England*.

Neal, J. L. and Lowe, N. K. (2012). Physiologic partograph to improve birth safety and outcomes among low-risk, nulliparous women with spontaneous labor onset. *Medical hypotheses*, 78 (2), article, Elsevier, p.319–326.

Neal, J. L., Lowe, N. K., Patrick, T. E., Cabbage, L. A. and Corwin, E. J. (2010). What is the slowest-yet-normal cervical dilation rate among nulliparous women with spontaneous labor onset? *Journal of obstetric, gynecologic, and neonatal nursing : JOGNN / NAACOG*, 39 (4), p.361–369. [Online]. Available

at: doi:10.1111/j.1552-6909.2010.01154.x [Accessed: 8 February 2016].

Neal, J. L., Lowe, N. K., Schorn, M. N., Holley, S. L., Ryan, S. L., Buxton, M. and Wilson-Liverman, A. M. (2015a). Labor Dystocia: A Common Approach to Diagnosis. *Journal of Midwifery and Women's Health*, 60 (5), p.499–509. [Online]. Available at: doi:10.1111/jmwh.12360.

Neal, J. L., Ryan, S. L., Lowe, N. K., Schorn, M. N., Buxton, M., Holley, S. L. and Wilson-Liverman, A. M. (2015b). Labor Dystocia: Uses of Related Nomenclature. *Journal of Midwifery and Women's Health*, 60 (5), p.485–498. [Online]. Available at: doi:10.1111/jmwh.12355.

Neergaard, M. A., Olesen, F., Andersen, R. S. and Sondergaard, J. (2009). Qualitative description - the poor cousin of health research? *BMC medical research methodology*, 9, p.52. [Online]. Available at: doi:10.1186/1471-2288-9-52 [Accessed: 18 December 2014].

Neilson, J. P., Lavender, T., Quenby, S. and Wray, S. (2003). Obstructed labour. *British Medical Bulletin*, 67, p.191–204. [Online]. Available at: doi:10.1093/bmb/ldg018.

Ness, A., Goldberg, J. and Berghella, V. (2005). Abnormalities of the first and second stages of labor. *Obstetrics and gynecology clinics of North America*, 32 (2), article, p.201--20, viii. [Online]. Available at: doi:10.1016/j.ogc.2005.01.007 [Accessed: 18 December 2014].

NHS Commissioning Board. (2012). *Commissioning Maternity Services A Resource Pack to support Clinical Commissioning Groups*. (July).

Niiniluoto, I. (2002). *Critical scientific realism*. Oxford University Press, USA.

Noseworthy, D. A., Phibbs, S. R. and Benn, C. a. (2013). Towards a relational model of decision-making in midwifery care. *Midwifery*, 29 (7), Elsevier, p.e42–e48. [Online]. Available at: doi:10.1016/j.midw.2012.06.022.

Nystedt, A. and Hildingsson, I. (2014). Diverse definitions of prolonged labour and its consequences with sometimes subsequent inappropriate

treatment. *BMC pregnancy and childbirth*, 14 (1), p.233. [Online]. Available at: doi:10.1186/1471-2393-14-233.

Nystedt, A., Högberg, U. and Lundman, B. (2005). The negative birth experience of prolonged labour: a case-referent study. *Journal of clinical nursing*, 14 (5), article, Wiley Online Library, p.579–586.

Nystedt, A., Högberg, U. and Lundman, B. (2008). Women's experiences of becoming a mother after prolonged labour. *Journal of advanced nursing*, 63 (3), article, Wiley Online Library, p.250–258.

O'Driscoll, K., Foley, M. and MacDonald, D. (1984). Active Management of Labor as an Alternative to Cesarean Section for Dystocia. *Obstetrics & Gynecology*, 63, p.485–490.

O'Sullivan, G., Liu, B., Hart, D., Seed, P. and Shennan, A. (2009). Effect of food intake during labour on obstetric outcome: randomised controlled trial. *BMJ (Clinical research ed.)*, 338 (mar24{ }2), p.b784. [Online]. Available at: doi:10.1136/bmj.b784.

Odent, M. (1986). Primal health. *Medicine*, 329, article, Random House (UK), p.1246–1253.

Odent, M. (1997). Can water immersion stop labor? *Journal of nurse-midwifery*, 42 (5), JOUR, Wiley Online Library, p.414–416.

Odent, M. R. (1991). Fear of death during labour. *Journal of reproductive and infant psychology*, 9 (1), article, Taylor {&} Francis, p.43–47.

Officers UCN. (2010). *Midwifery 2020: Delivering expectations*. London. [Online]. Available at: <http://midwifery2020.org.uk/documents/M2020Deliveringexpectations-FullReport2.pdf>.

Oliver, P. and Jupp, V. (2006). Purposive sampling. In: Jupp, V. (ed.), *The Sage Dictionary of Social Research Methods*, p.244–245.

Orb, A., Eisenhauer, L. and Wynaden, D. (2001). Ethics in qualitative research. *Journal of nursing scholarship*, 33 (1), JOUR, Wiley Online Library, p.93–96.

Page, L. A. and McCandlish, R. (2006). *The new midwifery: science and sensitivity in practice*. 2nd ed. Elsevier Health Sciences.

Page, M. and Mander, R. (2014). Intrapartum uncertainty: A feature of normal birth, as experienced by midwives in Scotland. *Midwifery*, 30 (1), Elsevier, p.28–35. [Online]. Available at: doi:10.1016/j.midw.2013.01.012.

Pairman, S., Tracy, S. K., Thorogood, C. and Pincombe, J. (2010). *Midwifery: preparation for practice*. Elsevier Australia.

Parr, S. (2013). Integrating critical realist and feminist methodologies: ethical and analytical dilemmas. *International Journal of Social Research Methodology*, 18 (2).

Parratt, J. A. and Fahy, K. M. (2008). Including the nonrational is sensible midwifery. *Women and birth : journal of the Australian College of Midwives*, 21 (1), p.37–42. [Online]. Available at: doi:10.1016/j.wombi.2007.12.002 [Accessed: 8 February 2016].

Patterson, J., Skinner, J. and Foureur, M. (2015). Midwives' decision making about transfers for 'slow' labour in rural New Zealand. *Midwifery*, Elsevier, p.1–7. [Online]. Available at: doi:10.1016/j.midw.2015.02.005.

Peirce, C. S. and Turrisi, P. A. (1997). *Pragmatism as a principle and method of right thinking: The 1903 Harvard lectures on pragmatism*. SUNY Press.

Pembroke, N. F. and Pembroke, J. J. (2008). The spirituality of presence in midwifery care. *Midwifery*, 24 (3), p.321–327. [Online]. Available at: doi:10.1016/j.midw.2006.10.004 [Accessed: 29 February 2016].

Pescetto, G., De Cecco, L., Pecorari, D. and Ragni, N. (2009). *Manuale di ginecologia e ostetricia: ostetricia*. Roma: Società Editrice Universo.

Philpott, R. H. and Castle, W. M. (1972). Cervicographs in the management of labour in primigravidae. *BJOG: An International Journal of Obstetrics & Gynaecology*, 79 (7), article, Wiley Online Library, p.592–598.

Pope, C. (1995). FROM: Pope. C., & Mays, N.(1995). Qualitative research: Reaching the parts other methods cannot reach: An introduction to qualitative methods in health and health services research. *BMJ*, 1 (311), 42-45. *BMJ: British medical journal*, 311, article, p.42–45.

Pope, C., Ziebland, S. and Mays, N. (2000). Analysing qualitative data. *Bmj*, 320 (January), p.5–7. [Online]. Available at: <http://www.bmj.com/content/320/7227/114.short> [Accessed: 19 December 2014].

Quenby, S., Matthew, A., Zhang, J., Dawood, F. and Wray, S. (2011). In vitro myometrial contractility reflects indication for caesarean section. *BJOG: An International Journal of Obstetrics & Gynaecology*, 118 (12), article, Wiley Online Library, p.1499–1506.

Quenby, S., Pierce, S. J., Brigham, S. and Wray, S. (2004). Dysfunctional labor and myometrial lactic acidosis. *Obstetrics & Gynecology*, 103 (4), article, LWW, p.718–723.

Ragusa, A., Gizzo, S., Noventa, M., Ferrazzi, E., Deiana, S. and Svelato, A. (2016). Prevention of primary caesarean delivery: comprehensive management of dystocia in nulliparous patients at term. *Archives of Gynecology and Obstetrics*, Springer Berlin Heidelberg. [Online]. Available at: doi:10.1007/s00404-016-4046-5.

Raynor, M. D., Marshall, J. E. and Sullivan, A. (2005). *Decision making in midwifery practice*. Elsevier Health Sciences.

Redmond, R. and Curtis, E. (2009). *Focus groups: principles and process*. (2000), p.57–70.

Redshaw, M. and Rowe, R. (2011). Mapping maternity care. The

configuration of maternity care in England. Birthplace in England research programme. Final report part 3. ... *programme*, (November 2011). [Online]. Available at: <http://core.kmi.open.ac.uk/download/pdf/9982826.pdf> [Accessed: 19 December 2014].

Redshaw, M., Rowe, R., Schroeder, L., Puddicombe, D., Macfarlane, A., Newburn, M., McCourt, C., Sandall, J., Silverton, L. and Marlow, N. (2011). *Mapping maternity care: the configuration of maternity care in England. Birthplace in England research programme.* article, HMSO.

Regalia, A., Fumagalli, S., Nelli, E., Nespoli, A. and Usuelli, L. (2004). *Pro-muovere il parto-La postura come procedura nel travaglio e nel parto.* Monza: IRIS Istituto Ricerca Intervento Salute.

Rhodes, P. (1995). *A short history of clinical midwifery: the development of ideas in the professional management of childbirth.* Butterworth-Heinemann.

Rickles, D., Hawe, P. and Shiell, A. (2007). A simple guide to chaos and complexity. *Journal of Epidemiology & Community Health*, 61 (11), p.933–937. [Online]. Available at: doi:10.1136/jech.2006.054254.

Ritchie, J. and Lewis, J. (2003). *Qualitative research practice. A guide for Social Science students and researchers.* SAGE Publications Ltd.

Robinson, F. (2016). *NHS nurses, midwives, managers and directors pay scales for 2016/2017.* [Online]. Available at: <http://www.hospitaldr.co.uk/blogs/guidance/nurses-and-nhs-managers-pay-scales>.

Rooney, P. (1993). Feminist-Pragmatist Revisionings of Reason, Knowledge, and Philosophy. *Hypatia*, 8 (2), p.15–37.

Rowe, R. E., Fitzpatrick, R., Hollowell, J. and Kurinczuk, J. J. (2012). Transfers of women planning birth in midwifery units: data from the birthplace prospective cohort study. *BJOG: an international journal of obstetrics and*

gynaecology, 119 (9), p.1081–1090. [Online]. Available at: doi:10.1111/j.1471-0528.2012.03414.x [Accessed: 22 February 2016].

Rowe, R. E., Townend, J., Brocklehurst, P., Knight, M., Macfarlane, A., McCourt, C., Newburn, M., Redshaw, M., Sandall, J., Silverton, L. and Hollowell, J. (2013). Duration and urgency of transfer in births planned at home and in freestanding midwifery units in England: secondary analysis of the birthplace national prospective cohort study. *BMC Pregnancy & Childbirth*, 13, p.224. [Online]. Available at: doi:10.1186/1471-2393-13-224.

Rowley, J. (2002). Using case studies in research. *Management Research News*, 25 (1), p.16–27. [Online]. Available at: doi:10.1108/01409170210782990 [Accessed: 20 December 2014].

Royal College of Midwives. (2012). Evidence based guidelines for midwifery-led care in labour: Latent phase. *Royal College of Midwives*, p.11.

Saldana, J. (2013). *The coding manual for qualitative researchers*. 2nd ed. Los Angeles: Sage.

Sale, J., Lohfeld, L. and Brazil, K. (2002). Revisiting the quantitative-qualitative debate: Implications for mixed-methods research. *Quality and quantity*, p.43–53. [Online]. Available at: <http://link.springer.com/article/10.1023/A:1014301607592> [Accessed: 19 December 2014].

Samuels, N., Zisk-Rony, R. Y., Singer, S. R., Dulitzky, M., Mankuta, D., Shuval, J. T. and Oberbaum, M. (2010). Use of and attitudes toward complementary and alternative medicine among nurse-midwives in Israel. *American journal of obstetrics and gynecology*, 203 (4), article, Elsevier, p.341.e1--341.e7.

Sandelowski, M. (2000). Focus on research methods-whatever happened to qualitative description? *Research in nursing and health*, p.334–340. [Online]. Available at: <http://www.wou.edu/~mcgladm/Quantitative Methods/optional stuff/qualitative description.pdf> [Accessed: 19

December 2014].

Satin, A. J., Maberry, M. C., Leveno, K. J., Sherman, M. L. and Kline, D. M. (1992). Chorioamnionitis: a harbinger of dystocia. *Obstetrics & Gynecology*, 79 (6), article, LWW, p.913–915.

Saunders, N. S. T. G., Paterson, C. M. and Wadsworth, J. (1992). Neonatal and maternal morbidity in relation to the length of the second stage of labour. *BJOG: an international journal of obstetrics & gynaecology*, 99 (5), article, Wiley Online Library, p.381–385.

Sayer, A. (2000). *Realism and social science*. Sage.

Scapparino, T., Iannuzzi, L., Salvioli, C., Chiaroni, D., Sulli, F. and D'Antuono, L. (2016). I luoghi della nascita tra sicurezza, economia e scelta. I Centri Nascita in Italia: esperienze, politiche, prospettive. *I centri nascita intraospedalieri in Italia: traguardi e barriere*, Genova.

Schmid, V. (2014). La necessità di cambiare il paradigma. *D&D-Donna & Donna il Giornale delle Ostetriche*, 85, p.15.

Schwandt, T. A. (2001). Dictionary of Qualitative Inquiry. *SAGE Publications Ltd*, p.320. [Online]. Available at: <http://srmo.sagepub.com/view/the-sage-dictionary-of-qualitative-inquiry/SAGE.xml> [Accessed: 29 March 2016].

Segaar, D., Bolman, C., Willemsen, M. C. and De Vries, H. (2007). Identifying determinants of protocol adoption by midwives: a comprehensive approach. *Health education research*, 22 (1), JOUR, Oxford Univ Press, p.14–26.

Selin, L., Almström, E., Wallin, G. and Berg, M. (2009). Use and abuse of oxytocin for augmentation of labor. *Acta obstetrica et gynecologica Scandinavica*, 88 (12), p.1352–1357. [Online]. Available at: [doi:10.3109/00016340903358812](https://doi.org/10.3109/00016340903358812) [Accessed: 18 December 2014].

Selin, L., Wallin, G. and Berg, M. (2008). Dystocia in labour–risk factors, management and outcome: a retrospective observational study in a

Swedish setting. *Acta obstetricia et gynecologica Scandinavica*, 87 (2), article, Taylor & Francis, p.216–221.

Setola, N. and Borgianni, S. (2016). *Designing Public Spaces in Hospitals*. Routledge.

Sharan B. Merriam. (1998). *Qualitative Research and Case Study Applications in Education*. Jossey-Bass Publishers, 350 Sansome St, San Francisco, CA 94104; phone: 415-433-1740; fax: 800-605-2665; World Wide Web: www.josseybass.com (\$21.95). [Online]. Available at: <http://eric.ed.gov/?id=ed415771> [Accessed: 29 March 2016].

Shazly, S. A. M., Embaby, L. H. O. and Ali, S. S. (2014). The labour scale - Assessment of the validity of a novel labour chart: A pilot study. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 54 (4), p.322–326. [Online]. Available at: doi:10.1111/ajo.12209.

Sheiner, E., Levy, A., Feinstein, U., Hallak, M. and Mazor, M. (2002). Risk factors and outcome of failure to progress during the first stage of labor: a population-based study*. *Acta obstetricia et gynecologica Scandinavica*, 81 (3), article, Wiley Online Library, p.222–226.

Shobeiri, F., Tehranian, N. and Nazari, M. (2007). Amniotomy in labor. *International Journal of Gynecology & Obstetrics*, 96 (3), article, Elsevier, p.197–198.

Shuval, J. T. and Gross, S. E. (2008). Midwives practice CAM: feminism in the delivery room. *Complementary Health Practice Review*, 13 (1), article, SAGE Publications, p.46–62.

Siddiqui, J. (2005). The role of knowledge in midwifery decision making. In: Raynor, M. D., Marshall, J. E. and Sullivan, A. (eds.), *Decision making in midwifery practice*, Elsevier Churchill Livingstone, p.23–36.

Silverman, D. (2000). *Doing qualitative research. A practical guide*. Thousand Oaks, CA: Sage Publications, 93, JOUR.

- Silverman, D. (2009). *Doing Qualitative Research*. SAGE Publications Ltd.
- Sim, J. and Mcsp, B. A. (1998). *Collecting and analysing qualitative data : issues raised by the focus group*. 28 (2), p.345–352.
- Simkin, P. and Ancheta, R. (2011). *The labor progress handbook: early interventions to prevent and treat dystocia*. John Wiley and Sons.
- Skilnand, E., Fossen, D. and Heiberg, E. (2002). Acupuncture in the management of pain in labor. *Acta obstetricia et gynecologica Scandinavica*, 81 (10), article, Wiley Online Library, p.943–948.
- Smith, C. A. and Crowther, C. A. (2004). Acupuncture for induction of labour. *Cochrane Database Syst Rev*, 1, article, Wiley Online Library.
- Smith, S., Dewar, B., Pullin, S. and Tocher, R. (2010). Relationship centred outcomes focused on compassionate care for older people within in-patient care settings. *International Journal of Older People Nursing*, 5 (2), p.128–136. [Online]. Available at: doi:10.1111/j.1748-3743.2010.00224.x.
- Smyth, R., Alldred, S. K. and Markham, C. (2006). Amniotomy for shortening spontaneous labour. *Cochrane Database of Systematic Reviews*, (4). [Online]. Available at: doi:10.1002/14651858.CD006167.
- Sobh, R. and Perry, C. (2006). Research design and data analysis in realism research. *European Journal of marketing*, 40 (11/12), article, Emerald Group Publishing Limited, p.1194–1209.
- Spandrio, R., Regalia, A. and Bestetti, G. (2015a). *Fisiologia della nascita Dai prodromi al post partum*. 3rd ed. Carocci Faber-le professioni sanitarie.
- Spandrio, R., Regalia, A., Bestetti, G., Burns, E., Mauri, E. and Rossetti, A. (2015b). Il travaglio. In: *Fisiologia della nascita. Dai prodromi al post partum*, Carocci Faber-le professioni sanitarie.
- Spina, E. (2014). *[La professione ostetrica: mutamenti e nuove prospettive]*. (2010), p.53–64. [Online]. Available at: doi:10.1400/224641.

Spradley, J. P. (1980). *Participant observation*. article, Holt, Rinehart and Winston.

Stake, R. E. (1995). *The art of case study research*. Sage.

Stake, R. E. (2006). *Multiple Case Study Analysis*. New York: Guilford Press. [Online]. Available at: doi:ISBN 9781593852481.

Stålhammar, A. and Boström, B. (2008). Policies for labour management–existence and content. *Scandinavian journal of caring sciences*, 22 (2), article, Wiley Online Library, p.259–264.

Stapleton, S. R., Osborne, C. and Illuzzi, J. (2013). Outcomes of Care in Birth Centers: Demonstration of a Durable Model. *Journal of Midwifery and Women's Health*, 58 (1), p.3–14. [Online]. Available at: doi:10.1111/jmwh.12003.

Strauss, A. and Corbin, J. (1990). *Basics of qualitative research*. Newbury Park, CA: Sage.

Stuart, C. C. (2000). Invasive actions in labour. Where have the 'old tricks' gone? *The practising midwife*, 3 (8), JOUR, p.30.

Studd, J. (1973). Partograms and nomograms of cervical dilatation in management of primigravid labour. *Br Med J*, 4 (5890), JOUR, British Medical Journal Publishing Group, p.451–455.

Suchman, A. L. (2006). A New Theoretical Foundation for Relationship-centered Care. *Journal of general internal medicine*, 21, p.S40–S44. [Online]. Available at: doi:10.1111/j.1525-1497.2006.00308.x.

Sultana, F. (2007). *Participatory Ethics : Negotiating Fieldwork Dilemmas in International Research*.

Swanborn, P. (2010). *Case study research: what, why and how?* Sage.

Sweet, B. and Tiran, D. (1997). *Mayes' Midwifery: A Textbook for Midwives (10th edn)* Balliere Tindall. misc, London.

Teijlingen, E. van. (2005). A Critical Analysis of the Medical Model as used in the Study of Pregnancy and Childbirth. *Sociological Research Online*, 10 (2), Sociological Research Online. [Online]. Available at: <http://www.socresonline.org.uk/10/2/teijlingen.html> [Accessed: 8 February 2016].

Tellis, W. M. (1997). Application of a case study methodology. *The qualitative report*, 3 (3), article, p.1–19.

The British Standards Institutions. (2016). *What is a standard? & What does it do?* [Online]. Available at: <http://www.bsigroup.com/en-GB/standards/Information-about-standards/what-is-a-standard/>.

Thomas, F. (1953). *Mayes' Handbook for Midwives and Maternity Nurses*. 4th ed. London: Tindall, Bailliere.

Thorne, S. (2000). Data analysis in qualitative research. *Evidence Based Nursing*, 3 (3), JOUR, p.68–70. [Online]. Available at: [doi:10.1136/ebn.3.3.68](https://doi.org/10.1136/ebn.3.3.68).

Tiran, D. (2010). Complementary therapies and the NMC. *The practising midwife*, 13 (5), article, Elsevier, p.1–3.

Treacy, A., Robson, M. and O'Herlihy, C. (2006). Dystocia increases with advancing maternal age. *American journal of obstetrics and gynecology*, 195 (3), article, Elsevier, p.760–763.

University of Nottingham. (2010). *University of Nottingham Code of Research Conduct and Research Ethics*.

Uvnäs-Moberg, K. (2015). How kindness, warmth, empathy and support promote the progress of labour: a physiological perspective. In: Byrom, S. and Downe, S. (eds.), *The roar behind the silence*, London: Printer & Martin Ltd.

Varner, M. W., Fraser, A. M., Hunter, C. Y., Corneli, P. S. and Ward, R. H. (1996). The intergenerational predisposition to operative delivery.

Obstetrics & Gynecology, 87 (6), article, LWW, p.905–911.

Wagner, M. (1994). *Pursuing the birth machine: the search for appropriate birth technology*. Ace Graphics.

Wagner, M. (2001). Fish can't see water: The need to humanize birth. *International Journal of Gynecology and Obstetrics*, 75 (SUPPL. 1), p.25–37. [Online]. Available at: doi:10.1016/S0020-7292(01)00519-7.

Waldenström, U., Hildingsson, I., Rubertsson, C. and Rådestad, I. (2004). A negative birth experience: Prevalence and risk factors in a national sample. *Birth*, 31 (1), p.17–27. [Online]. Available at: doi:10.1111/j.0730-7659.2004.0270.x.

Walker, D. and Myrick, F. (2006). Grounded theory: an exploration of process and procedure. *Qualitative health research*, 16 (4), p.547–559. [Online]. Available at: doi:10.1177/1049732305285972 [Accessed: 9 July 2014].

Walraven, G. E. (1994). WHO partograph. *The Lancet*, 344 (8922), JOUR, p.617.

Walsh, D. (2000). Part three : Assessing women ' s progress in labour. *British Journal of Midwifery*, 8 (7), p.449–457.

Walsh, D. (2006). Subverting the assembly-line: childbirth in a free-standing birth centre. *Social Science & Medicine*, 62 (6), JOUR, Elsevier, p.1330–1340.

Walsh, D. (2012a). *Evidence and skills for normal labour and birth. A guide for midwives*. 2nd ed. Routledge.

Walsh, D. (2012b). *Evidence-based care for normal labour and birth: a guide for midwives*. Francis, T. & (ed.).

Walsh, D. and Devane, D. (2012). A metasynthesis of midwife-led care. *Qualitative health research*, 22 (7), p.897–910. [Online]. Available at:

doi:10.1177/1049732312440330 [Accessed: 13 December 2014].

Walsh, D. and Downe, S. M. (2004). Outcomes of free-standing, midwife-led birth centers: a structured review. *Birth (Berkeley, Calif.)*, 31 (3), p.222–229. [Online]. Available at: doi:10.1111/j.0730-7659.2004.00309.x [Accessed: 22 February 2016].

Walsh, D. and Evans, K. (2014). Critical realism: An important theoretical perspective for midwifery research. *Midwifery*, 30 (1), JOUR, Elsevier, p.e1–e6.

Walsh, D. and Newburn, M. (2002). Towards a social model of childbirth: part one. *British Journal of Midwifery*, 10 (8), JOUR, MA Healthcare London, p.476–481.

Wei, S., Wo, B. L., Xu, H., Luo, Z. C., Roy, C. and Fraser, W. D. (2009). Early amniotomy and early oxytocin for prevention of, or therapy for, delay in first stage spontaneous labour compared with routine care. *Cochrane Database of Systematic Reviews*, (2). [Online]. Available at: doi:10.1002/14651858.CD006794.pub2.

Whiting, L. (2008). Semi-structured interviews: guidance for novice researchers. *Nursing Standard*, 22 (23), p.59–65. [Online]. Available at: <http://rcnpublishing.com/doi/full/10.7748/ns2008.02.22.23.35.c6420> [Accessed: 19 December 2014].

Wiberg-Itzel, E., Pettersson, H., Andolf, E., Hansson, A., Winbladh, B. and Åkerud, H. (2010). Lactate concentration in amniotic fluid: a good predictor of labor outcome. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 152 (1), article, Elsevier, p.34–38.

Wiklund, I., Wallin, J., Vikström, M. and Ransjö-Arvidson, A.-B. (2012). Swedish midwives' rating of risks during labour progress and their attitudes toward performing intrapartum interventions: a web-based survey. *Midwifery*, 28 (4), p.E456-60. [Online]. Available at: doi:10.1016/j.midw.2011.06.008 [Accessed: 22 February 2016].

Williams, J. and Mitchell, M. (2007). Midwifery managers' views about the use of complementary therapies in the maternity services. *Complementary Therapies in Clinical Practice*, 13 (2), article, Elsevier, p.129–135.

Winter, C. (2002). Orderly chaos: how do independent midwives assess the progress of labour. *London: South Bank University*, Master dissertation, South Bank University.

Winter, C. and Duff, M. (2009). The progress of labour: Orderly Chaos? In: McCourt, C. (ed.), *Childbirth, midwifery and concepts of time*, p.84–103.

Woodward, K. (2008). Hanging out and hanging about: Insider/outsider research in the sport of boxing. *Ethnography*, 9 (4), p.536–560. [Online]. Available at: doi:10.1177/1466138108096991 [Accessed: 18 December 2014].

World Health Organization. (2014). *WHO recommendations for augmentation of labour*. World Health Organization, p.57.

World Medical Association. (2008). *Declaration of Helsinki. Ethical principles for medical research involving human subjects*. JOUR.

Wray, S. (2007). Insights into the uterus. *Experimental physiology*, 92 (4), article, Wiley Online Library, p.621–631.

Yin, R. K. (1981). The Case Study Crisis: Some Answers. *Administrative Science Quarterly*, 26 (1), p.58–65. [Online]. Available at: doi:10.2307/2392599.

Yin, R. K. (1994). *Case study research: design and methods*. Sage Publications.

Yin, R. K. (1999). Enhancing the quality of case studies in health services research. *Health services research*, 34 (5 Pt 2), article, Health Research {&} Educational Trust, p.1209.

Yin, R. K. (2009). *Case Study Research: Design and Methods*. [Online]. Available at: <http://www.amazon.com/Case-Study-Research-Methods->

Applied/dp/1412960991%3FSubscriptionId%3D0J4WYP9344R0ZYYB9F
G2%26tag%3D0537-7404-
2182%26linkCode%3Dxm2%26camp%3D2025%26creative%3D165953
%26creativeASIN%3D1412960991 [Accessed: 29 March 2016].

Zanetti-Dällenbach, R., Lapaire, O., Maertens, A., Holzgreve, W. and Hösli, I. (2006). Water birth, more than a trendy alternative: a prospective, observational study. *Archives of gynecology and obstetrics*, 274 (6), article, Springer, p.355–365.

Zhang, J., Bricker, L., Wray, S. and Quenby, S. (2007). Poor uterine contractility in obese women. *BJOG: An International Journal of Obstetrics and Gynaecology*, 114 (3), p.343–348. [Online]. Available at: doi:10.1111/j.1471-0528.2006.01233.x.

Zhang, J., Troendle, J. F. and Yancey, M. K. (2002). Reassessing the labor curve in nulliparous women. *American Journal of Obstetrics and Gynecology*, 187 (4), p.824–828. [Online]. Available at: doi:10.1067/mob.2002.127142 [Accessed: 6 December 2014].

Zhu, B.-P., Grigorescu, V., Le, T., Lin, M., Copeland, G., Barone, M. and Turabelidze, G. (2006). Labor dystocia and its association with interpregnancy interval. *American journal of obstetrics and gynecology*, 195 (1), p.121–128. [Online]. Available at: doi:10.1016/j.ajog.2005.12.016 [Accessed: 18 December 2014].

APPENDICES

Appendix 1: Search Strategy

Databases used:

- MEDLINE (OVID 1950)
- AMED
- MATERNITY AND INFANT CARE
- EMBASE
- COCHRANE LIBRARY
- CINHAL
- ASSIA

Limits:

Humans, English and Italian languages

Keywords:

Slow, poor, delayed, stalled, arrest, progress, failure to progress, dysfunctional, prolonged, abnormal, labour, dystocia, dynamic, uterine, functional, dysfunctional dystocia, obstetric labour complications, inertia, uterine, inefficient, hypotonic, weak, inadequate, contractions, augmentation, midwifery, midwives, approaches, treatment, management, interventions, non-pharmacological, alternative, complementary medicine, complementary therapies, decision, decision making, midwives-led units.

Example of search strategy within EMBASE and OVID databases:

Results Generated From: Embase <1980 to 2016 Week 11>

Set	Search	Results
001	exp *midwife/ or midwi*.mp.	1833
002	(slow adj5 progress adj5 labo?r).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	4
003	approach*.mp.	135832
004	(failure adj5 progress).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	191
005	dysfunction* labo?r.mp.	17
006	management*.mp.	115241
007	3 or 6	233469
008	2 or 4 or 5	211
009	intervent*.mp.	93773
010	1 and 2 and 9	0
011	limit 10 to english language	0
012	1 and 5 and 9	0
013	limit 12 to english language	0
014	(inefficient adj3 contractions).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	2
015	limit 14 to english language	2
016	(inefficient adj3 uterine adj3 contractions).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	1
017	3 or 6 or 9	301158
018	1 and 16 and 17	0
019	1 and 9 and 16	0
020	dystocia/ or dystocia.mp.	608
021	1 and 17 and 20	18
022	limit 21 to english language	16
023	uterine inertia.mp.	18
024	1 and 23	0

025	homeopathy/ or herbaceous agent/ or alternative medicine/ or acupuncture/ or complementary alternative medicine.mp.	7894
026	20 and 25	1
027	20 and 25	1
028	limit 27 to english language	1
029	maternity ward/ or birth centre*.mp.	204
030	midwife-led unit*.mp.	7
031	20 and 29	3
032	29 or 30	210
033	20 and 32	3
034	limit 33 to english language	2
035	5 and 32	0
036	exp *midwife/ or midwi* care.mp.	352
037	2 and 36	0
038	limit 37 to updatetrange="emed13(20160303161720-2016031014243 3]"	0

Your autoalert was checked against the latest changes but no relevant documents were found.

Total documents retrieved: 0

Results Generated From:

Ovid MEDLINE(R) <1946 to March Week 1 2016>

Ovid MEDLINE(R) <2012 to March Week 1 2016> (updates since 2016-03-02)

Set	Search	Results
001	dystocia/ or uterine inertia/	374
002	(dystocia and (functional or mechanical)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	7
003	slow progress of labo?r.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	7
004	(slow progress and labo?r).mp. [mp=title, abstract, original	11

title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]

005 (slow adj5 labo?r).mp. [mp=title, abstract, original title, 36
name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]

006 failure to progress.mp. [mp=title, abstract, original title, 110
name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]

007 (labo?r and failure to progress).mp. [mp=title, abstract, or 49
original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]

008 1 or 2 or 3 or 4 or 5 or 6 or 7 512

009 midwi*.mp. [mp=title, abstract, original title, name of substance 4290
word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]

010 8 and 9 37

011 intervention*.mp. [mp=title, abstract, original title, name 165113
of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]

012 8 and 11 67

013 8 and 9 and 11 10

014 limit 13 to updaterrange="medl(20160302121017-20160309115751] 0
"

Appendix 2: Study Protocol from the University of Nottingham



AN EXPLORATION OF MIDWIVES' APPROACHES TO SLOW PROGRESS OF LABOUR IN BIRTH CENTRES, USING CASE STUDY METHODOLOGY

Draft 1.2/ Final Version 1.0
3rd October 2012

Short title: *An exploration of midwives' approaches to slow progress of labour*

NRES reference:

Trial Sponsor: University of Nottingham

Sponsor reference: 12106

Funding Source: Self-funded

Page 1 of 21

"An exploration of midwives' approaches to slow progress of labour". Protocol Draft 1.2 Final Version 1.0
Date 3rd October 2012

This protocol is confidential and the property of the University of Nottingham. No part of it may be transmitted, reproduced, published, or used by others persons without prior written authorisation from the University of Nottingham

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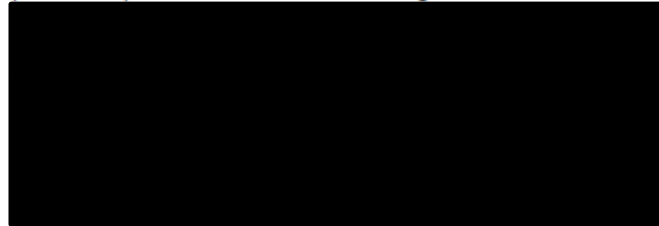
"An exploration of midwives' approaches to slow progress of labour". Protocol/Draft 1.2 Final Version 1.0
Date 3rd October 2012

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Local Collaborator: [REDACTED]
(UK -site) Midwife Matron/Supervisor of Midwives



Local Collaborator: [REDACTED]
(Italian -site) Midwife Manager



Study Statistician: NOT APPLICABLE

Study Coordinating Centre: School of Nursing, Midwifery and Physiotherapy,
University of Nottingham

SYNOPSIS

Title	An exploration of midwives' approaches to slow progress of labour in birth centres, using case study methodology
Short title	An exploration of midwives' approaches to slow progress of labour
Chief Investigator	Prof. Helen Spiby
Objectives	To explore: <ul style="list-style-type: none"> • What approaches/practises midwives are currently using in birth centres in case of slow progress of labour, • How midwives understand the phenomenon of slow progress of labour. • What influences midwives' decision-making in respect to slow progress in labour
Study Configuration	Cross-country qualitative multiple case studies
Setting	Alongside and freestanding birth centres between UK and Italy
Sample size estimate	N/A
Number of participants	From 10-18 midwives, 1 manager of midwives and 1 Head of the Obstetric-Unit of reference per birth centre (total of 24-40 participants)
Eligibility criteria	Registered midwives working in Italian alongside or English freestanding birth centres, managers of midwives in birth centres and heads of consultant units of reference for birth centres
Description of intervention	N/A
Description of methods	Within each case site (birth centre) semi-structured interviews to 10 midwives, 1 midwives' manager/matron and 1 head of the consultant unit of reference will be conducted after participants' consent. 1 focus group at the end of all the individual interviews will involve 4-8 consent midwives. Both the individual and focus groups' length is anticipated of approximately 45-80 minutes. 144 hours of direct observations, documentary review, field notes and a reflexive journal will be included in the data collection of each site.
Duration of study	The study will start on November 2012 and end on May 2013. The data collection in the field will occur from November 2012 to April 2013
Outcome measures	N/A
Methods of analysis	Data analysis will be conducted by the Co-investigator supervised by the Chief-investigator and the Co-supervisor. Individual interviews and focus groups will be transcribed, transcripts will be thematically analysed, coding, creating categories and finally the main themes. Nvivo software will be used. Field notes from the observation, the analysis of the reflexive journal and the documentary analysis will complement the analysis of transcripts, following the triangulation logic typical of the

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	<p>methodology adopted and the best practices of qualitative research. The analysis will be focused on elements that seem to stipulate or influence practice, trying to build casual relationships between factors.</p> <p>A cross cases (cross countries) analysis will be performed after the end of the study trying to understand similarities and differences between the cases explored, with particular attention to cross-country issues.</p>
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ABBREVIATIONS

AE	Adverse Event
CI	Chief Investigator overall
CRF	Case Report Form
CS	Co-supervisor
DAP	Data Analysis Plan
GCP	Good Clinical Practice
ICF	Informed Consent Form
MLU	Midwife-led Unit (birth centre)
NHS	National Health Service
OU	Obstetric Unit
P/GIS	Parent / Guardian Information Sheet
PI	Principal Investigator at a local centre
PIS	Participant Information Sheet
REC	Research Ethics Committee
R&D	Research and Development department

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STUDY BACKGROUND INFORMATION AND RATIONALE

Slow progress of labour is a phenomenon occurring in 3-20% of all births¹. It is the primary cause of caesarean section in nulliparas and is also associated with increased risk of operative deliveries, maternal and fetal morbidity¹⁻³ and negative birth experience. It is also the main reason for women's transfers from midwife-led units (MLUs) to hospitals, due to the need for medical interventions⁴.

Slow progress of labour is described as an ill-defined and over-diagnosed condition⁵ underlining the role of socio-cultural factors in its definition, recognition and management and the controversies existing in the literature around this topic.

Medical interventions, such as augmentation of labour and/or amniotomy and active management^{6,1} remain the standard care of slow progress of labour within consultant-units. However, the efficacy of these practices is increasingly questioned, for example regarding their role in reducing the caesarean section rate⁷. There is an apparent need for investigating alternatives to these interventions¹.

Whilst medical approaches to managing slow progress are well-established, there is an apparent gap in the literature with regard to midwifery approaches to slow progress of labour – that represent an alternative to medical interventions- and what factors influence their decision-making.

No single review provides a clear picture of the midwifery care in case of slow progress of labour and decision-making in this specific situation. Some individual interventions have been examined such as continuous support, water immersion or the use of complementary therapies, but evidence levels vary. Decision making in midwifery seems to be influenced by many facilitators and barriers such as personal knowledge, trust in women and in the team, organisational and socio-cultural factors⁷.

This study aims to explore midwives' approaches to slow progress of labour in MLUs, contexts where a midwifery model is central in comparison to the medically-centred model of hospital labour wards.

The main research questions focus on identifying the approaches used by midwives in case of slow progress of labour in midwifery led units, how midwives understand this phenomenon, factors that influence midwives' decisions-making.

The research questions will be addressed using a cross-country multiple case study. For the purpose of this research, the case is represented by midwives' approaches to slow progress of labour. The case sites are an alongside Italian MLU - a structure placed in the same building or geographic site of an obstetric unit (OU) - and a freestanding English MLU - a completely separated building from an OU. The rationale for site selection is such that by including different organisational models of MLUs in different countries, better insights on the impact of organisational (e.g. more or less proximity with the medical model) and socio-cultural factors on midwives' approaches will be obtained. Within each site semi-structured interviews with midwives, midwives managers and the head of OU of reference will be conducted. Direct observation of midwifery interactions (excluding those with women in receipt of care), focus groups and documentary review will complete the data collection following a triangulation logic and using an inductive reasoning. The analysis of data will be thematic and in accordance with the qualitative approach of the study.

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The findings of this research will lead to a conceptualisation of midwives' approaches to slow progress of labour, having the potential to influence at several levels, such as women's care, education and supervision of midwives, midwifery knowledge and further research.

STUDY OBJECTIVES AND PURPOSE

PURPOSE

This research aims at exploring midwives' approaches to slow progress of labour in birth centres, using a case study methodology⁶⁻¹⁰.

PRIMARY OBJECTIVE

- To explore midwives' approaches to slow progress of labour, their current practices and policies in birth centres,
- To identify influences on midwives' decision-making process as regards slow progress of labour

SECONDARY OBJECTIVES

- To investigate the role and impact of personal, socio-cultural and organisational factors on midwives' decisions concerning approaches to slow progress of labour (e.g. the current discourses about normal length or progress of labour and the consequent definition of what is abnormal or slow)
- To provide some insights regarding midwives' understanding of the phenomenon of slow progress of labour (e.g. when they define a labour as slow in its progression, what factors they think contribute to the onset of a slow progress of labour)

STUDY DESIGN

STUDY CONFIGURATION

Multiple cross-country case study, using a purposive sample. The 'case' (i.e. the issue of midwives' approaches to slow progress of labour) will be explored within different models of MLUs (alongside and freestanding) to obtain insights about the role of organisational factors. The choice of investigating these settings in two different countries (Italy and UK) is to explore the role of socio-cultural factors in midwives' approaches and in particular in decision-making.

The study will use a qualitative approach, an inductive reasoning and a triangulation logic, using different sources of data (semi-structured interviews, focus groups, direct observations, documentary review, field notes and a reflexive journal/diary) in order to triangulate different perspectives to obtain a more holistic and in- depth understanding of the complexity of the phenomenon and its context.

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STUDY MANAGEMENT

The coordinating centre of this study is identified in the School of Nursing, Midwifery and Physiotherapy of the University of Nottingham. The study group is represented by the Chief Investigator, the Co-supervisor and the Co-Investigator.

The Chief Investigator has overall responsibility for the study and shall oversee all study management. The data custodian will be the Chief Investigator

The data will be collected through semi-structured interviews, focus groups, direct observations, documentary review, field notes and a reflective journal diary of the co-investigator.

All the data in the form of documents will be stored securely in a locked cabinet at the School of Nursing, Midwifery and Physiotherapy. The audio-records of the interviews and focus groups and any other data in the form of files will be put on a computer protected by password assuring security of the information collected. The access to data will be available just for the study group. However, the management of data will be in accordance with the Ethics code of 2010 of the University of Nottingham.

DURATION OF THE STUDY AND PARTICIPANT INVOLVEMENT

The study will be conducted from November 2012 to May 2013 (6 months).

The data collection within the MLUs will take place from November 2012 to April 2013.

The involvement of participants in the individual interviews and focus groups is anticipated and estimated around 45-60 minutes.

Enrolment will begin with the presentation of the project to midwives in each birth centre.

End of the Study

The study will end with the final focus group in the last birth centre of investigation (the UK freestanding MLU).

SELECTION AND WITHDRAWAL OF PARTICIPANTS

Recruitment

The study will be conducted in Italian and English MLUs. The midwifery philosophy is central in these contexts so that midwives' approaches to slow progress of labour in these settings might better reflect the general midwifery-biosocial model of care. By exploring different organisational models of birth centres/MLUs in different countries, a better understanding on the impact of organisational and socio-cultural factors on midwives' approaches is allowed.

The study is focused on midwives and their perspectives concerning slow progress of labour. Thus, women in receipt of care and their families will not be included in this study. However, women/ users of birth centres even if not directly involved in the study will be informed of the presence of the research in these contexts by posters. The posters will include all the useful contacts information of the co-investigator who will be present in the field.

The involvement of the Head of the obstetric/consultant-unit of reference per each birth centre will provide the perspective from the affiliated OU with regard to in particular issues related to transfers.

Midwives' managers are considered the gatekeeper to accessing the fieldwork and approaching the participants. A presentation with all the information about the study will represent the first approach to the potential participants and will be performed by the co-investigator. In particular the aim and the methods of the research will be explained, the position of the co-investigator (researcher but also a midwife) the voluntary nature of participation, the ethical features of the study (e.g. the importance of informed consent for participation, assuring confidentiality, anonymity, security of data management) the feedback to participants and the dissemination of findings. The co-investigator will be available after the presentation to individually contact the participants who expressed their willingness to be involved in the study.

Information about the study and contacts will be on display in the birth centres involved by posters.

All research materials (including protocols, information sheet and consent form) will be available in the appropriate language in each site (Italian and English).

In addition to explaining that the participation in the research is entirely voluntary, it will also be clarified that participants can withdraw at any time but attempts will be made to avoid this occurrence. In the event of their withdrawal it will be explained that their data collected so far cannot be erased and we will seek consent to use the data in the final analyses where appropriate.

Inclusion criteria

- Registered midwives working in Italian alongside or English freestanding MLUs
- Managers of midwives working in Italian alongside or English freestanding MLUs
- Head of OU of reference for Italian alongside or English MLUs
- Able to give informed consent to participation

Exclusion criteria

Italian and English midwives, managers and doctors who do not meet the inclusion criteria

Expected duration of participant participation

Study participants will be participating in the study for 45-60 minutes both for the individual interviews and focus groups.

Participant Withdrawal

Participant withdrawal is not anticipated. However, participants may be withdrawn from the study either at their own request or at the discretion of the Investigator. Participants will be

made aware (via the information sheet and consent form) that should they withdraw the data collected to date cannot be erased and may still be used in the final analysis.

Informed consent

All participants will provide written informed consent in Italian or English language depending on the case sites. The Consent Form will be signed and dated by the participant before they enter the study. The Investigator will explain the details of the study and provide a Participant Information Sheet, ensuring that the participant has sufficient time to consider participating or not. The Investigator will answer any questions that the participant has concerning study participation.

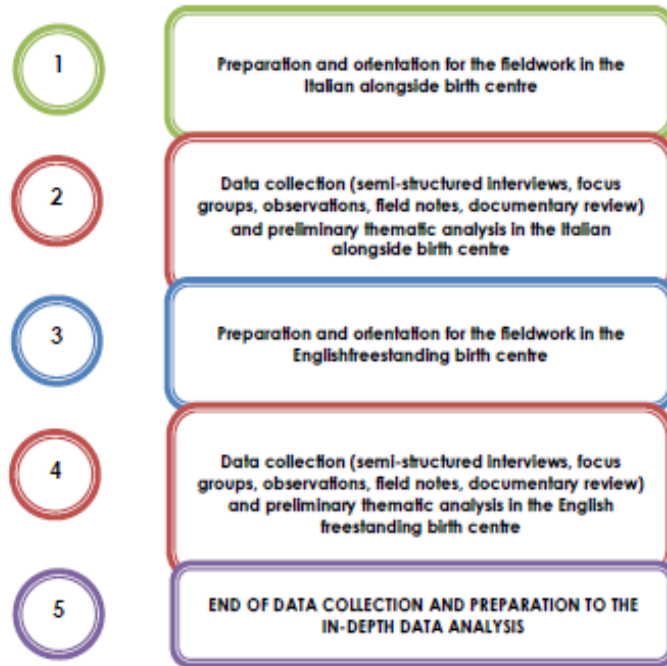
Informed consent will be collected from each participant before they participate in either a focus group or interview. One copy of this will be kept by the participant and one will be kept by the Investigator.

STUDY REGIMEN

The study will be conducted sequentially starting with the collection of data in the Italian site and finishing with the fieldwork in the English one. A period for orientation and preparation for the fieldwork is planned by the co-investigator and will occur in the month preceding the fieldwork per each site. A diagram of the stages of the study is shown in Fig.1.

Within each setting the different sources of data collection will be adopted without a strict specific order and flexibility and convenience criteria may guide the investigator. The only fixed regimen within each field is that the focus groups will follow the end of all the individual interviews. In particular the focus group in each site will be performed after a preliminary analysis of the themes emerged from the individual face-to-face interviews in order to discuss them with participants. In general, given the inductive approach and the methodology chosen, a preliminary analysis of data will be conducted during the data collection. Feedback will be given to participants after the data analysis. More specific details as regards the methods are provided in the section 'methods of data collection'.

Fig.1: General stages of the study



METHODS OF DATA COLLECTION

A multiple case study will be adopted as methodology.

One Italian and one English birth centre will be involved as sites for the study in order to compare different socio-cultural systems. The central element of the research is the current approaches adopted by midwives in these settings when they think labour is progressing slowly.

At each site data will be collected as follows:

- Individual semi-structured interviews: the planned participants are 10 midwives currently working in the birth centre, 1 manager of the midwives and 1 obstetric lead of the consultant unit of reference for the birth centre.

- Focus group: it is planned to conduct a focus group at the end of all the individual interviews; this will involve 4-8 midwives who currently work in the birth centre. Within the focus group the themes emerged from a preliminary analysis of the individual interviews will be discussed with the participants. This will allow to some extent a member checking of the preliminary findings during data collection.

Both semi-structured interviews and focus group will last approximately 45-60 minutes and will be audio recorded after permission of the participants. In case a participant is willing to be interviewed but does not permit to be audio-recorded, the researcher will just take notes of the interview. Midwives who agreed to be involved in the study will decide whether to participate in individual interviews, focus groups or both. The date, venue and time for interviews and focus group will be agreed with the participants at the participant's workplace considering convenience of the individual and of the organisation involved.

- Observation (approximately 144 hours) in public and common areas will assist with understanding the culture of the organisation and systems of care and factors that influence midwives' decision-making. Observations will not take place in birth rooms. Field notes of the observations will be taken by the Co-investigator in order to record all the elements considered relevant for the research.

- Documents Review: interviewing the staff is to be considered a central method of the study. However, in addition to interviews, focus groups and observations, a review of relevant documents (such as protocol, guidelines, procedures, minutes of meetings or audits) will also be conducted to complete the data collection in the birth centre. The nature of the documents and their relevant elements will be recorded on a specific database that will be created by the Co-investigator under supervision of the Chief-investigator and Co-supervisor.

Compliance

N/A

Criteria for terminating the study

The study as a whole will terminate after the last focus group of the last birth centre under investigation. Within each birth centre the data collection will end after an interim analysis of the individual interviews with the discussion of the main themes within the focus group.

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STATISTICS/ ANALYSES

Methods

Both the interim and final data analysis will be conducted by the Co-investigator supervised by the Chief-investigator and the Co-supervisor. Following full transcription and preliminary review all individual interviews and focus groups will be thematically analysed, coding, creating categories and finally the main themes. The organisation of data will be supported by the use of the NVIVO software package.

Field notes from the observation, the analysis of the reflexive journal and the documentary analysis will complement the analysis of transcripts, following the triangulation logic typical of the methodology adopted and the best practices of qualitative research. The analysis will be focused on elements that seem to stipulate or influence practice, trying to build casual relationships between factors.

A cross cases (cross countries) analysis will be performed after the end of the study trying to understand similarities and differences between the cases explored, with particular attention to cross-country issues.

Sample size and justification

The sample size was based on previous qualitative studies, best practice on qualitative research, pragmatic reasons (e.g. resources) and specific aims. Knowledge of the staffing configuration in birth centres also informed the sample size. A purposive sample of 10 midwives appears likely to reflect the composition of the midwifery team and its varying features (such as expertise and seniority) allowing multiple perspectives. In addition, birth centres generally have one midwifery manager.

The Lead Obstetric clinician/head in the consultant-led obstetric units has been selected as being a key individual whose role includes responsibility for clinical policies and protocols.

ADVERSE EVENTS

No adverse events are anticipated within this study and no adverse event data will be collected.

ETHICAL AND REGULATORY ASPECTS

ETHICS COMMITTEE AND REGULATORY APPROVALS

The study will not be initiated before the protocol, consent forms and participant information sheets have received approval / favourable opinion from the Research Ethics Committee (REC), and the respective National Health Service (NHS) Research & Development (R&D) department. Should a protocol amendment be made that requires REC approval, the changes in the protocol will not be instituted until the amendment and revised informed consent forms and participant have been reviewed and received approval / favourable opinion from the REC and R&D departments.

The study will be conducted in accordance with the ethical principles that have their origin in the Declaration of Helsinki, 1996; the principles of Good Clinical Practice, and the Department of Health Research Governance Framework for Health and Social care, 2005.

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In particular besides the obtainment of informed consent of participants, key element such as confidentiality, anonymity and security of data information will be guaranteed. No harm to participants are expected and no sensitive topics are apparent.

INFORMED CONSENT AND PARTICIPANT INFORMATION

The process for obtaining participant informed consent will be in accordance with the REC guidance, and Good Clinical Practice (GCP) and any other regulatory requirements that might be introduced. The investigator or their nominee and the participant or other legally authorised representative shall both sign and date the Consent Form before the person can participate in the study.

The participant will receive a copy of the signed and dated forms and the original will be retained in the Study records.

The decision regarding participation in the study is entirely voluntary. The investigator or their nominee shall emphasize to them that consent regarding study participation may be withdrawn at any time without penalty, or loss of benefits to which the participant is otherwise entitled. No study-specific interventions will be done before informed consent has been obtained.

If the Consent Form is amended during the study, the investigator shall follow all applicable regulatory requirements pertaining to approval of the amended Consent Form by the REC and use of the amended form (including for on-going participants).

RECORDS

Study Forms or Case report forms

The Co-investigator is the person identified to manage the study forms, their completion and immediate custody. The CI and CS can have access to data. The data will be stored on a secure server and password protected and access restricted to investigators.

Each participant will be assigned a study identity code number, for use on CRFs, other study documents and the electronic database. Privacy and anonymity of the participants and the data collected will be ensured. Before any dissemination of findings participants' and study sites' name will be rendered anonymous using fictitious names and avoiding any information that may lead to the identification of participants.

CRFs will be treated as confidential documents and held securely in accordance with regulations. As already mentioned, the security of data will be guaranteed by securing the data in locked cabinets and files in pc secured with a password, that can be known just by the study group, of the School of Nursing, Midwifery and Physiotherapy.

The final data analysis will be conducted at the post graduate student office of the School of Nursing, Midwifery and Physiotherapy of the University of Nottingham.

Source documents

Source documents shall be filed at the Co-investigator's site and may include but are not limited to, consent forms, study records, field notes, interview transcriptions and audiorecords. A CRF may also completely serve as its own source data. Only study staff

shall have access to study documentation other than the regulatory requirements listed below.

Direct access to source data / documents

The CRF and all source documents shall be made available at all times for review by the Chief Investigator, Sponsor's designee and inspection by relevant regulatory authorities.

DATA PROTECTION

All study staff and investigators will endeavour to protect the rights of the study's participants to privacy and informed consent, and will adhere to the Data Protection Act, 1998. The CRF will only collect the minimum required information for the purposes of the trial. CRFs will be held securely, in a locked room, or locked cupboard or cabinet. Access to the information will be limited to the trial staff and investigators and any relevant regulatory authorities (see above). Computer held data including the study database will be held securely and password protected. All data will be stored on a secure dedicated web server. Access will be restricted by user identifiers and passwords (encrypted using a one way encryption method).

Information about the study in the participant's medical records / hospital notes will be treated confidentially in the same way as all other confidential medical information.

Electronic data will be backed up every 24 hours to both local and remote media in encrypted format.

QUALITY ASSURANCE & AUDIT

INSURANCE AND INDEMNITY

Insurance and indemnity for clinical study participants and study staff is covered within the NHS Indemnity Arrangements for clinical negligence claims in the NHS, issued under cover of HSG (96)48. There are no special compensation arrangements, but study participants may have recourse through the NHS complaints procedures.

The University of Nottingham as research Sponsor indemnifies its staff, research participants and research protocols with both public liability insurance and clinical trials insurance. These policies include provision for indemnity in the event of a successful litigious claim for proven non-negligent harm.

STUDY CONDUCT

Study conduct will be subject to systems audit for inclusion of essential documents; permissions to conduct the study; CVs of study staff and training received; local document control procedures; consent procedures and recruitment logs; adherence to procedures defined in the protocol (e.g. inclusion / exclusion criteria, timeliness of visits); accountability of study materials and equipment calibration logs.

STUDY DATA

Monitoring of study data shall include confirmation of informed consent; data storage and data transfer procedures; local quality control checks and procedures, back-up and disaster recovery of any local databases and validation of data manipulation.

Study data and evidence of monitoring and systems audits will be made available for inspection by the REC as required.

RECORD RETENTION AND ARCHIVING

In compliance with the ICH/GCP guidelines, regulations and in accordance with the University of Nottingham Code of Research Conduct and Research Ethics, the Chief or local Principal Investigator will maintain all records and documents regarding the conduct of the study. These will be retained for at least 7 years or for longer if required. If the responsible investigator is no longer able to maintain the study records, a second person will be nominated to take over this responsibility.

The study documents held by the Chief Investigator on behalf of the Sponsor shall be finally archived at secure archive facilities at the University of Nottingham. This archive shall include all anonymised audio recordings, databases and associated meta-data encryption codes.

DISCONTINUATION OF THE STUDY BY THE SPONSOR

The Sponsor reserves the right to discontinue this study at any time for failure to meet expected enrolment goals, for safety or any other administrative reasons. The Sponsor shall take advice as appropriate in making this decision.

STATEMENT OF CONFIDENTIALITY

Individual participant personal information obtained as a result of this study are considered confidential and disclosure to third parties is prohibited with the exceptions noted above. If information is disclosed during the study that could pose a risk of harm to the participant or others, the researcher will discuss this with the CI and where appropriate report accordingly.

Data generated as a result of this study will be available for inspection on request by the University of Nottingham representatives, the REC, local R&D Departments and the regulatory authorities.

PUBLICATION AND DISSEMINATION POLICY

Participants and sites will be anonymised before any publication and dissemination of the findings obtained completing the analyses.

The findings will be reported and disseminated mainly by means of the Co-investigator's PhD thesis, scientific papers (journal publications), feedback to participants involved in the study, abstracts, poster and presentation within conferences.

USER AND PUBLIC INVOLVEMENT

Users do not represent eligible participants for this study. The study explores midwifery practice from the perspectives of midwives' and will involve English and Italian maternity service staff.

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We have explored obtaining a service user perspective via the local Maternity Service Liaison Committee but this is not currently operating.

STUDY FINANCES

Funding source

Self-funded

Participant stipends and payments

Participants will not be paid to participate in the study.

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SIGNATURE PAGES

Signatories to Protocol:

Chief Investigator: Prof. Helen Spiby

Signature: _____

Date: _____

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REFERENCES

- 1 Bugg GJ, Siddiqui F, Thornton JG. Oxytocin versus no treatment or delayed treatment for slow progress in the first stage of spontaneous labour. *Cochrane Database Syst Rev.* 2011;7.
- 2 Cluett ER, Pickering RM, Getliffe K, et al. Randomised controlled trial of labouring in water compared with standard of augmentation for management of dystocia in first stage of labour. *BMJ.*[Original research]. 2004 7;328(7435):314-8.
- 3 Wei S, Wo B, Xu H, Luo Z, Roy C, Fraser W. Early amniotomy and early oxytocin for prevention of, or therapy for delay in first stage spontaneous labour compared with routine care. *Cochrane Database of Systematic Reviews.*2009(2).
- 4 Nystedt A, Högberg U, Lundman B. The negative birth experience of prolonged labour: a case-referent study. *Journal of Clinical Nursing.* 2005;14(5):579-86.
- 5 McCourt C, Rance S, Rayment J, Sandall J. Birthplace qualitative organisational case studies: How maternity care system may affect the provision of care in different birth settings Programme NSDaO;2011 Contract No.: Final report part 6.
- 6 Karacam Z, Walsh D, Bugg G. Dystocia and its diagnosis in the first stage of labour in low-risk women: A critical systematic review. [Paper submitted to 'Obstetrics & Gynaecology' for publication]. In press 2012.
- 7 Everly MC. Facilitators and Barriers of Independent Decisions by Midwives During Labor and Birth. *Journal of Midwifery & Women's Health.* 2012;57(1):49-54.
- 8 Yin RK. Enhancing the quality of case studies in health services research. *Health Services Research.* 1999;34(5 Pt 2):1209.
- 9 Stake RE. *The art of case study research*: Sage Publications, Inc; 1995.
- 10 Swanborn P. *Case study research: what, why and how?*: Sage Publications Ltd; 2010.

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Appendix 3: Letter of sponsorship from the University of Nottingham

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SPONSORSHIP AGREEMENT SPONSOR and CHIEF INVESTIGATOR CLINICAL RESEARCH (CLINICAL TRIALS)

Version 1.0, July 2007

This AGREEMENT is made between

The University of Nottingham (the Sponsor) of University Park, Nottingham, NG7 2RD,
and **the Chief Investigator** (collectively the 'Parties') of the clinical research identified below:

Chief Investigator name: Helen Spiby
University of Nottingham job title: Professor in Midwifery
Title of research project: AN EXPLORATION OF MIDWIVES' APPROACHES TO SLOW
PROGRESS OF LABOUR IN BIRTH CENTRES, USING CASE STUDY METHODOLOGY
Project ID: 12106

With effect from 1st May 2004, Statutory Instrument 2004, no. 1031, *The Medicines for Human Use (Clinical Trials) Regulations 2004* enacting *EU Directive 2001/20/EC*

and

with effect from 29th August 2006, Statutory Instrument 2006, no. 1928, *The Medicines for Human Use (Clinical Trials) Amendment Regulations 2006*

and

with effect from 12th December 2006, Statutory Instrument 2006, no. 2984, *The Medicines for Human Use (Clinical Trials) Amendment (no. 2) Regulations 2006*

hereafter known as the '**Regulations**', came into effect in the UK governing the conduct of clinical trials involving the use of investigational medicinal products (IMPs) and superseding previous clinical trial legislations.

In addition the Department of Health Research Governance Framework for Health and Social Care, second edition, 2005 (RGF) set out a framework for the conduct of all clinical research within the NHS.

The Regulations define a 'Sponsor' with regard to clinical trials as being the organisation or organisations taking responsibility for the 'initiation, management and financing (or arranging the financing) of that trial'.

The Regulations define a Chief Investigator as 'the authorised health professional, whether or not he is an investigator at any particular site, who takes primary responsibility for the conduct of the trial'.

Written by: A. C. Shone
Authorised by: P. Cartledge

Date: July 2007

UoN/CI Agreement Version 1.0 July 2007

The RGF defines a Sponsor as the 'Individual, organisation or group taking on responsibility for securing the arrangements to initiate, manage and finance a study' and also make provision for joint sponsorship.

The RGF defines a Chief Investigator as 'the person who takes overall responsibility for the design, conduct and reporting of a study if it is at one site; or if the study involves researchers at more than one site, the person who takes responsibility for the design, conduct and reporting of the study, whether or not that person is an investigator at any particular site'.

This agreement defines the roles and responsibilities of both the Sponsor and Chief Investigator for the named clinical research falling within these Regulations and / or the RGF.

While the Regulations pertain to the use of investigational medicinal products (IMP) within clinical trials, the RGF covers all clinical research within the NHS. For the purposes of this agreement 'clinical research' is taken to mean any research whose participants are human beings *and* who are patients or users of the NHS *and* the research is conducted within NHS, Primary Care Trust (PCT) or associated premises, including non-NHS premises such as universities and study participants' homes regardless of whether that research uses IMPs.

For the purposes of this agreement the Chief Investigator shall be an employee of the University of Nottingham or, where the University is not the substantive employer, the proposed Chief Investigator shall hold an Honorary Contract with the University of Nottingham.

IT IS HEREBY AGREED that the following terms and conditions shall apply to the Parties' collaboration on the clinical research identified:-

1 GENERAL OPERATING AGREEMENTS

- 1.1 In undertaking clinical research, the Parties shall do so in line with the Regulations and the Research Governance Framework for Health and Social Care as applicable and any subsequent amendment or re-issue thereof.
- 1.2 In undertaking clinical research, the Parties shall do so in line with the all other Regulations, Codes of Practice and guidance documents that pertain to the research and are issued by relevant authorities such as the Department of Health.
- 1.3 The Chief Investigator shall be responsible for the overall day-to-day running of the research and shall report to the Sponsor accordingly. The responsibilities of being a Chief Investigator in whole or part may not be devolved to or expected to be delivered by a third party without prior written agreement from the Sponsor. In such cases the third party shall be an employee of or hold an honorary contract with the University of Nottingham
- 1.4 No clinical research shall be permitted to start [at a particular site] without first obtaining all [the relevant] ethics committee and regulatory approvals for that research. These include the national ethical and competent authority approvals and each Site Specific Assessment and R&D approvals where applicable. The Chief Investigator shall retain and be required to produce evidence to the Sponsor of all approvals for the clinical research upon request.
- 1.5 The Chief Investigator shall obtain all necessary approvals, indemnities and agreements from organisations with which they are collaborating on the research. This includes any NHS Trusts, PCTs or associated organisations where aspects of the research may be carried out.
- 1.6 Where the Parties are collaborating on an international multi-centre clinical trial, none of them shall accept Sponsorship responsibilities for activity outside the United Kingdom without prior written agreement from the University of Nottingham. This agreement may be required at an early stage of the research development and must be sought before any funding application is made.

2 SPONSOR DUTIES AND OBLIGATIONS

The Sponsor or its representatives shall:

- 2.1 Ensure research agreement(s) are in place with other participating organizations
- 2.2 Assess the quality of the research using the protocol and submitted peer review reports as guidance.
- 2.3 Assess overall corporate risk to the University of Nottingham based on the research protocol risk assessment, own experience and in consultation with relevant in-house experts
- 2.4 Ensure that the Chief Investigator has sufficient experience and expertise to carry out the research as evidenced by his or her previous involvement at a high level in all aspects of research development and management
- 2.5 Ensure that there is provision for adequate trial insurance, indemnity and financial management of the research
- 2.6 Ensure arrangements are in place for overall monitoring of the research
- 2.7 Ensure arrangements are in place for the conduct of the research in accordance with the principles of Good Clinical Practice with appropriate documented management systems and Standard Operating Procedures (SOPs)
- 2.8 Provide CI with authorization letter for the Medicine and Healthcare products Regulatory Authority (MHRA) to complete a Clinical Trial Authorization (CTA) on behalf of the Sponsor
- 2.9 Provide CI with authorization letter for the NHS Research Ethics Committee to which the application for ethical permission is sought on behalf of the Sponsor
- 2.10 Provide payment of initial and annual CTA fee to the MHRA, and payment of any audit inspection fee as required. Payment may be recovered from the research or School funding
- 2.11 Ensure arrangements are in place to review any change to the protocol or research developments and to review sponsorship accordingly
- 2.12 Monitor serious adverse events and in particular those that are sudden, unexpected and serious adverse reactions to an IMP. In accordance with regulatory requirements shall ensure that these events are reported to the competent authority and ethics committee as required
- 2.13 Be responsible for the management of Intellectual Property and publication rights
- 2.14 Ensure arrangements are in place for the archiving of trial source data, essential documents and the Trial Master File
- 2.15 Provide for and partake in statutory inspections by the competent authority
- 2.16 Take the decision and retain the right to temporarily halt or stop the research where:
 - there is reason to do so such that the University of Nottingham's interests are protected
 - or where there is sufficient reason to believe that the research is not being conducted in accordance with any Regulations, Codes of Practice or the RGF
 - or where there is a real or perceived unforeseen or unacceptable danger to the participants of the research
 - or where advised to do so by any Trial Steering Committee or Data Monitoring Committee and shall do so by withdrawal of its sponsorship

3 CHIEF INVESTIGATOR DUTIES AND OBLIGATIONS

The Chief Investigator shall:

3.1 Research Protocol

- 3.1.1 Devise, with appropriately qualified advice, the clinical research proposal and develop into a full written protocol and associated documents
- 3.1.2 Seek, where appropriate, independent expert review of the protocol and provide reports to the Sponsor
- 3.1.3 Seek, and incorporate within the protocol, statistical advice from a qualified statistician for

the analysis of the research data and outcomes

- 3.1.4 Seek advice from and liaise with an appropriately qualified Pharmacist and/or QP to write and develop an Investigator Brochure where required
- 3.1.5 Seek advice from and liaise with a qualified information technology expert for development of computer based collection, storage and manipulation, including transfer where applicable, of the research data.
- 3.1.6 Carry out a full risk/benefit analysis of the research and incorporate into the protocol. Use this analysis to determine the risk to the research participants, the research staff and to the University of Nottingham. Submit a risk assessment report to the Sponsor.

3.2 Competent Authority, Ethics Committee and R&D Authorisations

- 3.2.1 Obtain a EudraCT number and submit the Clinical Trials Authorisation (CTA) request to the Medicines and Healthcare products Regulatory Agency (MHRA) where applicable; and respond to queries and amendments as required
- 3.2.2 Complete and submit the application to the NHS Research Ethics Service (NRES) for approval to conduct the research; attend the designated Research Ethics Committee (REC) meeting as required and respond to and act upon any recommendations then made.
- 3.2.3 Complete and submit the NHS R&D application form for local permission to conduct the research. Liaise with the local R&D Department to meet their expectations of the research conduct
- 3.2.4 For multi-centre research assist local researchers in completion and submission of their R&D applications and advise accordingly
- 3.2.5 Submit for permission and give notice of trial management and protocol amendments to the MHRA and REC
- 3.2.6 Cooperate with and allow statutory inspection of trial-sites by the competent authority
- 3.2.7 Produce and submit quarterly, annual and final reports, including safety reports to the MHRA
- 3.2.8 Give notice of the end of the trial to the MHRA and REC

3.3 Research Funding and Terms and Conditions

- 3.3.1 Liaise with University of Nottingham staffs to procure funding from a suitable source for the costs of the research.
- 3.3.2 Complete and submit any research funding proposal to the appropriate body and respond to any call for clarification and / or amendment
- 3.3.3 Ensure that the terms and conditions of the funding are met throughout the research and that the research conduct can meet those terms without jeopardising its integrity and the welfare of the research participants

3.4 Good Clinical Practice and Trial Conduct

- 3.4.1 Ensure that management systems are in place to assure the quality of the trial conduct to meet GCP standard
- 3.4.2 Ensure that all aspects of data collection, storage and manipulation comply with the Data Protection Act 1998 and any subsequent amendments or additions to this Act
- 3.4.3 Ensure that sufficient monitoring of the research data and conduct is carried out in accordance with the level identified within the research risk assessment and identified within the protocol
- 3.4.4 Ensure that there are documented systems with audit trails for the supply, storage, delivery and disposal of IMPs and that IMPs are made available to participants free of charge
- 3.4.5 Recruit only suitable qualified and experienced researchers to undertake any research duties and demonstrable by retention of evidence. The CI must be satisfied that all those expected to play a role in the execution of the research are capable through qualification, expertise and experience to take on their roles including those at dispersed sites in a multi centre trial
- 3.4.6 Ensure that all other researchers involved in the research are trained in aspects of this research and are fully versed in their requirements and responsibilities within the research
- 3.4.7 Ensure that local logs are completed and retained for delegation of research duties

3.5 Pharmacovigilance (research involving IMPs)

- 3.5.1 Take appropriate urgent safety measures to assure the welfare of research participants
- 3.5.2 Assess all serious adverse events (SAEs) for seriousness and causality and report accordingly

- 3.5.3 Report all Suspected Unexpected Serious Adverse Reactions (SUSARs) in an expedited fashion to the MHRA according to the Regulations. Report to the Sponsor within the same timeframes.
- 3.5.4 Keep records of all SAEs and continually monitor the research for ongoing risk/benefit and take appropriate measures accordingly to protect the welfare of research participants
- 3.5.5 Ensure that all other researchers involved are promptly informed of SUSARs and any changes to the research protocol in light of ongoing risk/benefit analyses of safety data
- 3.5.6 Complete and submit safety reports to the MHRA, REC and R&D according to the Regulations and local requirements
- 3.5.7 Complete and submit safety reports to the Sponsor on a frequency determined by the research risk assessment and by prior agreement. This shall be no less than yearly.

4 CONFIDENTIALITY

- 4.1 The Parties shall ensure that information supplied to or deriving from the clinical research is exchanged between themselves on a confidential basis and in accordance with the Data Protection Act 1998. The Chief Investigator shall ensure that any of the researchers within this research, employed by the University of Nottingham or otherwise; students, consultants, sub-contractors or agents who participate in the research are made aware of, and abide by, this requirement.
- 4.2 The Parties shall ensure that the publication and dissemination of the results of the clinical research on which they collaborate is managed in a co-ordinated manner and in accordance with the protocol. All publications arising from such clinical research shall give due credit to the Parties involved, unless requested to the contrary by either Party.

5 DATE AND TERM

- 5.1 This Agreement shall be effective from **4th October 2012** and shall initially run until **31st December 2013** on which date it shall automatically expire unless it is specifically renewed.
- 5.2 The Parties intend that before its expiry this Agreement shall be reviewed in light of the continuation of the named research, renewed where appropriate and that it shall be amended as appropriate to reflect their working relationship and any changes in relevant laws or regulations. To this end, the Parties shall meet to consider the renewal of this Agreement no later than three months before its expiry date.

Title of research project: **AN EXPLORATION OF MIDWIVES' APPROACHES TO SLOW
PROGRESS OF LABOUR IN BIRTH CENTRES, USING CASE STUDY METHODOLOGY**

Project ID: **12106**

SIGNATURES

Signed for and on behalf of the University of Nottingham:

Signature:



Date: **4th October 2012**

Name: **Paul Cartledge**

Position: **Head of Research Grants and Contracts**

Chief Investigator:

Signature:



Date:

08/10/12

Name: **Helen Spiby**

Position: **Professor in Midwifery**

Appendix 4: Ethical Approval from the Faculty of Medicine and Health Sciences

Direct line/e-mail
+44 (0) 115 8231063
Louise.Sabir@nottingham.ac.uk



16th November 2012

Laura Iannuzzi
PhD Student – Health Studies
School of Nursing, Midwifery & Physiotherapy
Room B33, B Floor
QMC Campus
Nottingham University Hospitals
Nottingham
NG7 2UH

Medical School Research Ethics
Committee
Division of Therapeutics &
Molecular Medicine
D Floor, South Block
Queen's Medical Centre
Nottingham
NG7 2UH

Tel: +44 (0) 115 8231063
Fax: +44 (0) 115 8231059

Dear Laura

Ethics Reference No: C18102012 SNMP 12106
Study Title: An exploration of midwives' approaches to slow progress of labour in birth centres, using case study methodology
Chief Investigator/Supervisors: Professor Helen Spiby, Denis Walsh, Associate Professor in Midwifery, Academic Division of Midwifery, SNMP
Lead Investigator/Student: Laura Iannuzzi, PhD student-Health Studies, SNMP.
Duration of Study: 1/11/12-31/5/13 – 6mths No of Subjects: 38

Thank you for your letter dated 15th November 2012 responding to the issues raised by the committee and enclosing the following revised documents:

- Letter of permission from Dr Valtere Giovannini, CEO and Prof Gianfranco Scarselli Director of Obstetrics, Azienda University Hospital of Careggi, Florence, Italy dated Florence, 29 October 2012.
- 12106 Application form dated 15/11/2012
- An exploration of midwives' approaches to slow progress of labour. Plan of Action in case of encountering bad or poor practice during the study Draft version 1.1/Final version 1.0 15/11/2012

The following documents were reviewed 18 October 2012:

- Application form dated 10/3/2012
- An exploration of midwives' approaches to slow progress of labour. Protocol Draft 1.2 Final Version 1.0 Date 3rd October 2012
- An exploration of midwives' approaches to slow progress of labour in birth centres- Participant Information sheet Manager Draft 1.2 Final Version 1.0 Date 3/10/2012.
- An exploration of midwives' approaches to slow progress of labour in birth centres-Participant Information sheet Midwives Draft 1.2 Final Version 1.0. Date 3/10/2012.
- An exploration of midwives' approaches to slow progress of labour in birth centres-Participant Information Sheet Doctor Draft 1.2 Final Version 1.0. Date 3rd October 2012.
- An exploration of midwives' approaches to slow progress of labour in birth centres Consent Form Draft 1.1 Final Version 1.0 date 01/10/2012
- An exploration of midwives' approaches to slow progress of labour, Interview Schedule Draft Version 1.1/final version 1.0 01/10/2012
- An exploration of midwives' approaches to slow progress of labour in birth centres- Participant's Contact Details draft 1.2 Final Version 1.0. Date 3rd October 2012
- An exploration of midwives' approaches to slow progress of labour in birth centres. Poster Draft version 1.1 Final version 1.0 03/10/2012.
- An exploration of midwives' approaches to slow progress of labour in birth centres, UoN Sponsorship Statement letter dated 4th October 2012
- Evidence of Insurance – The University of Nottingham 25 July 2012.

These have been reviewed and are satisfactory and the study is approved.

Approval is given on the understanding that the Conditions of Approval set out below are followed.

Conditions of Approval

You must follow the protocol agreed and any changes to the protocol will require prior Ethics' Committee approval.

This study is approved for the period of active recruitment requested. The Committee also provides a further 5 year approval for any necessary work to be performed on the study which may arise in the process of publication and peer review.

You promptly inform the Chairman of the Research Ethics Committee of

- (i) Deviations from or changes to the protocol which are made to eliminate immediate hazards to the research subjects.
- (ii) Any changes that increase the risk to subjects and/or affect significantly the conduct of the research.
- (iii) All adverse drug reactions that are both serious and unexpected.
- (iv) New information that may affect adversely the safety of the subjects or the conduct of the study.

The attached End of Project Progress Report is completed and returned when the study has finished.

Yours sincerely



Dr Clodagh Dugdale
Chair, Nottingham University Medical School Research Ethics Committee

Appendix 5: Research poster for the users of the maternity services where the study was conducted (English and Italian versions)

DID YOU KNOW ?



THERE IS RESEARCH IN PROGRESS HERE...



Hello,
my name is Laura Iannuzzi, I'm an Italian midwife and a PhD student at the School of Nursing, Midwifery and Physiotherapy of the University of Nottingham.
My supervisors are Prof. Helen Spiby and Dr. Denis Walsh

I'm conducting a study about midwives' approaches to slow progress of labour within Italian and English birth centres .

This research aims at providing a better understanding of practices currently use by midwives and what factors may influence their decisions when a labour is progressing more slowly than expected.

The focus of my study is on midwives. I plan to interview and hold group discussions with midwives and observe some midwives' activities on the days indicated below. I will not be entering birth rooms.

Although women and their families are not directly involved in this research, you might see me around during your time at this birth centre.
If you have any question about my research, please do not hesitate to contact me, I will be happy to talk with you.

You could see me around on these days:

For information contact:
Laura Iannuzzi
Email: ntxli@nottingham.ac.uk
lauraiannuzzi@gmail.com
Mobile: 07435903185
Helen Spiby
Email: Helen.Spiby@nottingham.ac.uk
Tel: 0115 823 0820

An exploration of midwives' approaches to slow progress of labour in birth centres. Draft version 1.1 Final version 1.0
03/10/2012

FORSE NON SAPETE CHE...

... C'E' UNA RICERCA IN CORSO QUI



Salve,

Mi chiamo Laura Iannuzzi, sono un' ostetrica dell' [redacted] attualmente impegnata in un programma di Dottorato di ricerca presso la School of Nursing, Midwifery and Physiotherapy dell' Università di Nottingham (UK).

I professori con cui collaboro sono la Prof. ssa Helen Spiby e il Prof. Denis Walsh.

Sto conducendo uno studio sugli approcci usati dalle ostetriche in caso di rallentamento del travaglio all'interno di centri nascita italiani e inglesi.

Questa ricerca mira principalmente ad una migliore comprensione delle pratiche adottate dalle ostetriche e degli elementi che influenzano le loro decisioni cliniche, nel caso in cui un travaglio proceda più lentamente di quanto ci si aspetti.

Lo studio è focalizzato sulle ostetriche e prevede interviste individuali, discussioni di gruppo e osservazioni di attività che si riterranno rilevanti per la ricerca. Penso sia importante assicurarla sul fatto che tali osservazioni non avverranno all'interno delle stanze travaglio-parto.

Sebbene questa ricerca, quindi, non coinvolga direttamente le donne afferenti ai servizi e le loro famiglie, potreste incontrarmi durante il vostro percorso. Per tanto se avete domande o necessitate di chiarimenti sullo studio non esitate a contattarmi, sarò felice di poterne parlare con voi.

Potreste incontrarmi nei seguenti giorni:

Per informazioni rivolgersi a:

Laura Iannuzzi

Email: nlxli@nottingham.ac.uk

lauraiannuzzi@gmail.com

Tel: 055 7947997

Helen Spiby

Email: Helen.Spiby@nottingham.ac.uk

Appendix 6: English version of the participants' information sheets (for midwives, manager, head of the OU)

Participant Information Sheet for midwives



UNITED KINGDOM - CHINA - MALAYSIA

Participant Information Sheet
MIDWIFE
(Draft Version 1.2 / Final version 1.0: 3/10/2012)

Title of Study: An exploration of midwives' approaches to slow progress of labour in birth centres, using case study methodology

Name of Researchers: Laura Iannuzzi, Prof. Helen Spiby, Dr. Denis Walsh

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. One of our team will go through the information sheet with you and answer any questions you have. Talk to others about the study if you wish. Ask us if there is anything that is not clear.

What is the purpose of the study?

This study aims at exploring midwives' approaches to slow progress of labour in Italian and English birth centres. The focus of this research is on midwives, their understanding of the phenomenon of slow progress of labour, the approaches that they currently use and suggest to women in case of slow progress of labour and the influential factors for their decision-making. This work is being conducted as part of a PhD.

Why have I been invited?

You are being invited to take part because you are a midwife working in the birth centre involved in the study and we think your experience may help in having a better understanding of the phenomenon of slow progress of labour and midwives' approaches to it. We are inviting 12-20 NHS staff to take part.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. This would not affect your legal rights.

What will happen to me if I take part?

As a participant you could be involved in this study in different ways:

- An individual interview and/or
- A focus group and/or
- Observations

If you agree to take part in an individual interview, we will arrange together the date, the venue and the hour. The interview will be audio-recorded and will last approximately 45- 60 minutes. It will be centred on your view/experience of slow progress of labour and on midwives' approaches to it within birth centres.

Page 1 of 3

An exploration of midwives' approaches to slow progress of labour in birth centres-
Participant Information Sheet Midwives Draft 1.2 Final Version 1.0. Date 3/10/2012

If you agree to participate in a focus group, you will be involved in a group discussion (with approximately 4-8 midwives) that will be arranged considering occupational and personal commitments of the participants. The focus group will be conducted after the end of all the individual interviews in order to discuss the themes that have emerged from them within the group. It will be audio-recorded and will last approximately 45- 60 minutes.

If you give permission to be included in the observation component, you are allowing the researcher to observe activities in common and public areas at the site. The researcher will make it clear when the observations will take place verbally and by mean of posters. The observations will NOT include clinical encounters and they will NOT interfere with your duties. The aim is to have general insights on the organisation, midwives' care and attitude and what factors can influence their practice in the every-day life (with a particular focus on slow progress of labour). Observation will be conducted at participants' discretion and will NOT include individuals who are not willing to participate. You will always have the opportunity to verbally decline your participation and in that case the researcher will not conduct any observation that might include you.

Expenses and payments

Participants will not be paid to participate in the study.

What are the possible disadvantages and risks of taking part?

We do not anticipate any disadvantage or risk in taking part in this research. You will only share what you are comfortable with and we will keep the interview confidential.

What are the possible benefits of taking part?

We cannot promise the study will help you but the information we get from this study may help future care for women and professionals.

What if there is a problem?

If you have any question you can speak with Laura Iannuzzi. If you have concern about any aspect of this study, you should ask to speak to Prof. Helen Spiby. The researchers' contact details are given at the end of this information sheet. If you are unhappy with the response you are advised to contact Mrs Louise Sabir, Secretary to the Medical School Research Ethics Committee, email: louise.sabir@nottingham.ac.uk.

Will my taking part in the study be kept confidential?

We will follow ethical and legal practice and all information about you will be handled in confidence.

If you join the study, the data collected for the study may be looked at by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people to check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant.

All information which is collected about you during the course of the research will be kept **strictly confidential**, stored in a secure and locked office, and on a password protected database. Any information about you which leaves the site will have your

name and address removed (anonymised) and a unique code will be used so that you cannot be recognised from it.

Your personal data (address, telephone number) will be kept up to 12 months after the end of the study so that we are able to contact you about the findings. All other data (research data) will be kept securely for 7 years. After this time your data will be disposed of securely. During this time all precautions will be taken by all those involved to maintain your confidentiality, only members of the research team will have access to your personal data.

Although what you say in the interview is confidential, should you disclose anything to us which we feel puts you or anyone else at any risk, we may feel it necessary to report this to the appropriate persons.

What will happen if I don't want to carry on with the study?

Your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without your legal rights being affected. If you withdraw then the information collected so far cannot be erased and this information may still be used in the project analysis.

What will happen to the results of the research study?

This is doctoral work, it can be anticipated that the results will be published as a doctoral thesis by early 2015. A summary of the results will be available for the participants maintaining anonymity and confidentiality in the reports. It can be also anticipated that the findings will be presented at conferences and submitted for publication in peer-reviewed journals.

Who is organising and funding the research?

This research is being organised by the University of Nottingham and is a self-funded study.

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by the University of Nottingham Research Ethics Committee and the Research and Development Department of the Lancashire Care NHS Foundation Trust.

Further information and contact details

Laura Iannuzzi, PhD student in Health Studies, School of Nursing, Midwifery and Physiotherapy, University of Nottingham, room B33 Queen's Medical Centre, Nottingham, NG7 2HA.
Email: nbxli@nottingham.ac.uk
Tel: +44 (0)7435903185

Helen Spiby, Professor in Midwifery, Academic Division of Midwifery, School of Nursing, Midwifery and Physiotherapy, University of Nottingham. A Floor, Medical School Queen's Medical Centre, Nottingham, NG7 2HA
Email: Helen.Spiby@nottingham.ac.uk
Tel: +44 (0)115 823 0820

Participant Information Sheet for manager



Participant Information Sheet MANAGER

(Draft Version 1.2 / Final version 1.0: 3/10/2012)

Title of Study: An exploration of midwives' approaches to slow progress of labour in birth centres, using case study methodology

Name of Researchers: Laura Iannuzzi, Prof. Helen Spiby, Dr. Denis Walsh

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. One of our team will go through the information sheet with you and answer any questions you have. Talk to others about the study if you wish. Ask us if there is anything that is not clear.

What is the purpose of the study?

This study is part of a doctoral work and aims at exploring midwives' approaches to slow progress of labour in Italian and English birth centres. The focus of this research is on midwives, their understanding of the phenomenon of slow progress of labour, the approaches that they currently use and suggest to women in case of slow progress of labour and the influential factors for their decision-making.

Why have I been invited?

You are being invited to take part because you are the midwife manager/matron of the team of midwives working in the birth centre involved in the study and we think your experience may help in having a better understanding of the phenomenon of slow progress of labour and midwives' approaches to it. We are inviting 12-20 NHS staff to take part.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. This would not affect your legal rights.

What will happen to me if I take part?

As a participant you could be involved in this study in different ways:

- An individual interview and/or
- Observations

If you agree to take part in an individual interview, we will arrange together the date, the venue and the hour. The interview will be audio-recorded and will last approximately 45- 60 minutes.

Page 1 of 3

An exploration of midwives' approaches to slow progress of labour in birth centres-
Participant Information Sheet Manager Draft 1.2 Final Version 1.0. Date 3/10/2012

If you give permission to be included in the observation component, you are allowing the researcher to observe activities in common and public areas at the site. The researcher will make it clear when the observations will take place verbally and by means of posters.

The observations will NOT include clinical encounters and they will NOT interfere with your duties. The aim is to have general insights on the organisation, midwives' care and attitude and what factors can influence their practice in the every-day life (with a particular focus on slow progress of labour). Observation will be conducted at participants' discretion and will NOT include individuals who are not willing to participate. You will always have the opportunity to verbally decline your participation and in that case the researcher will not conduct any observation that might include you.

Expenses and payments

Participants will not be paid to participate in the study.

What are the possible disadvantages and risks of taking part?

We do not anticipate any disadvantage or risk in taking part in this research. You will only share what you are comfortable with and we will keep the interview confidential.

What are the possible benefits of taking part?

We cannot promise the study will help you but the information we get from this study may help future care for women and professionals.

What if there is a problem?

If you have any question you can speak with Laura Iannuzzi. If you have concern about any aspect of this study, you should ask to speak to Prof. Helen Spiby. The researchers' contact details are given at the end of this information sheet. If you are unhappy with the response you are advised to contact Mrs Louise Sabir, Secretary to the Medical School Research Ethics Committee, email: louise.sabir@nottingham.ac.uk.

Will my taking part in the study be kept confidential?

We will follow ethical and legal practice and all information about you will be handled in confidence.

If you join the study, the data collected for the study may be looked at by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people to check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant.

All information which is collected about you during the course of the research will be kept **strictly confidential**, stored in a secure and locked office, and on a password protected database. Any information about you which leaves the site will have your name and address removed (anonymised) and a unique code will be used so that you cannot be recognised from it.

Your personal data (address, telephone number) will be kept up to 12 months after the end of the study so that we are able to contact you about the findings.

All other data (research data) will be kept securely for 7 years. After this time your data will be disposed of securely. During this time all precautions will be taken by all those involved to maintain your confidentiality, only members of the research team will have access to your personal data.

Although what you say in the interview is confidential, should you disclose anything to us which we feel puts you or anyone else at any risk, we may feel it necessary to report this to the appropriate persons.

What will happen if I don't want to carry on with the study?

Your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without your legal rights being affected. If you withdraw then the information collected so far cannot be erased and this information may still be used in the project analysis.

What will happen to the results of the research study?

This is doctoral work, it can be anticipated that the results will be published as a doctoral thesis by early 2015. A summary of the results will be available for the participants maintaining anonymity and confidentiality in the reports. It can be also anticipated that the findings will be presented at conferences and submitted for publication in peer-reviewed journals.

Who is organising and funding the research?

This research is being organised by the University of Nottingham and is a self-funded study.

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by the University of Nottingham Research Ethics Committee and the Research and Development Department of the Lancashire Care NHS Foundation Trust.

Further information and contact details

Laura Iannuzzi, PhD student in Health Studies, School of Nursing, Midwifery and Physiotherapy, University of Nottingham, room B33 Queen's Medical Centre, Nottingham, NG7 2HA.
Email: ntxl@nottingham.ac.uk
Tel: +44 (0)7435903185

Helen Spiby, Professor in Midwifery, Academic Division of Midwifery, School of Nursing, Midwifery and Physiotherapy, University of Nottingham. A Floor, Medical School Queen's Medical Centre, Nottingham, NG7 2HA
Email: Helen.Spiby@nottingham.ac.uk
Tel: +44 (0)115 823 0820

Participant Information Sheet for doctor



Participant Information Sheet

DOCTOR

(Draft: Version 1.2 / Final version 1.0: 03/10/2012)

Title of Study: An exploration of midwives' approaches to slow progress of labour in birth centres, using case study methodology

Name of Researchers: Laura Iannuzzi, Prof. Helen Spiby, Dr. Denis Walsh

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. One of our team will go through the information sheet with you and answer any questions you have. Talk to others about the study if you wish. Ask us if there is anything that is not clear.

What is the purpose of the study?

This study is part of a doctoral work and aims at exploring midwives' approaches to slow progress of labour in Italian and English birth centres. The focus of this research is on midwives, their understanding of the phenomenon of slow progress of labour, the approaches that they currently use and suggest to women in case of slow progress of labour and the influential factors for their decision-making.

Why have I been invited?

You are being invited to take part because you are the head of the host consultant unit of the birth centre involved in the study and we think your experience may help in having a better understanding of the phenomenon of slow progress of labour and midwives' approaches to it. We are inviting 12-20 NHS staff to take part.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. This would not affect your legal rights.

What will happen to me if I take part?

As a participant you could be involved in this study in different ways:

- An individual interview and/or
- Observations

If you agree to take part in an individual interview, we will arrange together the date, the venue and the hour. The interview will be audio-recorded and will last approximately 45-60 minutes.

If you give permission to be included in the observation component, you are allowing the researcher to observe activities in common and public areas at the site. The researcher will make it clear when the observations will take place verbally and by means of posters.

The observations will NOT include clinical encounters and they will NOT interfere with your duties. The aim is to have general insights on the organisation, midwives' care and attitude and what factors can influence their practice in the every-day life (with a particular focus on slow progress of labour). Observation will be conducted at participants' discretion and will NOT include individuals who are not willing to participate. You will always have the opportunity to verbally decline your participation and in that case the researcher will not conduct any observation that might include you.

Expenses and payments

Participants will not be paid to participate in the study.

What are the possible disadvantages and risks of taking part?

We do not anticipate any disadvantage or risk in taking part in this research. You will only share what you are comfortable with and we will keep the interview confidential.

What are the possible benefits of taking part?

We cannot promise the study will help you but the information we get from this study may help future care for women and professionals.

What if there is a problem?

If you have any question you can speak with Laura Iannuzzi. If you have concern about any aspect of this study, you should ask to speak to Prof. Helen Spiby. The researchers' contact details are given at the end of this information sheet. If you are unhappy with the response you are advised to contact Mrs Louise Sabir, Secretary to the Medical School Research Ethics Committee, email: louisa.sabir@nottingham.ac.uk.

Will my taking part in the study be kept confidential?

We will follow ethical and legal practice and all information about you will be handled in confidence.

If you join the study, the data collected for the study may be looked at by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people to check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant.

All information which is collected about you during the course of the research will be kept **strictly confidential**, stored in a secure and locked office, and on a password protected database. Any information about you which leaves the site will have your name and address removed (anonymised) and a unique code will be used so that you cannot be recognised from it.

Your personal data (address, telephone number) will be kept up to 12 months after the end of the study so that we are able to contact you about the findings.

All other data (research data) will be kept securely for 7 years. After this time your data will be disposed of securely. During this time all precautions will be taken by all those involved to maintain your confidentiality, only members of the research team will have access to your personal data.

Although what you say in the interview is confidential, should you disclose anything to us which we feel puts you or anyone else at any risk, we may feel it necessary to report this to the appropriate persons.

What will happen if I don't want to carry on with the study?

Your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without your legal rights being affected. If you withdraw then the information collected so far cannot be erased and this information may still be used in the project analysis.

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This is doctoral work, it can be anticipated that the results will be published as a doctoral thesis by early 2015. A summary of the results will be available for the participants maintaining anonymity and confidentiality in the reports. It can be also anticipated that the findings will be presented at conferences and submitted for publication in peer-reviewed journals.

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Further information and contact details

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Helen Spiby, Professor in Midwifery, Academic Division of Midwifery, School of Nursing, Midwifery and Physiotherapy, University of Nottingham. A Floor, Medical School Queen's Medical Centre, Nottingham, NG7 2HA
Email: Helen.Spiby@nottingham.ac.uk
Tel: +44 (0)115 823 0820

Appendix 7: Participant's consent form (English and Italian version)

 <p>UNITED KINGDOM · CHINA · MALAYSIA</p>		
CONSENT FORM		
(Draft Version 1.1 / Final version 1.0: date 01/10/2012)		
Title of Study: An exploration of midwives' approaches to slow progress of labour in birth centres, using case study methodology		
REC ref:		
Name of Researcher: Laura Iannuzzi		
Name of Participant:	Please initial box	
1. I confirm that I have read and understand the information sheet version numberdated..... for the above study and have had the opportunity to ask questions.	<input type="checkbox"/>	
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my legal rights being affected. I understand that should I withdraw then the information collected so far cannot be erased and that this information may still be used in the project analysis.	<input type="checkbox"/>	
3. I understand that data collected in the study may be looked at by authorised individuals from the University of Nottingham, the research group and regulatory authorities where it is relevant to my taking part in this study. I give permission for these individuals to have access to the data, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential.	<input type="checkbox"/>	
4. I understand that the interview/focus group* will be recorded and that anonymous direct quotes from the interview/focus group* (*delete as appropriate) may be used in the study reports.	<input type="checkbox"/>	
5. I would like to have a summary of the study findings.	<input type="checkbox"/>	
6. I agree to take part in the above study and agree to be involved in components below (initials those that apply) :		
<input type="checkbox"/> Interview	<input type="checkbox"/> Focus group	<input type="checkbox"/> Observation

Appendix 8: Examples of processes involved in the within and cross-case analysis

Example from the process of coding (English case)

'Deborah'

[She started working at the BBC 3 weeks before the interview, band 5 midwife]

L: first of all I would like to ask you ... when you think about slow progress of labour what you've got in mind, thinking about this, thing..?

R: so why I think a labour slows down?

L: for example or why what what is slow progress (slow progress of labour) [thinking about what to answer] of labour...in your understanding of the thing what it is..

R: slow ...slow progress of labour so ...active labour is classed from 4 cms, so from 4 cms we expect ladies to dilate on about half cm to a cm an hour so anything less than that I would class as slow progress in labour

L: mm mm and this image of slow progress of labour...where does it come from? Does it come from the school, from what other people told you?

R: from school, university yeah

L: so they they told you (yes) they talked to you ..they taught you about slow progress of labour (yeah) or was something that came like..(ye yeah) during your training or.. was a lesson

R: not on slow progress of labour but lessons on (progress) phases of labour and how labour goes

L: so if you should tell to like a student midwife here when and she ...when a labour is progressing slowly so...

R: we have a...if I have to show a student... on partograms we have the action lines so, I'd show student how to do an action line and if the lady is stable the action line where is progressing nice and normally and if the lady crosses the action line labour is progressing slower than we would like

L: mm mm and you think is quite fine, is quite loyal to what you see in the experience, this classification of slow progress of labour and normal progress?

R: is quite what sorry?

L: loyal...so do you think it reflects what what happens with woman pretty much?

R: yeah

L: you are quite fine with the use of partogram?

R: yeah yeah

L: do you think is fine?

R: ye eh... because then if you're using the partogram and the action line picks up quite early on it, there is slow progress you you can do something early on to try eh...speed things up eh...and usually the action lines are quite...found

LAURA IANNUZZI
Based on partogram, expected dilatation [this is one of the more didactic definitions]

LAURA IANNUZZI
Authoritative knowledge

LAURA IANNUZZI
No lessons on slow progress [but on labour stages/normal progress]

LAURA IANNUZZI
Partograms and action line; slow progress = when woman crosses the action line

LAURA IANNUZZI
Fine with partogram, it pretty much reflects women's labour progress

LAURA IANNUZZI
Partogram as an aid, the earlier you pick up slow progress the sooner you intervene

1

Examples from the process of grouping codes and categorising (Italian case)

TO EVALUATE EFFECTIVENESS OF THE APPROACH

O se ritornano le contrazioni alla donna (e anche *fu lì che arco di come fai come fai a valutare?*) una donna che vedo che ha comunque bisogno di riposare massimo un'oretta (mm *ogg*) mi *già* massimo un'ora *perché* a *quell* punto o *è* il momento di rifare l'altra visita e capire o comunque poi non ho *più* tempo per fare il resto. (FP HOW TO EVALUATE THE EFFECTIVENESS)

CHANGING TO MAKE CHANGE HAPPENING

perché il fatto magari a due ore di dire a questa donna 'guarda sta succedendo questo ti rivisita tra un'ora vediamo, sarà l'effetto strizza, insomma ogni tanto vedo in quella terza ora qualche cosa succede e se *perché* in quella terza ora non *è* successo niente...basta (FP APPR-DEC)

ti trasferisco *perché* allora *è* come se ripartisse qualcosa *mi* *è* *capito* diverse volte che dopo che *perché* avevo detto si *fu* al trasferimento tempo di chiamare di *la* magari mi dicono 'aspetta 10 minuti *perché* non ce la facciamo' e la donna nel frattempo *è* sbloccata completamente ... (FP)

poi il discorso anche di cambiare ambiente certe volte anche dire 'proviamo a fare due passi andiamo in cucina a mangiare qualche *cosa* aprire la porta la finestra rifare un po' l'ambiente non necessariamente *perché* se *è* in penombra certo va bene *perché* l'aria ferma anche tutti *la*...come quando uno sta a letto molato tanto tempo quando si alza si sente molle sulle gambe *perché* dopo ti senti riavere quando prendi una boccata d'aria fresca (FP EXTRA APPR)

HARD TO SAY/AMBIGUITY OF DEF

capisco ora se tu mi vuoi chiedere soltanto il travaglio rallentato o anche quando *è* stentato, *perché* secondo me alcuni travagli partono, partono *è* rallentati prima di esserlo diventati (FP DEF)

EXHAUSTION / LESS RESOURCES

EARLY LABOUR & SLOW PROGRESS

LONG/EXHAUSTING (IS NOT JUST A MATTER OF TIME)



quando sei con queste donne, con questi prodromi magari lunghi [...] lunghi per tempo, lunghi per stress [...]oltre le 12 ore...8-12 ore per qualche persona *è* *perché* secondo me la lunghezza dei prodromi dipende anche dalla *capacità* proprio di *supportare della donna*, quando hai questi prodromi che certe volte queste donne cominciano, poi vanno via, poi ricominciano poi vanno via e poi magari ricominciano sempre di notte e la donna magari non riesce a riposare e *già* ti arriva con delle risorse in meno (mm *ogg*) ecco io in questi casi per esempi tendo a essere abbastanza stretta...

RESTING OR ARRESTING?

a un certo punto comunque finisce le energie e si stanca *perché* rallentato anche per la donna *perché* quando comunque la donna mi *già* dei segnali in cui riesce a riposare a sfruttare questo rallentamento a me va anche



Examples from the process of the cross-case analysis towards final conceptualisation

	SOME COMPARISONS BETWEEN THE 2 SITES	
<ul style="list-style-type: none"> • ALONGSIDE BIRTH CENTRE (400 BIRTHS) POINT OF REFERENCE • PROBLEMATIC COLLABORATION WITH THE HOST UNIT • EVIDENCE BASED PRACTICE • DEDICATED / CORE SMALL TEAM (11-12 MWS) • PERIODS OF ROTATION WITH THE LABOUR SUITE STAFF (6 MONTHS) • CONFLICTS BETWEEN MANAGERS OF BIRTH CENTRE AND LABOUR WARD • MANAGER/HEAD OF THE UNIT IN SITE • TEAM WITH HALF SENIOR - HALF JUNIOR MIDWIVES • WEEKLY MEETINGS, SLOW PROGRESS AS THEME DISCUSSED • MINUTES OF MEETINGS AVAILABLE IN THE SITE • ARCHITECTURE ALLOWS TO HAVE A VIEW ON EVERYTHING THAT'S GOING ON • TELEPHONIC AND IN SITE TRIAGE • PROCEDURE/SPECIFIC INSTRUCTION ABOUT THE USE OF PARTOGRAM • NO SPECIFIC POLICY ABOUT SLOW PROGRESS OF LABOUR • ONE OF THE FIRST CAUSES OF TRANSFERS • SLOW PROGRESS OF LABOUR SEEN AS A BIG ISSUE • TRANSFERS FOR SLOW PROGRESS OF LABOUR RECORDED IN A DIARY NO SPECIFIC FORM • MWS OCCASIONALLY (RARELY) CAN CONTINUE THE CARE IN THE LABOUR SUITE IN CASE OF TRANSFER • NO PHARMACOLOGICAL PAIN-RELIEF AVAILABLE • HIGH LEVEL OF STRESS RELATED TO TRANSFERS DUE TO SLOW PROGRESS OF LABOUR (SENSE OF GUILTINESS) • NEED OF LEADERS, CLINICAL GUIDANCE • MWS TEND TO UNDERLINE NEGATIVE ELEMENTS 		<ul style="list-style-type: none"> • FREESTANDING BIRTH CENTRE (800-900 BIRTHS) POINT OF REFERENCE • IDEAL/ POSITIVE COLLABORATION WITH THE HOST UNIT • EVIDENCE BASED PRACTICE • DEDICATED LARGE TEAM BASED IN THE COMMUNITY (40-50 MWS) • NO ROTATION WITH THE LABOUR SUITE STAFF • ARMONY BETWEEN LEADERS OF BIRTH CENTRE AND MANAGER (SAME FOR THE LABOUR WARD) • MANAGER NOT IN SITE (TEAM LEADERS AS MANAGERS) • TEAM MAINLY OF MIDWIVES CONSIDERED NOT JUNIOR • 2-3 MEETINGS A YEAR, SLOW PROGRESS NOT DISCUSSED • MINUTES OF MEETING SENT VIA EMAIL PERSONALLY • ARCHITECTURE DON'T ALLOW TO HAVE A VIEW ON EVERYTHING THAT'S GOING ON • TELEPHONIC AND IN SITE TRIAGE • NO SPECIFIC INSTRUCTION ABOUT THE USE OF PARTOGRAM • SPECIFIC POLICY ABOUT (TRANSFER) FOR SLOW PROGRESS • ONE OF THE FIRST CAUSES OF TRANSFERS • SLOW PROGRESS OF LABOUR NOT SEEN AS AN ISSUE • TRANSFERS FOR SLOW PROGRESS OF LABOUR RECORDED IN DETAIL (AUDIT FORM) • MWS MORE RARELY THAN BEFORE CONTINUE THE CARE IN THE LABOUR SUITE IN CASE OF TRANSFER • ENTONOX AND PETHIDIN AVAILABLE AS PAIN RELIEF • LITTLE /NO STRESS RELATED TO TRANSFERS FOR SLOW PROGRESS (RARE SENSE OF GUILTINESS) • PRESENCE OF TEAM LEADERS, INTERNAL HIDDEN CONFLICTS • MWS TEND TO GIVE ROSY PICTURES OF THE REALITY

SOME COMPARISONS BETWEEN THE 2 SITES (ctd)

- MWS HAVE GOT IN MIND MANY CASES OF SLOW PROGRESS
- QUITE CLEAR DEFINITION OF SLOW PROGRESS (DIFFICULT IN PRACTICE) MAINLY FOCUSED ON UTERINE ACTIVITY, ACTION LINE, NO CHANGE IN 2 EXAMINATIONS
- 2 HOURLY VAGINAL EXAMINATIONS, FINAL DECISION OFTEN BASED ON THE VAGINAL ASSESSMENT
- LOCAL VERSION OF THE WHO PARTOGRAM (4 HOURS BETWEEN ALERT AND ACTION LINE), SET GRAPH
- LESS DESCRIPTIVE RECORD OF THE PROGRESS IN THE PARTOGRAM
- JUST CARE PROVIDED RECORDED, NO INTRAPARTUM PLAN
- HARD TO GO BEYOND BOUNDARIES
- MANIPULATION OF THE PARTOGRAM, FEAR OF JUDGMENTS FROM DOCTORS AND COLLEAGUES
- MAIN CAUSES OF SLOW PROGRESS OF LABOUR: UNKNOWN, PSYCHO-CULTURAL FACTORS, ENVIRONMENT, MALPOSITIONS
- CONNECTION HARD EARLY LABOUR STAGE - SLOW PROGRESS
- IMPORTANCE OF PUTTING THINGS IN CONTEXT, IN A BIGGER PICTURE FOR RECOGNITION OF SLOW PROGRESS
- DESCRIPTION OF WOMEN'S BEHAVIOURS THAT MIGHT HELP IN DISTINGUISHING A REST FROM AN ARREST, ATTENTION TO IT
- MORE APPROACHES REPORTED (OF DIFFERENT NATURE, FROM ENVIRONMENT, CONTINUITY OF CARE TO CHINESE MEDICINE, FEW ARMs)
- IMPORTANCE OF STAYING WITH THE WOMAN
- LESS COPING STRATEGIES FOR WOMEN'S EXHAUSTION
- SEARCHING FOR NEW APPROACHES, UNDERSTANDINGS, WAYS OF COPING
- SENSE OF NECESSITY OF CONTINUOUSLY IMPROVE THE CARE PROVIDED

- MWS ARGUING THEY HARDLY HAD A SLOW PROGRESS IN THE CAREER
- HARD TO DEFINE/ NO DEFINITION, (INDIVIDUALS AS UNIQUE) CROSSING THE ACTION LINE, MORE FLEXIBLE TIME, NO CHANGE IN 2 EXAMINATIONS TIME
- 4 HOURLY VAGINAL EXAMINATIONS (MORE ABDOMINAL), SOMETIMES V. EXAMINATION FUNDAMENTAL FOR MAKING DECISION
- PARTOGRAM BASED ON WHO MODEL (4 HOURS ALERT-ACTION LINES) TO DRAW MANUALLY
- LONG DESCRIPTIVE RECORDS OF THE PROGRESS IN PARTOGRAMS
- IMPORTANCE OF WRITING THE INTRAPARTUM PLAN
- FLEXIBILITY, ADVANTAGES OF DISTANCE FROM DOCTORS
- RARE MANIPULATIONS OF THE PARTOGRAM, USE OF THE GUIDELINES AS GUIDANCE (MORE MATURE APPROACH AND AUTONOMY)
- MAIN CAUSES OF SLOW PROGRESS OF LABOUR: MALPOSITIONS, ENVIRONMENT, PSYCHOLOGICAL (RARE ANSWER), UNKNOWN (RARE)
- CONNECTION HARD EARLY LABOUR STAGE-SLOW PROGRESS
- IMPORTANCE OF PUTTING THINGS IN CONTEXT, IN A BIGGER PICTURE FOR RECOGNITION OF SLOW PROGRESS
- POORER DESCRIPTIONS OF WOMEN'S BEHAVIOURS (LESS ATTENTION DUE TO THE LESS IMPORTANCE GIVEN TO THE PHENOMENON)
- LESS APPROACHES REPORTED, IMPORTANCE GIVEN TO THE FUNDAMENTALS OF MIDWIFERY (ONE-TO-ONE, MOBILISATION, DRINKING, EATING) ARMs
- IMPORTANCE OF STAYING WITH THE WOMAN
- USE OF PETHIDIN FOR WOMEN'S EXHAUSTION
- QUITE FINE WITH THE APPROACHES CURRENTLY ADOPTED, NOT FELT THE NEED FOR LOOKING AT OTHER APPROACHES
- SENSE OF PROUDNESS OF THE CARE PROVIDED, NO MUCH FELT THE NEED FOR IMPROVEMENT

SOME COMPARISONS BETWEEN THE 2 SITES (ctd)

- BIRTH CENTRE AS IDEAL SCENARIO
- COMPLEXITY OF DECISION MAKING PROCESS EXPLICIT
- COLLEAGUES SEEN AS FUNDAMENTAL
- CONFLICTING ROLE OF THE MANAGER (SUPPORT IN SOME CASES, FORCING ELEMENT IN OTHERS)
- FEAR OF JUDGMENTS, VERY POWERFUL
- IMPORTANCE OF THE WOMAN, THE BIRTH PARTNER, FAMILIES
- INFLUENCE OF THE TRANSFERS RATE, SOMETIMES NOT JUST AS A PRESSURE FROM THE MANAGER
- SOME DIFFERENCES BETWEEN WHAT IS REPORTED AND THE REALITY EMERGED FROM THE OBSERVATIONS
- AWARENESS OF THE IMPACT OF THE CULTURE ON THE PHENOMENON (GENERAL, WOMEN'S, OF THE ORGANIZATION)
- IMPORTANCE OF THE SETTING (DIFFERENT MWS' BEHAVIOURS IN DIFFERENT SETTINGS)
- APPARENT MEDICAL DOMINANCE IN THE CULTURE
- COMMUNICATION PROBLEMS FELT AS ISSUE
- STRESS ON BAD COLLABORATION WITH HOST UNIT. VICIOUS CIRCLE
- IDEAS FROM PERSONAL EXPERIENCE, OTHERS, TEXTBOOKS, CONFERENCES, EVIDENCE
- LOOKING AT OTHER MIDWIFERY SYSTEMS OF CARE (UK), SOMETIMES REPORTED EXAMPLES FROM OTHER COUNTRIES
- SENSE OF BIRTH CENTRE AS FORMATIVE ENVIRONMENT, INFLUENCE ON FUTURE DECISIONS WHATEVER THE SETTING
- DECISIONS FREQUENTLY DISCUSSED WITHIN MEETINGS, INDIVIDUALLY AND WITHIN AUDITS

- BIRTH CENTRE AS IDEAL SCENARIO
- COMPLEXITY OF DECISION MAKING PROCESS LESS APPARENT
- COLLEAGUES SEEN AS FUNDAMENTAL
- LITTLE ROLE OF THE MANAGER, CONFLICTING ROLE OF THE TEAM LEADERS
- FEAR OF JUDGMENTS NOT SO POWERFUL
- IMPORTANCE OF THE WOMAN, THE BIRTH PARTNER, FAMILIES
- INFLUENCE OF THE TRANSFERS RATE, MORE A LEADERS' OR MANAGER'S PROBLEM
- SOME DIFFERENCES BETWEEN WHAT IS REPORTED AND THE REALITY EMERGED FROM THE OBSERVATIONS
- RARE MENTION OF THE IMPACT OF CULTURE AND SOCIETY ON SLOW PROGRESS
- IMPORTANCE OF THE SETTING (DIFFERENT MWS' BEHAVIOURS IN DIFFERENT SETTINGS)
- LESS MEDICAL DOMINANCE
- COMMUNICATION PROBLEMS NOT FELT AS ISSUE
- STRESS ON COLLABORATIVE TEAM, ROSY PICTURE SOMETIMES, VIRTUOUS CIRCLE OF POSITIVITY
- IDEAS MAINLY FROM PERSONAL EXPERIENCE, EVIDENCE, NO MENTION ABOUT TEXTBOOKS
- HARDLY KNOWING OTHER MIDWIFERY SYSTEM OF CARE (NEVER MENTIONED EXAMPLES FROM OTHER COUNTRIES)
- SENSE OF BIRTH CENTRE AS FORMATIVE ENVIRONMENT, INFLUENCE ON FUTURE DECISIONS WHATEVER THE SETTING
- DECISIONS DISCUSSED WITHIN PERSONAL RELATIONSHIPS OR OFFICIAL AUDIT

Factors	Assertion 1		Assertion 2		Assertion 3		Assertion 4		Assertion 5	
	IT	EN	IT	EN	IT	EN	IT	EN	IT	EN
O	H	H	M	M	H	M	H	H	M	M
I	M	H	H	H	H	H	H	H	H	M-H
R	H	M	H	M	M	L	H	M	H	H
C	H	H	H	M	H	M	H	M	H	M

Contribution of each key factor identified to the assertions made regarding the quintain. O= organisation; I= individuals' characteristics; R= relationships; C= contextual features including socio-cultural aspects. H indicates high relevance, M medium and L low.