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The culture and context of minimising perineal injury during physiological birth: an ethnographic study

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Contents

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Abstract

Injury to the tissues of the perineum during childbirth is a frequent occurrence with most women likely to experience a degree of perineal injury when giving birth for the first time, with this leading to significant consequences in some cases. There is no international agreement on how, or whether, midwives should use their hands to facilitate a physiological birth to reduce perineal injury. English national clinical guidelines suggest using one of two techniques: 'hands on' i.e. guarding the perineum and flexing the baby's head, or 'hands poised' i.e. with hands off the perineum and baby's head but in readiness. The technique used by midwives is a contentious issue with speculation that adoption of the 'hands poised' approach has led to an increase in severe perineal injury. The use of the terms 'hands on' and 'hands poised' (often used interchangeably with the term 'hands off') to label midwifery techniques is problematic. The terms are not used consistently in the literature and are frequently undefined.

This thesis addressed the research question: which strategies do midwives use to reduce perineal injury during physiological birth and what factors affect their decision making? An ethnographic study was undertaken in a large maternity unit in the southeast of England with data collected through participant-observation in the obstetric-led delivery suite and co-located midwifery-led birth centre. During the study it became apparent that the concept of minimising perineal injury during birth was troublesome for midwives for several reasons. The data was subsequently considered within the context of threshold concept theory. Three main themes were

identified from the data: Troublesome language, Troublesome knowledge, and Troublesome environments. The findings from the study contribute to the current body of knowledge by providing further evidence to the 'hands on/hands off/hands poised' debate. A novel model is presented that illustrates the intersection between the elements of evidence-based clinical decision making and the types of troublesomeness that make this a complicated process for midwives to successfully navigate. A unique and detailed inventory of the practices used by midwives to minimise perineal injury has been developed, which demonstrates how 'hands on' techniques are more complex than the current definition implies. Recommendations include the adoption of a set of standardised definitions for the terms 'hands on', 'hands off' and 'hands poised', a structured reporting system when a 'hands on' technique has been used and an educational approach that recognises minimising perineal injury during birth as a midwifery threshold concept.

Glossary of terms

Birth centre: part of the maternity service provision, managed by a team of midwives with the aim of facilitating physiological birth, in a home from home environment. Birth centres can be freestanding or co-located within hospital premises.

Cardiotocography (CTG): a continuous recording of the fetal heart rate using an ultrasound transducer on the mother's abdomen, in conjunction with a pressure senor to measure uterine contractions. CTG is a tool used to assess fetal wellbeing.

Delivery suite: the maternity unit located in a hospital, with full medical facilities available usually including operating theatres and high dependency provision

Epidural anaesthesia: the injection of pain relieving drugs in the back (into the epidural space) that typically provides complete cessation of the pain associated with labour contractions and childbirth

Extension: a movement that increases the angle between two body parts, such as the baby's chin and chest

Flexion: a movement that decreases the angle between two body parts, such as the baby's chin and chest

Lithotomy position: whilst lying on the back, the legs are flexed to 90 degrees at the hips with the knees bent between 70 to 90 degrees. The feet are supported by stirrups or footrests

Occiput: the back of the head

Perineum: the term used to identify the structures and tissues bounded by the bony structures of the pelvis, which includes the external genitalia and anus

Physiological birth: spontaneous onset of labour between 37 and 42 weeks of pregnancy, no medical intervention during labour and a vaginal birth that is not assisted with instruments

Shoulder dystocia: the baby's head has been born but one of the shoulders is stuck behind the mother's pubic bone, which delays the birth of the baby's body

Sinciput: the front of the skull from the forehead to the crown

Threshold concept: a term in the study of higher education that describes core concepts that once understood, transforms the perception of a given subject, phenomenon, or experience

Traction: the action of pulling

Troublesomeness: a difficulty that causes anxiety

Valsalva technique: the action of taking a deep breath and holding it (closed glottis) whilst pushing with a contraction

Woman: Where the term 'woman' is used, the intention in this thesis is to include reference to all childbearing and birthing people.

Chapter 1 Introduction to perineal care practices during birth

'To obtain a normal dilatation of the perineum, sufficient to allow the exit of the child, preserving the integrity of the tissues, is the highest object attainable'

(DeWees, 1889 p.841)

1.1 Introduction

This thesis presents an ethnographic study that investigated the different interventions used by midwives during physiological birth to reduce injury to the perineum, and the factors that influence their decision making. The study took place at a maternity unit in the south-east of England.

Injury to the tissues of the perineum during childbirth is a frequent occurrence. It has been consistently reported that most women giving birth vaginally for the first time are likely to experience some degree of perineal injury that requires surgical repair (Albers *et al.,* 2005, Bick, 2012, Kettle and Tohill, 2008, Smith *et al.,* 2013). Sustaining perineal injury can have significant consequences for women, therefore it is important to consider how injury can be prevented or minimised. There is, however, no consensus regarding the optimal approach for reducing perineal injury, and there is ongoing professional debate as to how, or whether birth attendants should intervene with hand manoeuvres to provide manual support to the perineal tissues and control the birth of the baby's head and shoulders during physiological birth

(Manresa *et al.,* 2020, Thornton and Dahlen, 2020). The most recent Cochrane systematic review evaluating the effectiveness of perineal techniques to reduce perineal injury during the second stage of labour, concluded that adopting either the 'hands on' or 'hands off' approach made no clear difference to perineal outcomes (Aasheim *et al., 2017*).

Most published studies focus on the actions of the birth attendant and the mechanics and management of birth to reduce perineal tearing with interventions intended to manually slow the birth of the baby's head and to provide physical support to the perineal tissues. There is a notable lack of research exploring midwives' decision-making and determination of the optimal perineal management technique to use when facilitating physiological birth. This study addressed this gap in the evidence using ethnographic methods. This thesis provides new knowledge by presenting descriptions of the practices used by midwives to minimise perineal injury, an analysis of their understanding of the techniques used, the factors that contributed to their decision-making and offers explanatory theories for future investigation.

This opening chapter describes the structure and tissues of the perineum and classification of perineal injury, discusses the type and incidence of perineal injury sustained during childbirth and the significance of this for childbearing women and their families, midwives, and the healthcare system. The history of perineal protection is then presented to provide context, followed by a summary of the clinical recommendations currently available for midwives in the United Kingdom

(UK). Areas of contention and gaps in the literature are identified and the research question, aims and objectives are stated. The chapter concludes with an outline of the thesis.

1.2 The perineum: structure and function

The perineum is the term used to collectively identify the structures and tissues bounded by the bony structures of the pelvic outlet; the symphysis pubis anteriorly, coccyx posteriorly and the ischial tuberosities laterally. The diamond shape created by these bony margins is divided into two triangular areas separated by the muscles of the perineal body. The anterior perineal triangle contains the urethra, clitoris and external genitalia with the posterior perineal triangle containing the anus and anal sphincters (Paterson-Brown, 2010), see Figure 1.1. The pelvic floor muscles of the perineum support the organs in the pelvic cavity and therefore play an important role in the functions of urination and defaecation, sexual intercourse and childbirth. During physiological vaginal birth, the tissues of the perineum stretch and flatten to accommodate the descending fetal head. Perineal injury occurs when the tissues of the perineum tear spontaneously or when an episiotomy is cut to enlarge the vaginal outlet.

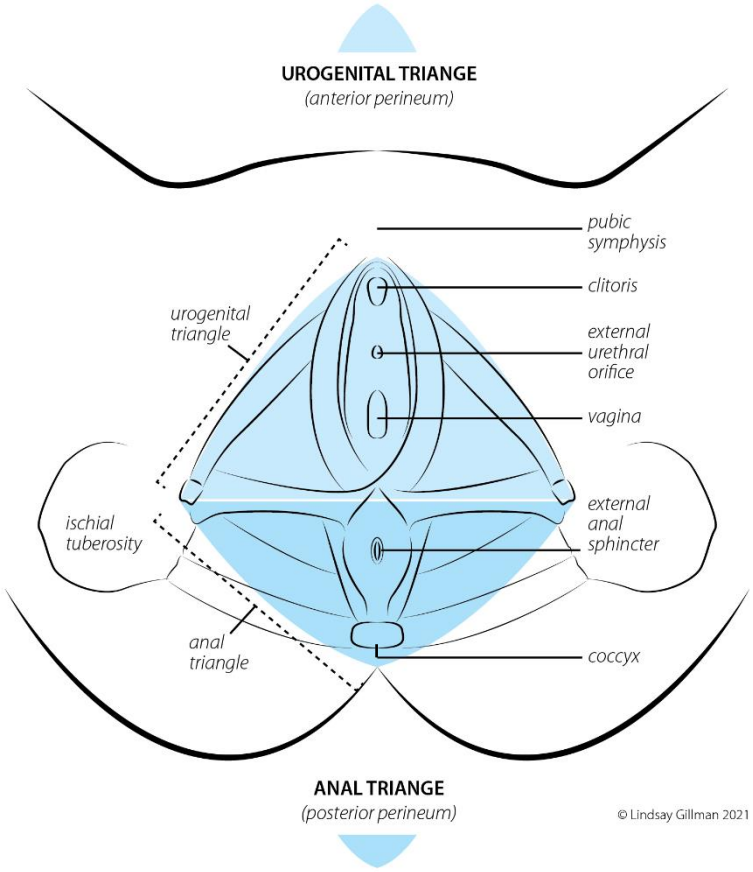


Figure 1.1. The structures and borders of the perineum

1.3 Definition and classification of perineal injury

1.3.1 Definitions of perineal injury

Perineal injury, often referred to as perineal trauma, is defined as any damage to the genitalia during childbirth that occurs spontaneously or intentionally by surgical incision (Dahlen *et al.,* 2007, Kettle and Tohill, 2008). Perineal injury is associated with considerable short- and long-term maternal morbidity including perineal pain, dyspareunia, urinary, flatus or faecal incontinence all of which can lead to psychological and social issues (Aasheim *et al.,* 2017, Priddis, Schmied and Dahlen, 2012, Priddis, Schmied and Dahlen, 2014, Way, 2012). The degree of morbidity experienced in the postnatal period is generally related to the type and severity of the perineal injury sustained. Women who have an intact perineum after birth generally report lower levels of pain and pelvic floor symptoms in the postnatal period (Albers *et al.,* 1999, Williams, Herron-Marx and Hicks, 2007).

Anterior perineal trauma is any injury to the tissues of the labia, anterior vaginal wall, urethra, or clitoris with posterior perineal trauma classified as any injury to the posterior vagina wall, perineal muscles, or anal sphincter (Kettle, 2008). Posterior perineal trauma is further classified by the extent to which the perineal skin and underlying muscles are damaged, with first degree trauma being the most superficial and fourth degree being the most extensive, often referred to in the literature as severe perineal trauma (SPT) or obstetric anal sphincter injury (OASI).

The term OASI (or OASIS), an acronym of obstetric anal sphincter injury was first used by obstetricians Sultan and Thakar (2002) and is now widely adopted as the term applied to third- and fourth-degree perineal tears. Priddis (2014) however, challenged the acceptance of this terminology following her own experience and research with women who had sustained an anal sphincter injury. Priddis considered that the use of the term OASIS reflected '*the dismissive attitude of health professional and reinforces the feelings of abandonment experienced by women who seek help for postpartum morbidities';* and that the term considers only the physical harm sustained to the perineum without regard for the psychological implications. Consequently, the term severe perineal trauma (SPT) was presented as a more appropriate and acceptable term (Priddis, 2014 p.149-150, 153). Hunter (2006 p.120) considers medical terminology as a symbol of power *'reinforcing the control of the provider at the expense of the woman'*. Therefore, the term severe perineal trauma (SPT) will be used throughout this thesis when referring to third and fourth-degree perineal injury in response to the recommendation by Priddis (2014), and out of respect for those who have shared their lived experience of this type of childbirth trauma.

1.3.2 Classification of perineal injury

Perineal injury sustained during birth can range on a spectrum of severity from tears to the skin only to more severe trauma that includes the perineal muscles and anal sphincter complex. In 2007, The Royal College of Obstetricians and Gynaecologists (RCOG) produced guidance to improve the standardised classification of perineal trauma (Table 1.1).

First degree	Injury to perineal skin only
Second degree	Injury to perineum involving perineal muscles but not involving the anal sphincter
Third degree	Injury to perineum involving the anal sphincter complex: 3a: Less than 50% of external anal sphincter thickness torn
	3b: More than 50% of external anal sphincter thickness torn
	3c: Both external anal sphincter and internal anal sphincter torn
Fourth degree	Injury to perineum involving the anal sphincter complex (external and internal anal sphincter) and anal epithelium

Table 1.1: The Royal College of Obstetricians and Gynaecologists classification of perineal trauma (RCOG 2007)

1.4 Incidence of perineal injury

It has been consistently reported that during childbirth approximately 85% of women will sustain some degree of perineal trauma (Albers *et al.,* 2005). During 2019-20 perineal injury was reported to be the most prevalent birth complication, having occurred in 244,181 births (65.49% of all births) in England (NHS Digital, 2020). The incidence and degree of perineal trauma varies depending on whether the birth is a first or subsequent vaginal birth, the mode of birth and the place of birth. Identified risk factors for perineal injury are discussed later in this chapter in section 1.4.3.

1.4.1 The incidence of episiotomy

An episiotomy is an intentional perineal injury caused by the surgical incision into the muscles and skin of the perineum during labour, to facilitate birth by enlarging the vulval outlet and requires repair by suturing (National Maternity and Perinatal Audit Project Team (NMPAPT) 2019). Episiotomy is classified as second-degree perineal injury, and only indicated to facilitate the manipulation of instruments during a vacuum or forceps birth or if there is suspected fetal compromise (National Institute for Health and Care Excellence (NICE), 2014). The use of episiotomy as an intervention to protect the perineum from more severe trauma is discussed in section 1.6.4.

There has been a wide variation in the reported rate of episiotomy during vaginal birth across the world. A study comparing the rates of SPT and episiotomy in 20

European countries reported that the variation in overall episiotomy use ranged from 3.7% in Denmark to 75% in Cyprus. The episiotomy rate for England in the reported year (2010) was 19.4% overall; 77.5% in assisted (vacuum and forceps) vaginal births and 8% in unassisted births (Blondel *et al.,* 2016). The reported episiotomy rates in England have increased slightly to 8.3% (27,612) during unassisted births and to a greater extent with assisted vaginal births to 86.1% (59,270) during 2016-2017, giving an overall rate of 21.6% (NMPAPT), 2019).

Aguiar *et al.,* (2019) reported a higher episiotomy rate in low- and middle-income countries (LMICs) for births that occurred in medical facilities (46%, 95% CI 36-55%), than that of high-income countries. This is significant as it is estimated that 99% of all maternal deaths occur in LMICs (World Health Organisation (WHO), 2018) and for every mother that dies, 30-50 women will suffer from acute birth related morbidity including pain, haemorrhage and infection, conditions that are more likely following episiotomy (Jiang *et al.,* 2017, Tunçalp *et al.,* 2015).

In LMICs, the use of routine episiotomy for births in medical facilities is an example of an extreme on the maternity care continuum, in which there is an over-medicalisation of birth and excessive use of interventions that do not decrease mortality and may contribute to morbidity, described as 'too much, too soon' (McDougall, Campbell and Graham, 2016, Miller *et al.,* 2016). The use of episiotomy as a routine intervention to reduce more severe perineal trauma during physiological birth is not supported by the evidence, and a selective approach should be

considered in all settings. An episiotomy guarantees at least second-degree perineal injury requiring suturing, and a selective episiotomy policy may result in fewer women experiencing severe perineal/vaginal trauma (Jiang *et al.,* 2017 p.2).

1.4.2 The incidence of severe perineal trauma (SPT)

Gurol-Urganci *et al.* (2013) identified a threefold increase in the reported incidence of SPT in England between 2000 and 2012, with the rate rising from 1.8% to 5.9% of vaginal singleton births in primiparous women. The rate of second-degree perineal injury also increased over the same time period, although by a lesser extent from 28.6% to 35.2%.

This rising trend in perineal injury, particularly SPT was also reported in other high-income countries such as Denmark, Norway, and Sweden (Laine, Gissler and Pirhonen, 2009), Finland (Räisänen et al., 2013), Canada (Muraca *et al.,* 2018) and Australia (Ampt *et al.,* 2013). The more recently reported rate of SPT in the United Kingdom (UK) is 3.5% (NMPAPT, 2019). The overall SPT rate in England is reported to be marginally higher at 3.6% although this varies significantly for primiparous and multiparous women for spontaneous births (5.4% and 1.6% respectively) and for births assisted with instruments (7.8% and 4.8% respectively) (NMPAPT, 2019). The overall reported rate of SPT also varies considerably from just above 1% to more than 6% between sites in the UK (NMPAPT, 2019). The rate of SPT at the site where this study was undertaken was 3.5%, in line with the UK average.

A systematic review and meta-analysis of data from 74 studies of births in 41 LMICs between 2004 and 2016 identified a lower rate of SPT than that of high-income countries with an estimated rate of 1.4% (95% CI 1.2-1.7%) compared to 2.5% reported in the UK in 2017 (Organisation for Economic Co-operation and Development (OECD) (2019). However, this estimate may not be a true representation of the scale of perineal injury in LMICs due to both lower levels of detection and poor-quality reporting therefore representing a falsely reassuring picture (Aguiar *et al.,* 2019, Hirayama *et al*., 2012).

The lack of reliable data from many LMICs has been identified as a major obstacle to improving childbirth outcomes for women and babies (Goldenberg, McClure and Saleem, 2018, Gabrysch *et al.,* 2019). SPT is an important cause of maternal morbidity in LMICs with the resultant issues of incontinence and impaired sexual function likely to lead to social isolation (WHO and United Nations Population Fund (UNPF) (2009), therefore any strategies that have the potential to reduce perineal injury, particularly SPT urgently need to be identified and disseminated globally.

1.4.2.1 Factors that may account for an increase in rates of SPT

There have been several reasons suggested for the increase in the reported rates of SPT in high income countries. Improvements in detection and reporting of third- and fourth-degree tears, due to increased awareness and training, has been cited as the

most likely explanation for the rise in reported cases in England (Gurol-Urganci *et al.*, 2013). Dahlen, Priddis and Thornton (2015) concur that improvements in recognition and reporting may be a contributory factor and suggest that a change in demographic with increased migration may also have an impact, reporting higher rates of SPT in women born in India, Bangladesh, Indonesia China, Thailand, Sri Lanka, the Philippines, and South Korea birthing in Australia with rates between 4.1 and 7.6%.

It has been consistently documented that SPT rates rise with the use of instruments to facilitate birth (Dahlen *et al.,* 2013, Dahlen, Priddis and Thornton, 2015, Hirayama *et al.,* 2012, NMPAPT, 2019, O'Mahony, Hofmeyr and Menon, 2010, Orlovic *et al.*, 2017). Gurol-Urganci *et al.* (2013) cite an increase in the number of assisted births (vacuum and forceps) during the time period of their study (2000-2011); which could account for the increase, noting that vaginal births facilitated using forceps for primiparous women increased from 9% to 16.1%, whilst the use of vacuum to facilitate birth decreased from 17.5% to 13.9%. The use of episiotomy in conjunction with both vacuum and forceps assisted births also increased (67.8% to 78.6% and 82.2% to 87.7% respectively), although Gurol-Urganci *et al.* (2013) do not consider that the increase in SPT for primiparous women during this time could be explained by the changes in these major risk factors. More recent data has identified that the use of instruments to facilitate birth for primiparous women resulted in an SPT rate of 7.8% compared to 5.4% during spontaneous birth, and 4.3% for multiparous women compared to 1.6% during spontaneous birth in England (NMPAPT, 2019), highlighting the increased risk of SPT with instrumental birth.

It has been suggested that changes to the way midwives manage the second stage of labour may be a contributory factor to the rise in reported SPT rates (Gurol-Urganci *et al.*, 2013, Pirhonen *et al.*, 1998, Tyagi, Perera and Guerrero, 2013, Trochez, Waterfield and Freeman, 2011, Freeman, 2013). Laine, Gissler and Pirhonen (2009 p.74) also add that these changes in practice suggest that *'protecting the perineum may have lost its importance'*.

The change in practice cited in the literature refers to the utilisation of a 'hands poised' approach to the perineum and/or the baby's head during birth, in contrast to a 'hands on' approach where the perineum and/or the baby's head are supported by the midwife's hands. The change in practice from a 'hands on' to a predominantly 'hands poised' or 'hands off' approach has been attributed to the publication of the results of a randomised controlled trial (RCT) that investigated the effect of 'hands on' and 'hands poised' perineal management at birth on the prevalence and level of perineal pain experienced by women ten days postpartum (McCandlish *et al.*, 1998). This study is discussed within the historical context in section 1.6.2.

Studies exploring midwives' perineal care practices, however, did not identify a widespread adoption of the 'hands poised' or 'hands off' approach. In a postal survey, in which the responses represented just 2.1% of the 28,030 practicing midwives in England at the time (Nursing and Midwifery Council (NMC), 2008), the results suggested that equal numbers of midwives 'preferred' both the 'hands on' and 'hands off' approaches (Trochez, Waterfield and Freeman, 2011). However, the

survey questionnaire limited midwives' choices to one of either methods and did not allow for expansion, context or rationale to be included. A later survey of midwives' hand positions during birth presented respondents with more options including: 'no touching at all', 'touching the head and perineum', 'only touching the perineum', and 'only touching the head', with the option of 'another position' which was a free text answer (RCM, 2014). From the 469 midwives who responded, almost two thirds (66.3% n=311) of midwives reported that they would have their hands on either the head (20.5% n=96), the perineum (14.5% n=68) or both the head and perineum (31.3% n=147). Of the remaining respondents, 32.4% (n=152) stated they would not touch at all and 1.1% (n=5) said they would use a pad or compress.

The reasons for the increase in reported cases of SPT in high income countries, including England, are multifactorial and complex. Risk factors that may predispose a woman to perineal injury have been identified and are explored in the following section. The suggestion that the increase in the SPT rate is due to a 'hands off' approach, however, is not substantiated by the evidence (Aasheim *et al.*, 2011, Aasheim *et al.*, 2017, Bulchandani *et al.,* 2015, Lee *et al*., 2018, Petrocnik and Marshall, 2015, Smith *et al.*, 2013, Wang, Jayasekara and Warland, 2015).

1.4.3 Identified risk factors for perineal injury

There have been several risk factors identified that may increase the chance of perineal injury during birth, many of which are non-modifiable such as primiparity,

ethnicity, maternal age, perineal length and having a baby with a higher birthweight for gestational age and a baby with a large head circumference (D'Souza, Monga and Tincello, 2020, Brown *et al.,* 2018, Jansova *et al.*, 2017, Jansson *et al.*, 2020, McPherson *et al.*, 2014, Pergialiotis *et al.*, 2014, Wheeler *$* 2012, Wilson and Homer, 2020, Yeaton-Massey, 2015). There are also some identified risks that are potentially modifiable, including: the lithotomy, sitting, squatting or semi-recumbent position for birth, birth assisted by instruments particularly forceps, midline episiotomy, routine use of episiotomy, epidural analgesia, induction and augmentation of labour, prolonged labour, malposition such as persistent occipito-posterior position, maternal effort with a contraction as the baby's head is born and shoulder dystocia (Brown *et al.*, 2018, Dahlen *et al.*, 2013, Elvander *et al.*, 2015, Friedman *et al.*, 2015, Hirayama *et al.*, 2012, Lodge and Haith-Cooper, 2016, Orlovic, 2017, Pergialiotis *et al.*, 2014, Tunestveit *et al*., 2018, Wilson and Homer, 2020).

The risk factors for perineal injury are complex and interrelated, and although most of the literature focuses on the identified risk factors for SPT, consideration of the modifiable risks has the potential to reduce the incidence of all types of perineal injury sustained during birth. Waldenström and Ekéus (2017 p.1) suggest that the identified risk factors for SPT should be considered in three 'clusters' in relation to maternal characteristics, infant indicators and medical procedures to consider the inter-relationship of these characteristics. A fourth category is proposed to separate birth characteristics from medical procedures to consider how the risks for any degree of perineal injury may be mitigated through prevention of the modifiable

factors shown in the birth characteristics and birth interventions columns presented in Table1.2.

Non-modifiable		Potentially modifiable	
Maternal indicators	Infant indicators	Birth characteristics	Birth interventions
First vaginal birth Asian ethnicity (birthing outside Asia) Maternal age (over 35)	Higher birth weight for gestational age Large head circumference	Persistent occipito-posterior position Shoulder dystocia Prolonged labour Maternal effort with contractions as head is born	Birth position Epidural anaesthesia Birth assisted by vacuum or forceps Induction of labour Augmentation of labour Episiotomy

Table 1.2: Identified risk factors for perineal injury from the literature

Birth interventions, when used judiciously, can reduce maternal and infant mortality and morbidity, however when interventions are used indiscriminately and adopted as standard care, physiological birth can be disrupted to the detriment of women and babies (Buckley, 2015, Miller *et al.,* 2016). The cascade of intervention in maternity care, when one intervention necessitates another, is a well-documented phenomenon (World Health Organisation (WHO), 2018) and consideration of the birth interventions and potential sequalae that lead to an increased chance of

sustaining perineal injury should be discussed with women, to ensure that informed decision-making for birth occurs.

1.5 Significance and impact of perineal injury

1.5.1 The effects of perineal trauma for women

All types of perineal trauma can cause both immediate and long-term problems for women. Immediate symptoms can include significant blood loss, swelling and pain which may affect the woman's ability to care for her baby and to initiate and sustain breastfeeding (Albers *et al.,* 1999, Aasheim *et al.,* 2011, Williams *et al,.* 2005). The long-term effects of perineal injury can include both physical symptoms such as ongoing pain, faecal and urinary incontinence and adversely affected sexual function, all of which can have negative effects on a woman's mental health and wellbeing (Priddis, Schmied and Dahlen, 2014, Priddis, 2015, Swenson *et al*., 2018).

Women with all degrees of perineal trauma, in addition those with no visible or classified trauma, may experience ongoing perineal pain and pelvic floor symptoms following birth (Åhlund *et al.,* 2019, Lindberg *et al.,* 2020), however those who experience posterior trauma, particularly SPT may have complex outcomes which can affect both their physical and psychological wellbeing. In the findings of a meta-ethnographic synthesis of studies exploring women's experiences of SPT, Priddis, Dahlen and Schmied (2013 p.752) identified a theme from the data: *'I am broken and*

a failure'. This was consistent with subsequent findings that women can experience a sense of both physical and psychological brokenness, with women referring to their body as damaged and wounded, leading to a detrimental effect on the sense of self and sexual relationships (Darmody, Bradshaw and Atkinson, 2020, Lindqvist *et al.*, 2019, Priddis, Schmied and Dahlen, 2014). Any midwifery practices that have the potential to avoid or minimise all types of perineal injury and improve physical and psychological well-being are therefore important to understand and discuss with women.

1.5.2 The effects of perineal trauma on midwives

It has been reported that when women sustain perineal trauma during birth, and particularly SPT, this can have a negative psychological effect on the midwife attending the birth; possibly due to an understanding of the significant impact this can have on a woman's physical and emotional health and well-being. It has been reported that when women sustain SPT during birth, the midwives caring for them had feelings of failure, shame, guilt, fear and a lack of confidence (Edqvist, Lindgren and Lindgren, 2014, Lindberg, Mella and Johansson, 2013). Similarly, in a meta-ethnographic synthesis of midwives' and nurses' experiences of adverse labour and birth events, Elmir *et al.* (2017) also identified that feelings of powerlessness, responsibility and failure were reported.

The feelings midwives experienced were also connected to a belief that when perineal injury occurred there was an underlying suspicion from colleagues that they were not professionally competent (Lindberg, Mella and Johansson, 2013). This association between the occurrence of perineal trauma and competence may be due to low rates of SPT being regarded as a quality indicator in maternity services. This is discussed in more detail in the next section of this chapter (section 1.3.3).

A study in Austria investigated the performance of experienced midwives in a retrospective cohort study (14 midwives and 1,937 births), to identify if the midwife was an independent factor for perineal injury (Ott *et al.,* 2015). The authors concluded that the practice of individual midwives was a significant influencing factor for perineal injury, although not for SPT. Although it is recognised that perineal injury is unpredictable, knowledge that individual practice has been identified as a factor for a woman sustaining perineal injury at birth may contribute to midwives' feelings of responsibility and failure when any degree of perineal injury occurs.

The historical context in which midwives trained and practised may have an impact on their attitude towards the occurrence of perineal injury. Graham (1997) reports that during the 1970s and 1980s even a small perineal laceration was considered to be due to *'poor delivery technique'* by the midwife, and midwives could be reprimanded or *'metaphorically rapped over the knuckles'* for *'allowing'* tears to happen (Graham 1997 p.77). It is feasible that this experience continues to have an

impact on the way perineal injury is viewed as midwives support, teach and supervise successive generations of student midwives in practice.

1.5.3 The effects of perineal trauma on health services

Rates of episiotomy and SPT are used in a number of countries, including the UK, as an indicator of quality in maternity services, with higher rates considered to be an indicator of poorer quality services. This indicator is also reported by the OECD (OECD, 2019). Rather than being viewed negatively, it has been suggested that the recent trend in an increasing SPT rate in England may indicate improved quality of care through better detection and reporting (Gurol-Urganci *et al.*, 2013). Conversely, as previously discussed, the lower rates of SPT reported in LMICs are likely to be attributed to lower levels of detection and underreporting, representing a false indicator of quality (Aguiar *et al*., 2019, Hirayama *et al*., 2012).

The economic burden of SPT for the NHS in England was calculated to be £14.5 million in 2013-2014 (Orlovic *et al.*, 2017), and although this cost is considered to be low relative to the total NHS expenditure, it still represents significant costs which are likely to be substantially increased since the original calculations. Costs to health care providers can therefore be lowered if the incidence and severity of perineal injury is reduced, enhancing postnatal recovery and decreasing the requirements for longer hospital stay, suturing, analgesia and antibiotics, referral to additional services and long-term follow-up.

In a ten-year review of NHS maternity litigation claims, perineal injury was identified as the fourth main cause of obstetric claims with £3.12 billion awarded in legal damages (NHS Litigation Authority, 2012). It is significant to note that successful claims were awarded for perineal injury of all severity including episiotomy and labial trauma, which indicates that any type of perineal injury can have significant consequences for women. Reducing the incidence and severity of perineal trauma is not only important to improve the quality of life for women, but for the impact this can have on the financial resources of maternity care services with reduced claims of negligence and substantial litigation costs (Steen and Diaz, 2018).

The following section considers the history of perineal care in labour identifying the legacy and debates in current obstetric and midwifery practice.

1.6 Perineal care in labour: from ancient to contemporary practice

> *'Every practising obstetrician will agree that a perineal tear during delivery, though not a life endangering injury, is in many ways a rather unfortunate one, for the prevention of which innumerable suggestions have been made during centuries past, but unobserved in practice. The complete protection of the perineum has undoubtably remained a weak spot in our art.'* (Ritgen 1855 p.422)

The history of perineal care during birth can be traced back to early writings of the second century A.D. In the ancient world, attending to women in childbirth seemed to exclusively be the domain of other women, who were considered to have special knowledge and understanding over the female mystery of birth. This situation remained unchanged in England until the formalisation of the role of the barber-surgeon in the thirteenth century, a role that was almost exclusively held by men. The right to use surgical instruments belonged only to these surgeons, who were therefore called for during a difficult labour when the life of the woman and/or child was in danger. Midwives, however remained the main attendants at normal birth until the mid-sixteenth century when the Renaissance led to greater interest in anatomy and the mechanics of labour and birth, with surgeons becoming increasing engaged in normal birth and the conduct of operative delivery (Donnison, 1977, Dundes, 1987, Oakley, 1980). By the early seventeenth century the man-midwife had become a common phenomenon although their innovations were often dangerous

for both the woman and her baby, some of which are detailed in the following sections.

Many of the contemporary practices used by midwives in an attempt to reduce perineal injury have been documented in the historical literature; namely the use of a warm compress, manual perineal support with the hands, maternal positions that avoid increased pressure on the perineum, a slow and controlled birth of the head either by direct pressure from the midwife's hand and/or ensuring no maternal effort when the head is crowning. The following sections consider the history of these practices and concludes with consideration of the current evidence and questions about contemporary birth practices.

1.6.1 Compresses and perineal massage

The first completed midwifery text is attributed to Soranus of Ephesus (98-138 AD) representing the body of midwifery knowledge from the early 2nd century (Karamanou *et al.*, 2013). The writings of Soranus include advice for midwives regarding care of the perineum during birth to prevent tearing by providing direct support with a linen pad while the head was advancing. Dahlen *et al.* (2011) note that following the very early writings there is a distinct lack of information regarding perineal care until the 17th century. In a midwifery text by Sharp published in 1671 advice for perineal care included: *'bags of herbs boiled well in water and held against her navel and private parts'*. A century later, Harvie, a well-known man-midwife

advised that: *'pain must be totally prevented by the palm of left hand applied over a warm clean cloth against the perineum with proper force'* (both cited in Dahlen *et al.,* 2011 p.106-107). Literature from the next century include the writings of the obstetrician Ritgen (1855 p.425) who recommended the application of warm softening poultices on the outer vaginal orifice, in addition to softening '*inunctions*' of grease massaged into the perineum in a semi-circle from one side to the other, steam baths and softening douches.

Over a hundred and fifty years later, predominantly as a result of research undertaken by Albers *et al.* (2005) and Dahlen *et al*. (2007) warm compresses during labour continue to be recommended elements of midwifery care utilised to reduce the incidence and severity of perineal injury (Aasheim *et al.,* 2017, RCM, 2018, RCOG, 2015, WHO, 2018).

1.6.2 Manual support and intervention

The application of manual support to the perineum in a specific way, usually in combination with other interventions, began to appear in the literature with the increasing attendance of the man-midwife at birth, although the interventions used were often detrimental for the woman and child. The operative births they performed were likely to have led to permanent injury, in addition to lacerations that increased the likelihood of puerperal sepsis which was often fatal (Donnison, 1977).

Fores (1793), writing under a pseudonym, aimed to expose the *'secret mischief'* of the man-midwives and their use of instruments at birth that led to severe perineal tearing. He considered that the majority of births did not require intervention other than supporting the perineal tissues:

> *'…the principle business of a midwife in natural labours (which happen 99 times in 100) is only to press the palm of her left hand against the perineum during the birth…'* (Fores, 1793 p.xxii)

Just over 40 years after Fores' observation, Ritgen (1855) documented various methods of perineal care during labour that he attributed to reducing perineal injury, although he concedes that this was not an easy task: *'it becomes clear that if performed in all details, as described, it is anything but child's play'*. (p.433)

Many of the contemporary manual perineal support techniques are based on hand manoeuvres that were first described by Ritgen in 1855 and still bear his name, although they appear to be modified from the original description. In the same paper, Ritgen writes that the birth of the shoulders was a significant factor for severe perineal tears and that accoucheurs should wait for rotation of the shoulders and facilitate delivery of one at a time for optimal protection of the perineal tissues. Other methods of perineal protection described in the paper include non-directive

pushing, the baby's head born between contractions without any pressure on the perineum and the position or posture to be chosen by the woman (Ritgen, 1855).

By the late eighteenth century, most doctors accepted what was known as the natural law of the perineum (Graham, 1997). Goodell, an American obstetrician explained that due to this natural law, perineal support by the hand was unnecessary:

> *'When one sees for the first time, the maternal soft parts stretched out to a diaphanous thinness by the presenting part of the child, to all appearances just upon the point of cracking open, the impulse to place the hand upon the bulging flesh becomes almost an instinct. We must not, however, forget that these tissues are not only elastic, but living and sentient; and – what is still greater weight – that the process of labour is strictly a physiological act. Nature in all her operations intends to adapt means to ends, and the perineum was certainly not created to be torn, unless shored up by the hand of the physician.'* (Goodell, 1871 p.71)

Another American obstetrician, DeWees (1889 p.841) also considered that under natural law *'Normally, every perineum will properly distend to allow the exit of the child, leaving all the tissues intact*', and considered that the causes of perineal injury were either due to the *'undilatable character'* of the perineum or the uterine forces operating in the wrong direction. In these cases only, in order to prevent perineal

injury, the accoucheur was advised to *'remove all exciting and aggravating causes…'* and *'to guard the perineum, by guiding, controlling or aiding, with artificial means (chiefly the hands and forceps) the uterine forces so as to operate properly'.*

The debate regarding whether or not perineal support during physiological birth is required has continued into the twentieth century. In a review of the literature, Floud (1994) considered that many contemporary midwifery practices to reduce perineal injury could be traced back to the 18th and 19th century however, concluded that there remained a distinct lack of evidence for any particular approach:

> *'In a situation that is reminiscent of the debate between the 19th century perineal abstainers and interventionists, the question of whether or not midwives should touch the perineum during spontaneous labour remains an issue of considerable disagreement.'* (Floud, 1994 p.358)

Following publication of Floud's (1994) work, a randomised controlled trial (RCT) was undertaken in England, known as the HOOP (hands on or poised) study, to evaluate whether touching or not touching the perineum resulted in different perineal outcomes (McCandlish, 2001). The 'hands on' method referred to manual perineal protection in which the midwife's hands were used to support ('guard') the perineum and put pressure on the emerging baby's head to increase flexion. The birth of the baby's shoulders was to be facilitated using lateral flexion. The 'hands poised'

method required the midwife not to touch the head or perineum but to be poised ready to put light pressure on the baby's head in the event of rapid expulsion, and the shoulders allowed to birth spontaneously (McCandlish *et al.,* 1998 p.1263).

Although the primary outcome of the HOOP trial was to compare the prevalence of perineal pain 10 days after birth, secondary outcomes were also measured including the incidence and severity of perineal injury. In both trial arms the results were similar with no statistically significant differences shown between the methods used and the incidence and severity of injury. The authors concluded that a change from a 'hands on' to a 'hands poised' policy was hard to recommend, however considered that the results: '*should provide evidence to enable individual women and health professionals to make informed decisions about which of these perineal managements is preferable for them' (*McClandish *et al.*, 1998 p.1272*).*

There has subsequently been considerable research undertaken globally to assess the benefit of either a 'hands on' or 'hands poised' approach to perineal care during the second stage of labour. However, there is a dearth of research exploring how health professionals make the '*informed decisions'* about which perineal management approach to take that McClandish *et al.* (1998 p.1272) recommend. The current evidence-based guidelines for intrapartum care for healthy women and babies in England consider that there is no benefit to adopting either approach in terms of reducing perineal trauma, and consequently advise that:

> *'Either the 'hands on' (guarding the perineum and flexing the baby's head) or the 'hands poised' (with hands off the perineum and baby's head but in readiness) technique can be used to facilitate spontaneous birth.'*
>
> (NICE 2014, 1.13.13)

There is no further context or explanation within the guideline beyond *'guarding the perineum'* and *'flexing the baby's head'* although the current literature suggests that there are multiple ways of performing both of these manoeuvres. Research is therefore required to explore which techniques midwives use and how they decide on the optimal approach to take.

1.6.3 Birth position

The recorded history of birthing indicates that women had generally birthed in an upright position such as kneeling, squatting, sitting or standing until the advent of the man-midwife in the late 17th century (Dundes, 1987). With an increase in the view that pregnancy was a disease, and birth an event that required medical management, women were under pressure to adopt a supine position initially for ease of observation of the perineum for the attendant, and later to improve access to it when instruments were introduced in the early 18th century (Dahlen *et al.*, 2011).

Although the use of the birth bed was well established by the nineteenth century, Ritgen recommended *'the elimination of all delivery chairs, delivery beds, delivery cushions, and so forth, and delivery carried out exclusively on an ordinary bed'* in order to eliminate the *'frequent spasms of the thighs and calves'* observed when women were using a delivery bed; the *'painful affliction'* being attributed to being exposed to cold air and the body being supported only by the soles of the feet and the pelvis. He considered that this position led to a tightening and rigidity of the perineal tissues. When perineal support was deemed necessary, the left lateral position was preferred on a normal bed to allow full visualisation of the perineum to observe the changes in width and thickness of the perineum and notice *'even the slightest injury'* (Ritgen, 1855 p.427-8)

The left lateral position for birth had become commonplace in England in the nineteenth century, partly due to preserving the modesty of the woman in addition to affording the accoucheur a good view of perineum. This position was, however, not universal and the preferred birth position became one in which the accoucheur was least hindered by the woman:

> *'The British practitioner almost invariably directs the patient to be placed upon her side…while the Continental accoucheur has her placed on her back…the woman should be placed so as to give her the least possible hinderance to the operations of the accoucheur-this is agreed upon by all; but there exists a diversity of opinion, what that position is. Some recommended*

> *the side; others the knees, and others the back. I coincide with the latter…Therefore when practicable, I would recommend she should be placed upon her back, both for convenience and safety'*
>
> (DeWees, 1828 cited in Dundes, 1987 p.639)

The woman's autonomy over choosing the most comfortable birth position continued to be eroded in the early twentieth century, with the increasing use of anaesthesia in labour and the induction of 'twilight sleep' using a scopolamine and morphine mixture in an attempt to control pain and improve women's experiences of birth. There were, however, serious side effects to this type of sedation including the induction of *'violent states of delirium'*, requiring women to be *'confined to their beds with canvas cages'* (MacIvor Thompson, 2019 p.71). The introduction of the delivery table with lithotomy straps, shoulder restraints and handcuffs immobilised women on their back to ensure the obstetrician had direct and unrestricted access to the perineum through sterile drapes, separating the woman not only from her perineum but from being an active participant in her birth (Kitzinger, 1997).

In 1955, Gelb wrote of her birth experience in a New York hospital to provide information for first time mothers and recommend preparation for 'natural childbirth'. The account illustrates how restraint during childbirth had become normalised and women seen as risky participants of birth, under the control of doctors. The story Gelb (1955) recounts also demonstrates the instinctive nature

women have to protect their perineum by slowing the birth of the baby's head with their hands:

> *'First, there are the stirrups and 'handcuffs' into which the woman is securely fastened as soon as she is rolled onto the delivery table. Although in theory a prepared patient is so completely relaxed and co-operative that locking her arms should be unnecessary, the hospital can't afford to take chances. One unprepared patient had gotten so panicky, I heard later from my doctor, that she had actually managed to wrench her arm free of the leather wrist strap, and pressed her hand on her baby's head as it was being born'* (Gelb 1955 p.120)

The increase in medicalisation of birth continued during the second half of the twentieth century with the majority of births in England taking place in hospitals by the early 1970s as recommended in The Peel Report (Ministry of Health, 1970). During the 1990s, with an increasing awareness of the need for good quality evidence upon which to base clinical decisions, research into the optimal position for labour was undertaken (Gupta and Nikodem, 2000, Gupta and Nikodem, 2003). The majority of women, however continued to give birth in the semi-recumbent or lithotomy position despite information being available about the benefits of upright birth (Walsh, 2000). Two decades later, despite the consistent findings that upright positions do not have any significant detrimental impact on maternal and neonatal outcomes and may confer benefits, the supine position (including the lithotomy

position) is still viewed as the traditional position in which to give birth and reported to be favoured by birth professionals to facilitate monitoring and medical intervention (WHO, 2018). The important psychological benefits of upright birth positions include an increased sense of empowerment for women, whilst the physical benefits include perineal protection through the reduction in likelihood of an episiotomy being performed (Gupta *et al*., 2017, WHO, 2018).

1.6.4 Surgical incision of the perineum

The use of episiotomy as an intervention to prevent perineal injury is featured in different forms throughout history, with the first description attributed to Ould in 1742, where the procedure was indicated in circumstances where the infant was considered in danger, and if the dilation of the vaginal orifice by the fingers was not sufficient (Dahlen *et al.*, 2011).

Ritgen (1855 p.422) referred to a different method of enlarging the vaginal orifice which he termed 'scarification' which entailed multiple superficial cuts, up to seven on each side, to the *'lower portion of the vagina, extending from the labia majora to the upper border of the constrictor cunni'* leaving the perineum undisturbed.

The belief that routine episiotomy prevented perineal injury during childbirth continued to be debated over the following centuries, and the practice of performing the operation remained virtually unchanged since the original description by Ould. During the nineteenth century, episiotomy was promoted as a way of preventing

perineal injury, however the very nature of the incision created a laceration that could never be predicated as absolutely necessary. Obstetricians recognised that perineal injury was largely unpredictable, and this presented them with the difficult decision of whether or not to perform an episiotomy and *'abandon any hope of delivering the woman intact'*, in addition to fears that the incision may become the site of infection (Graham, 1997 p.31).

During the early twentieth century, routine episiotomy as a prophylactic measure against perineal injury became a widely accepted part of standard obstetric practice as more women birthed in hospital rather than at home, and birth became increasingly medicalised. In England, midwives were authorised to perform episiotomies in emergency situations from 1967, and by the 1970s, the practice of routine episiotomy had become an accepted procedure of labour care (Graham, 1997).

The evidence to support episiotomy as an intervention to reduce serious perineal and vaginal tears and longer-term pelvic floor morbidity was largely absent, until the West Berkshire perineal management trial was published in 1984 and refuted this concept (Sleep *et al.*, 1984). Over thirty years later, the policy of selective rather than routine episiotomy during physiological birth continues to be supported for a decreased incidence of SPT and vaginal trauma (Jiang *et al*., 2017, NICE, 2104, WHO, 2018).

The history of perineal practices has changed over time with an increase in intervention seen with the medicalisation of birth and the pathologisation of the perineum, notably since the seventeenth century. Many of the strategies identified centuries ago to reduce injury to the perineum remain part of current midwifery practice, and the debates between practitioners regarding best practice continue. An awareness of how history has shaped perineal care during birth is important in order to understand how and why the dichotomy of the surgical and social models of care compete in the contemporary childbirth arena (Dahlen *et al.*, 2011). The following section considers the contemporary guidelines for practice to reduce perineal injury during birth.

1.7 Guidelines for maternity practice to reduce perineal injury - an overview

> *'Respectful application of evidence-based guidelines with attention to women's individual, cultural, personal, and medical needs is essential for universal access to quality maternal care'* (Miller *et al*., 2016 p.2181)

Since the publication of the HOOP trial results (McCandlish *et al.*, 1998), there has been a significant volume of midwifery and obstetric research exploring techniques to reduce perineal injury during birth, with an increase noted since a rise in the rate of SPT was observed at the turn of the 21st century (Baghestan *et al.*, 2010, Ekeus,

Nilsson and Gottvall, 2008, Laine, Gissler and Pirhonen, 2009, McLeod *et al.*, 2003, Raisanen *et al.*, 2009, Gurol-Urganci *et al*., 2013). The findings from this research have been used to inform the development of national, international, and professional guidelines and recommendations for practice, shown in Table 1.3 (NICE 2014, WHO 2018, RCM 2018, RCOG 2015, 2018). However, as demonstrated by the information in the table, there are inconsistencies in the guidelines which can make this area of practice difficult to navigate. The information available for women from the same sources is presented in Table 1.4 and is interesting to review, as there are inconsistencies between this and the professional guidance from the RCOG and RCM and the joint RCOG/RCM OASI care bundle. The notable omissions from the RCOG/RCM OASI care bundle are the recommendations to offer a warm perineal compress in labour and to avoid a supine or bed-based birth position. Similarly, the importance of a slow and controlled birth is highlighted for women but does not feature in the guidance for professionals.

Guideline information	National Institute for Health and Care Excellence (2014)	Royal College of Obstetricians and Gynaecologists (2015)	Royal College of Midwives (2018)	RCOG/RCM OASI care bundle (2018)	World Health Organisation (2018)
Warm compresses		Warm compression during the second stage of labour reduces the risk of third- and fourth-degree tears.	There is good evidence that using a warm compress on the perineum, during birth may help to reduce the rates of third- and fourth-degree tears Midwives should ask women if they would like a warm compress to be used on the perineum to help reduce the risk of serious tears		High-certainty evidence indicates that warm compresses reduce the incidence of third- or fourth degree perineal tears but make little or no difference to having an intact perineum after giving birth. Evidence on first- and second-degree tears and the need for perineal suturing is of very low certainty.
Manual intervention	Either the 'hands on' (guarding the perineum and flexing the baby's head) or the 'hands poised' (with hands off the perineum and baby's head but in readiness) technique can be used to facilitate spontaneous birth.	The positive effects of perineal support suggest that this should be promoted, as opposed to 'hands off' or 'poised', in order to protect the perineum and reduce the incidence of severe perineal tears.	There is low-quality evidence that hands-off (or poised) compared to hands-on techniques has no effect on the rate of third- and fourth-degree tears but may result in fewer women requiring episiotomy. There is insufficient evidence to show whether Ritgen's manoeuvre or other perineal techniques could improve outcomes.	Manual perineal protection to be used for: All spontaneous vaginal births, unless the woman's chosen birth position does not allow for it (e.g., water birth) All instrumental vaginal births (e.g., forceps, ventouse and kiwi)	Moderate-certainty evidence suggests that use of the hands-off compared with the hands-on approach probably makes little or no difference to the likelihood of having an intact perineum after giving birth. Low-certainty evidence suggests that the hands off approach may increase first-degree tears compared with the hands-on approach. Evidence on third- and fourth-degree tears, second-degree tears and episiotomy is of very low certainty.

Guideline information	National Institute for Health and Care Excellence (2014)	Royal College of Obstetricians and Gynaecologists (2015)	Royal College of Midwives (2018)	RCOG/RCM OASI care bundle (2018)	World Health Organisation (2018)
Intrapartum perineal massage	Do not perform perineal massage in the second stage of labour. This is under review in the light of new evidence (NICE, 2019 p.34)	The data regarding the protective effect of perineal massage in the second stage of labour are inconclusive	There is some evidence that perineal massage during birth may help to reduce the rates of third- and fourth-degree tears. Midwives should discuss techniques for this during the antenatal period		Low-certainty evidence suggests that perineal massage may increase the likelihood of having an intact perineum after giving birth. High-certainty evidence indicates that perineal massage reduces third- or fourth-degree perineal tears.
Maternal position	The guideline does not currently make any recommendations on the best position for reducing perineal trauma. New evidence provides mixed results on the benefits of adopting the hands-and-knees position, more research in this area is needed before any impact on the guideline can be assessed. (NICE, 2019 p.33)		There is low quality evidence that upright positions are associated with a reduction in episiotomies, but an increase in second degree perineal tears in some positions such as standing. There is low quality evidence that there is no clear difference in the number of third or fourth tears between upright and supine positions during labour. Midwives should advise women that upright positions during the second stage of labour may reduce the likelihood of interventions such as instrumental births and episiotomies	The guiding principle for maternal position in the second stage of labour is maternal comfort and the encouragement of mobility as well as the widening of the pelvis outlet to assist birth. There is no clear evidence that any particular position has a significantly protective effect on the perineum.	The evidence suggests that upright birth positions during the second stage of labour might reduce episiotomy and instrumental vaginal births but might also be associated with increased risk of second-degree tears. However, most evidence is of low certainty and the difference in benefits and harms between upright and recumbent positions might not be clinically apparent.

Table 1.3: Guidelines and recommendations for preventing perineal injury

	RCOG https://www.rcog.org.uk/en/patients/tears/reducing-risk/	**RCM** https://www.rcm.org.uk/media/2540/mothers-blue-top-guidance.pdf	**NHS** https://www.nhs.uk/pregnancy/labour-and-birth/what-happens/episiotomy-and-perineal-tears/#preventing-a-perineal-tear
Antenatal perineal massage	From 35 weeks onwards, you or your partner can use daily perineal massage until your baby is born which may reduce your risk of tearing.		Massaging the perineum in the last few weeks of pregnancy can reduce the chances of having an episiotomy during birth.
Birth position	A kneeling, or all-fours position, or lying on your side, may be beneficial and reduce the severity of tearing.		
Warm compress	Your healthcare professional can gently place a warm compress (pad, swab or gauze) on the perineum as the baby's head stretches the perineal tissues. This can help to reduce the severity of tearing.	There is good research to suggest that using warm compresses on your perineum during labour helps to reduce genital tears.	
Manual intervention	Your healthcare professional can support your perineum as your baby is being born. This is called manual perineal protection, or a 'hands on birth'.	There is some research to suggest that a midwife (or doctor) holding your baby's head as it is born may reduce the likelihood of tears.	
Other	Your healthcare professional should also work with you to ensure that you have a slow and controlled birth.		A midwife can help you avoid a tear during labour when the baby's head becomes visible. The midwife will ask you to stop pushing and to pant or puff a couple of quick short breaths, blowing out through your mouth. This is so your baby's head can emerge slowly and gently, giving the skin and muscles of the perineum time to stretch without tearing.

Table 1.4: Information available for women regarding preventing perineal injury

1.8 Areas of contention and gaps in literature identified

The issue that is the most contentious is whether the midwife should use a 'hands on' or 'hands off' approach during physiological birth. This topic has become widely debated and complex for many reasons however two main issues have been identified that require further exploration. The first issue is that of inconsistency in the definitions and meaning of the terms 'hands on' and 'hands off/poised' which has led to a problematic debate in which the approaches are presented as binary when in practice they are multiple. The second issue is the continuation of competing models of care, in which scientific or technocratic knowledge is presented as superior to other ways of knowing that have historically been part of midwifery practice. This section explores these issues to provide context for the development of the research question, aims and objectives.

1.8.1 Inconsistent definitions and meaning

The evidence to support the claim that a 'hands off' approach increases rates of SPT is not substantiated by several systematic reviews of RCTs (Aasheim *et al.*, 2017, Huang *et al.*, 2020, Petrocnik and Marshall, 2015), however evaluation of non-randomised intervention studies has suggested that 'hands on' manual perineal support may offer some protection against SPT (Bulchandani *et al.*, 2015, Gurol-Urganci *et al.*, 2021). Interpreting the results of the various studies is complex, as the terms used to describe the interventions are inconsistent within RCTs and are often poorly described (Kleprlikova *et al.*, 2020). Authors of systematic reviews have

reported that the overall lack of consistent descriptions, details and meaning of 'hands on' techniques has created difficulty in determining the strengths of association between each technique and the incidence and severity of perineal trauma. (Aasheim *et al.*, 2017, Petrocnik and Marshall, 2015, Wilson and Homer, 2020).

The term 'hands poised' or 'hands off' has been defined with considerable variation in the literature. In the HOOP study (McCandlish *et al.*, 1998) the term 'hands poised' referred to the midwife not touching the emerging head or perineum and waiting for the birth of the shoulders before intervening with manual assistance. The definition of 'hands off' in the study by Mayerhofer *et al.* (2002) was a non-touch approach until the head was born, with no differentiation of either a 'hands on' or 'hands off' approach for the birth of the shoulders. The term 'hands off' applied to a non-touch approach until the head was crowning and the perineum distended in the study by Albers *et al.* (2005).

'Hands on' methods have also been described in the literature with considerable variation. Zemčík *et al.*, (2012 p.77) define the 'hands poised' method in their study, however the description is more closely aligned to a 'hands on' approach: *'the modified 'hands-poised' technique was used for MPP* (manual perineal protection). *In keeping with this technique, the hands were applied to the perineum at the time of expulsion and not before. The anterior hand only slowed down expulsion of the fetal head, and the posterior hand and its fingers were placed alongside the fourchette and*

vaginal opening precisely at the time of expulsion'. 'Hands on' methods include the Finnish grip (see illustrations E3 and 5 in Appendix 5.1), Viennese manual perineal protection (see illustrations E2 in Appendix 5.1), Ritgen's manoeuvre and modified Ritgen's manoeuvre. The descriptions of these methods are complex and appear with variation in the literature, even when described by the same author.

Descriptions of 'hands on' methods by practitioners have been shown to be inconsistent, even when a standardised approach is taught and advocated in maternity units. Kleprlikova *et al.* (2020) undertook a survey of 124 birth practitioners in three European maternity units, including one in England, where manual perineal support during all vaginal births was advocated (either the Finnish or Viennese methods). The authors identified that only 5.6% (n=7) of respondents were able to provide an accurate description of the methods, even though all the participating units included instruction in the method as part of the ongoing staff development programmes.

The recent publication of a systematic review and meta-analysis of the effects of 'hands on' and 'hands off/poised' by Huang *et al.*, (2020), prompted challenge regarding the hypothesis presented that 'hands on' techniques apply pressure on the fetal head to increase flexion, and thereby may impede the natural process of labour and impinge on the posterior perineal tissues. In their critique, Manresa *et al.*, (2020 p.1) state *'we find this hypothesis very confusing because an effective MPP* (manual perineal protection) *aims to control the speed of head expulsion (not to maintain*

flexion head) [sic] by the nondominant hand, and to facilitate fetal head extension, not flexion, by the dominant hand'.

The hypothesis presented by Huang *et al.*, (2020) is, however supported by other authors (Cunningham *et al.*, 2018, Myrfield *et al.*, 1997) with definitions of 'hands on' methods stating that the action of the non-dominant hand is to increase flexion of the head (NICE, 2014, McCandlish *et al.*, 1998). This example illustrates how the use of the simplistic term 'hands on' is problematic due to the inconsistency in the definitions and compounded by a fundamental difference in the understanding of the physiology of birth and the possible benefits to the perineum of exaggerating or minimising the natural movements of the baby through the perineal tissues.

1.8.2 Differing birth philosophies and legitimate ways of knowing

With the current recommendations for practice based on evidence of variable quality and certainty (see Table 3), epistemological questions about the nature and validity of professional knowledge are raised. Midwifery is an ancient profession and prior to midwives being educated and literate, knowledge was passed down through generations of women who had gained experience supporting women in childbirth creating a tradition of oral history (Donnison, 1977). This transfer of knowledge can be considered part of the art of midwifery, however the contribution of art as legitimate in a scientific era has been debated. Art, in a midwifery context can also be viewed as the intuitive or tacit knowledge gained from contextual or experiential

learning and may include self-knowledge based on the belief system of the individual midwife, or grounded knowledge gained from a lived experience (Hunter, 2008). Odent (2015) refers to artistry in the childbearing context as the personality, way of being, and experience and intuition of the carer. Scientific knowledge, in contrast, is often viewed as more authoritative knowledge, and that which is informed by scholarly sources presented as evidence from research studies or trials.

The different ways of knowing are represented in the social and medical models of birth, which are frequently viewed as being philosophically opposed (Fahy, 2008, Jordon, 1997). There are therefore significant challenges within the maternity care arena where the two professions of midwifery and medicine hold fundamentally different philosophies regarding the nature and authority of knowledge, the place of artistry in professional practice and the validity of the concepts within the medical or social model of birth (Hunter, 2008).

Eason and Feldman (2000) illustrate the how the philosophy of birth practitioners will influence the approach they take to perineal care during physiological labour. In the same way that the obstetricians of the nineteenth century believed in the natural law of the perineum, they concluded that practitioners who were experienced in the art of watchful waiting and have witnessed the slow controlled stretching of the perineum at birth, will have confidence in the elasticity of the perineum. Practitioners who have rarely witnessed the phenomenon may consider the perineum unable to distend or about to tear severely unless the practitioner intervenes.

Carlson and Lowe (2014) consider how the concept of 'watchful waiting' during labour is given different meaning based on the divergent philosophical perspectives of practitioners. The nature in which birth is viewed and the personal philosophy and understanding of birth will ultimately have a direct impact on practice of the practitioner. However, where birth professionals have an understanding and appreciation of each other's perspective, childbearing women benefit. Carlson and Lowe (2014, p.519) conclude:

> *'Different kinds of birth providers will better serve all women if they are educated with an understanding of the other provider's perspective and work in healthcare settings that value them equally.'*

In addition to studies exploring the effectiveness of the 'hands on' or 'hands poised/off' methods, there have been studies that aimed to scientifically quantify the optimal pressure and placement in 'hands on' methods using stereophotogrammetry (Zemčík *et al.*, 2012 p.76), biomechanical models (Jansova *et al.* 2017) pressure measurement gloves with built-in sensors (Kalis *et al.* 2020) and mathematical modelling (Čechová *et al.*, 2020).

In the study by Zemčík *et al.* (2012), the women participating in the study were required to be positioned on the bed, their perineum marked with a mesh of green dots to facilitate the photographing of their perineum during the birth. A

biomechanical engineer was subsequently required to be present during the births to ensure the cameras were positioned correctly. Kalis *et al.* (2020) designed a bespoke glove that incorporated pressure sensors to determine the forces exerted by the thumb, index and middle fingers on the perineum during birth to determine an exact optimal hand manoeuvre concluding that: *'the thumb and index finger 2 cm anterior of the fourchette and 12 cm apart'* should be followed by movement in which the digits are approximated *'by a distance of 1 cm on either side without changing their anteroposterior orientation to the fourchette'* (Kalis *et al.*, 2020 p.363)

This technocratic approach to perineal care disembodies the birthing woman, separating her from her perineum and pathologizing it, similar to that seen in previous centuries (Dahlen *et al.*, 2011). This reductionist approach to examining the pressures and forces of the baby on the mother's perineum in an experimental setting, does not allow consideration of the complex interplay of factors that influence the neurohormonal pathways and affect birth outcomes for women (Buckley, 2015).

In contrast to the research exploring the scientific aspect of 'hands on' methods for perineal care, there has been very little consideration given to the activities that the 'hands poised' approach may encompass. The terms 'hands off' and 'hands poised' are used interchangeably in the literature and are both poorly described. In the same way that the term 'hands on' has been interpreted differently, it is likely that 'hands off' and 'hands poised' have multiple definitions and meaning.

There are a variety of strategies that a midwife may use within a 'hands poised' approach in addition to, or instead of, using their hands. These strategies may include encouraging the woman to adopt a position that does not put additional pressure on the perineum, supporting controlled breathing, relaxation, visualisation and encouraging the woman to touch and support her perineum or baby's head during crowning. These and other elements are difficult to quantify and therefore often remain undocumented in the woman's notes, therefore identifying which strategies are part of the 'hands off' or 'hands poised' approach can be problematic.

The available literature is predominantly generated from studies designed to explore the science of perineal protection, with a focus on interventions to manage the mechanics of the birth process. Providing effective perineal care during labour is a complex phenomenon, influenced by a combination of factors that are unique to each birth and attributable to the woman, the midwife and the birthing environment. It is proposed that the adoption of simple binary classifications of 'hands on' and 'hands off/poised' to describe perineal care does not capture the complexities and subtleties of practice and are therefore unhelpful. Unless the detail of perineal care is recorded, any attempt to retrospectively analyse the data to accurately evaluate intervention and outcome will be flawed. This study aims to address the gap in knowledge and present detailed descriptions of perineal care practices observed and explained by midwives in the context of the birth environment.

1.9 Research question and objectives

The research question was formulated to address a gap in the body of knowledge; specifically, to explore how midwives determine the appropriate methods to reduce perineal injury during physiological birth. The research question was therefore originally determined to be:

> Which strategies do midwives use to reduce perineal injury during physiological birth and what factors affect their decision making?

The aim of the study was to capture the elements of practice that are beyond the simple definition of 'hands off', 'hands on', or 'hands poised' in the context of each unique birth.

The objectives of the study were to:

1. Observe and record the elements of perineal care that midwives utilise to protect the perineum during physiological birth

2. Explore the factors that influence midwives' decision making in determining which elements of perineal practice to adopt

3. Describe the components of the observed 'hands on', 'hands off' and 'hands poised' methods

1.10 Outline of thesis

This thesis presents an ethnographic study undertaken to explore the midwifery practice of preventing perineal injury during physiological birth. This chapter has introduced the background to and history of, the topic of perineal protection and includes a review of the recommendations and current trends in practice.

Chapter 2 presents a review of the relevant literature pertaining to midwives' decision-making during birth to reduce perineal injury and introduces the reader to the theoretical framework of threshold concept theory. The rationale for the study approach is presented in Chapter 3, in addition to a discussion of the ethnographic methods used to explore the research question and the ethical issues considered when planning and undertaking the study.

The findings of the study and integrated discussion are presented in Chapters 4, 5, 6 and 7 constructed within a framework of 'troublesomeness' from the identification of perineal care during birth as a threshold concept. The themes of 'troublesome language', 'troublesome knowledge' and 'troublesome environments' are presented in Chapters 5, 6 and 7 respectively. In Chapter 8 the findings are discussed in relation to the wider literature, in addition to consideration of the strengths and limitations of the study and contribution of new knowledge to the field of study. The concluding argument made is that minimising perineal injury during birth is a key midwifery threshold concept and that elements of troublesomeness including language, knowledge and environments compound the complexity. The terms 'hands on',

'hands poised' and 'hands off' do not adequately capture the multiple and nuanced approaches that midwives use to minimise perineal injury. A systematic approach to classifying the different approaches is required and recommendations are provided for how this can be achieved. The thesis ends with a discussion of the implications and recommendations for practice and future research.

1.11 Conclusion

This chapter has provided an introduction to, and history of, the topic of perineal injury sustained during childbirth and explored the incidence and effects of perineal trauma for the woman, midwives and health services. The published guidelines regarding the recommended range of interventions and techniques to prevent perineal injury have been presented and the contradiction within these highlighted. The context of contemporary midwifery practice set within differing models of care and legitimate ways of knowing has been discussed, illuminating how the research question for the study was identified. The research question, aims, and objectives have been stated. The following chapter explores the literature in relation to midwifery clinical decision-making during birth and the factors that affect midwives' actions and introduces the theoretical framework of threshold concept theory.

Chapter 2 Literature review

2.1 Introduction

The previous chapter introduced the research topic of perineal care during childbirth and the background and historical context of the practices used by midwives to minimise perineal injury. The importance of this aspect of care has been presented and the impact of perineal injury on women's health and wellbeing has been described. This chapter appraises the current body of literature that informs midwifery practice and decision-making within the context of an inconclusive evidence base.

2.2 Literature search

A comprehensive and systematic search was undertaken to identify the available published and unpublished literature relating to the research question. This enabled a judgement to be made about what was already known, to present a summary of the current landscape, and to identify the gap in evidence that this study addressed (Aveyard, Payne and Preston, 2016).

The research aim was to identify the strategies midwives use to minimise perineal injury during physiological birth, and to explore the factors that inform their decision making. Therefore, the literature search was designed to focus on discovering evidence directly related to this phenomenon.

The literature search question was designed to be comprehensive and specific, to enable the separation of the question into components parts and facilitate structured, replicable searches in the relevant databases and search engines (Bettany-Saltikov, 2012). The initial literature search question was subsequently defined as:

How do midwives decide how to minimise perineal injury during physiological birth?

2.2.1 Literature review search method

The Population and problem, Exposure, Outcome (PEO) framework, as described by Bettany-Saltikov (2012), was used to identify the components parts of the research question to search for relevant literature. All types of research were included in the initial search to ensure a comprehensive review of previous studies could be undertaken. The key words identified are shown in Table 2.1 and include the use of truncation (*) to identify words with the same root and multiple endings. The search engines and databases used were CINAHL Plus, MEDLINE, SCOPUS, WorldCat, Google Scholar and EThOS. Inclusion and exclusion criteria were also identified using 'limiters' and 'expanders' to ensure the search met the quality criterion of rigour (Hart, 2018). The Boolean operators AND and OR were used to ensure the results were sufficiently narrowed whilst enabling the connection of similar concepts to occur.

Search question: *How do midwives decide how to minimise perineal injury during physiological birth?*		
P: population and problem	*Midwives*	*Midwi** OR *Midwife* OR *midwives* OR *midwifery*
	AND *Decision-making*	*Decide* OR *decision making* OR *decision-making* OR *clinical reasoning OR clinical-reasoning*
E: exposure	AND *Physiological birth*	*Childbirth* OR *birth* OR *labour* OR *labor* OR *parturition* OR *delivery* OR *normal birth* OR *natural birth*
O: outcome	AND *Perineal injury*	*Perine** OR *Perineum* OR *perineal trauma* OR *perineal tear* OR *perineal laceration* OR *perineal injury*
Limiters	Published date after 01.01.2010; English language; Peer reviewed; Research article; Abstract available	
Expanders	Apply related words; search within the full text of the articles; apply equivalent subjects	

Table 2.1: Literature search terms, limiters and expanders

The initial literature search was undertaken prior to developing the research design between January and June 2014 and undertaken regularly throughout the course of the study to identify additional contemporary publications. A final search was undertaken in July 2021 which identified one additional paper. Additional strategies to identify relevant literature included berry-picking, citation tracking and hand searching reference lists in the papers already identified (Aveyard, Payne and Preston, 2016).

2.2.2 Findings

Following a process of screening for relevance, a total of twelve journal articles and one report were selected for review. The process is presented as a PRISMA flowchart in Appendix 2.1. and a summary of the papers is presented in Appendix 2.2. The papers selected represented a global view of midwifery practice with studies undertaken in Australia, China, France, Ireland, New Zealand, Sweden, Turkey, and the United Kingdom suggesting that the issue of perineal care during birth is one of international interest and contention. Data collection regarding midwives' practices to reduce perineal injury at birth was undertaken: by interviews in five studies (Allen, Small and Lee, 2021, Begley *et al*., 2019, Jefford *et al.,* 2018, Lindgren *et al.,* 2011, Smith *et al.*, 2017); by survey in seven studies (Ampt, de Vroome and Ford, 2015, Barasinski *et al.,* 2018, East, Lau and Biro, 2015, RCM, 2014, Stride *et al*., 2021, Trochez, Waterfield and Freeman, 2011, Zhou *et al.,* 2019) and one that used a survey and subsequent observation (Akın *et al.,* 2020). Two papers reported on

different findings from the same study; both papers were included in the review as the findings are relevant to the research question (Begley *et al.,* 2019 and Smith *et al*., 2017). The literature was reviewed in two groups as the methods were relatively standardised in the studies that employed a survey method and those that utilised interviews for data collection.

2.3. Evaluation of the literature reporting quantitative studies

2.3.1 Questionnaire design

There were eight studies identified in which questionnaires were used to capture data relating to midwifery practice. The questionnaire originally created by Trochez *et al.* (2011) was subsequently adapted by East, Lau and Biro (2015), Ampt, de Vroome and Ford (2015), Stride *et al.* (2021) and used by Zhou *et al.* (2019) following translation into Chinese. East, Lau and Biro (2015) and Ampt, de Vroome and Ford (2015) made significant changes to the questionnaire to gather additional data regarding strategies to minimise perineal injury. All surveys focused on midwifery practice except for East, Lau and Biro (2015) where the practice of doctors was also included. The authors separated the data for each professional group when reporting the findings, therefore for the purpose of this review, only the data pertaining to midwifery practice was considered.

The original survey by Trochez *et al.* (2011 p.1284) was designed to *'find out whether midwives currently practice the 'hands on' or the 'hands poised' methods'* and consisted of thirteen questions with a final free text option for midwives to add any further comments. Demographic questions were limited to the midwife's date of birth and length of time practicing as a midwife, with only two questions directly related to the midwife's hand position whilst facilitating birth. Questions 2-6, 8 and 12 are related to episiotomy and question 9 to diagnosis of SPT. Question 10 related to the midwife's preferred method of perineal care where a binary option without a definition of terms, other than that within the introductory paragraph, was offered. The question as it is presented also suggested that the decision is based solely on the midwife's 'preference' rather than the woman's choice, with the terms 'management' and 'delivery' more frequently associated with the medical model of birth:

> *In a woman having a vaginal delivery with no evidence of fetal distress and where the second stage is progressing well, what is* ***your preferred*** *method for the management of the perineum during crowning and delivery?*
>
> a. Hands on
>
> b. Hands off ('poised')

The next question presented a series of characteristics related to the woman, the baby and various clinical scenarios and midwives were asked to indicate if they would

change from a preferred 'hands off/poised' to a 'hands on' approach in any of the given situations.

East, Lau and Biro (2015) reported that they expanded the survey used by Trochez *et al.* (2011) by including free text to describe the techniques used to prevent perineal injury in addition to questions seeking to explore respondents' knowledge and attitude toward perineal injury rates. Ampt, de Vroome and Ford (2015) adapted the original survey (Trochez *et al.,* 2011) by excluding the questions related to episiotomy and presented six perineal techniques with brief descriptions. These options differentiated the 'hands off' and 'hands poised' options and presented four 'hands on' possibilities including 'perineal guarding' and 'head flexion'. Midwives were asked to identify which technique they were taught and which they preferred to use in their current practice. Additional options were also included to ascertain when midwives might change from their preferred technique to using an alternative method of perineal care. Stride *et al.* (2021) included questions related to maternal position when using a 'hands on' approach and where the hands would be placed, with three options given of either hands on the fetal head, the woman's perineum or on both. Midwives were also asked to indicate whether the 'hands on' approach was encouraged in their workplace, and whether this was recorded in the woman's records.

The questionnaire developed by the Royal College of Midwives (RCM 2014) was unique in that it was designed to capture the specific midwifery practices that

occurred in the context of a physiological birth, with midwives completing the questionnaire retrospectively. In this way, the parity of the woman, her position during birth and the place of birth were also captured. Midwives were given four options in relation to hand position; 'no touching at all', 'only touching the head', 'only touching the perineum' or 'touching the head and the perineum' plus the option to select 'another position' with space available to describe this.

Barasinski *et al.* (2018) developed a more comprehensive online questionnaire that included questions about the different practices known to be used in France throughout labour, although only the data reported related to perineal techniques are considered within the scope of this review. There are six sections of the questionnaire, with the fourth seeking to gain information regarding the *'practiques durant l'expulsion'* (practices during the expulsive phase). This section includes subsections relating to maternal position, pushing techniques, perineal care and birth of the head and shoulders.

Akın *et al.* (2020) designed a questionnaire to collect demographic data and information about midwives' perineal care practices, stating that creation was informed by the literature, citing the work of East, Lau and Biro (2015). Following completion of the questionnaire, the researchers observed the midwives in practice to assimilate the data they had provided with their practices observed in the context of birth.

2.3.2 Scope of survey studies

The survey studies undertaken are variable in terms of the data collection instrument used and the sample size achieved. The largest study was completed by Zhou *et al.* (2019) across 31 provinces in China and completed by 5,225 midwives. The authors provide interesting socio-political contextual detail for the study; particularly of note is the impact of the government policy to promote natural childbirth in response to high caesarean section rates, in addition to the effect of the recently introduced 'second child' policy on childbearing women and midwives. The authors also note that Asian ethnicity is often cited as a risk factor for perineal injury however research related to Asian midwives providing care for Asian women is rare. The authors also note that SPT is a sensitive topic in China and the rates are often not disclosed making it a complex issue to investigate fully. The researchers achieved a high response rate of 83% (5,225 responses from 6,425 questionnaires sent).

Barasinski *et al.* (2018) achieved the second highest sample size with 1,496 eligible midwives from 377 midwifery units across France completing the online questionnaire. The sample sizes in the other studies are significantly smaller and are detailed in Table 2.2 (p.69). The study by Akın *et al.* (2020) had the smallest sample size with just twenty midwives recruited, however the midwives were also observed in clinical practice to compare reported practice with their actual practice.

2.3.3 Midwives preferred hand positions

The results from the surveys are varied in terms of the midwife's reported hand position during physiological birth, indicating that there is no consistent global approach to this aspect of midwifery care. The data should be interpreted with caution due to the notable variation in definition of the terms 'hands on', 'hands off' and 'hands poised', with 'hands poised' and 'hands off' frequently reported as one approach ('hands off/poised'), and the lack of clinical context in most studies, except for those reported by RCM (2014) and Akın *et al.* (2020). The definition of terms used in the studies are presented in Table 2.1.

Authors	'Hands on' definition	'Hands off/poised' definition
Trochez *et al.* 2011 (UK)	Perineal support	No support
RCM 2014 (UK)	a. only touching the head b. only touching the perineum c. touching the head and perineum	No touching at all
Ampt, de Vroome and Ford 2015 (Australia)	a. head flexion with no perineal support/guarding b. perineal support/guarding without head flexion c. perineal support/guarding with head flexion d. perineal support/guarding with head flexion and gripping the baby's chin through the perineum ('chinning')	a. hands off, with no touching of the perineum or the baby's head b. hands poised, ready to apply light pressure to the baby's head in case of a rapid birth
East, Lau and Biro 2015 (Australia)	Hands on fetal head/perineum	Careful observation of the second stage/hands off
Barasinski *et al.* 2018 (France)	Management of the fetal head: hands on, Ritgen's manoeuvre	Management of the fetal head: hands off
Zhou *et al.* 2019 (China)	Midwife applies downward pressure with one hand on the baby's head to facilitate its slow birthing, and/or supporting the perineum with the other	Midwife keeps her hands prepared to put light pressure on the baby's head in case of rapid expulsion but not to support the perineum or touches the baby's head
Akın *et al.* 2020 (Turkey)	Not stated	Not stated
Stride *et al.* (2021)	Not stated (options include hands on the fetal head, perineum or on both the fetal head and perineum)	Not stated

Table 2.1: Definitions of 'hands on' and 'hands off/poised' methods

Just over half of the midwives in China, who responded to the survey reported to preferring to use the 'hands off/poised' method during the late second stage of labour. Following analysis, Zhou *et al.* (2019) concluded that there was a significant correlation between length of experience and education and use of the 'hands poised' technique. The more experienced and educated midwives working in specialist hospitals were most likely to choose this method ($p<0.05$) except for midwives who have more than twenty years' experience. This contrasts with the results presented by Trochez et al. (2011) who reported that less experienced midwives were more likely to prefer the 'hands off' method ($p<0.001$). Zhou *et al.* (2019) however, note that Chinese midwives with less than five years' experience were more likely to use the 'hands on' approach, possibly as they lacked confidence and skill in using the 'hands poised' method to reduce SPT. In contrast, the results from the RCM (2014) did not find a significant association between years of experience and the position of the midwives' hands, reporting that most midwives had used their hands on the woman's perineum, the baby's head or both in the births reported in the survey (66.3%). The factors that significantly influenced the midwife's choice were the mother's position ($p<0.001$) and place of birth, with any kind of touching more frequent when women birthed in an obstetric unit (83.7% $p<0.001$).

Zhou *et al.* (2019) and Ampt, de Vroome and Ford (2015) were the only authors to report on midwives' education in the 'hands poised/off' technique, with the majority of Chinese midwives responding that they had received theoretical (82.5%) and practical (67.1%) education in contrast to only 33.4% of Australian midwives

reporting that they had been taught this method. The fact that midwives had instruction in this technique suggests that 'hands off/poised' is a more complex approach than simply not touching the woman's perineum or the baby's head during birth. The results presented by Zhou *et al.* (2019) suggest that when midwives have had education, practical training, and experience in the 'hands poised/off' approach, they are more likely to adopt this as their 'preferred' mode. In contrast to this, Ampt, de Vroome and Ford (2015) reported that there was a statistically significant change from the practice midwives were taught to use and their current practice ($p<0.01$), suggesting that this reflects the influence of learning different practices from colleagues following initial education.

Barasinski *et al.* (2018) reported that most midwives preferred to use the 'hands on' technique at birth (91.4%) with a slight increase for midwives who worked in tertiary units (95.3%) and those with less than five years' experience (95.5%). The question regarding hand position, however, was restricted to the use of the midwife's hands on the baby's head. The question relating to 'hands on' the perineum appeared to be limited to the use of the Ritgen's manoeuvre, with the majority of midwives (78.3%) indicating that they 'never or rarely' used this method. Midwives were not asked whether they supported or guarded the perineum during the birth of the head or shoulders, although the authors state that this is 'common practice' in France and associated with a low SPT rate (0.54%). Including a question regarding the type of manual perineal support used would have enhanced the results and indicated how 'common' this is in France, and which particular methods midwives utilise.

The studies completed in Australia present a conflicting picture regarding midwives preferred hand position. The majority of midwives (60.9%) stated that they would use the 'hands on fetal head/perineum' approach to minimising perineal injury in the study by East, Lau and Biro (2015), in contrast to 62.9% of the midwives surveyed by Ampt, de Vroome and Ford (2015) preferring the 'hands poised' method. Although these surveys were carried out in the same country within a similar time-period, the results are difficult to compare as the terms used to describe hand position and the survey design are not the same.

A strength in the study by East, Lau and Biro (2015) was the free text area allowing midwives to use their own words to describe their practices to reduce perineal injury, however categories were then created which limited the reporting to simply 'hands on fetal head/perineum' and 'careful observation of the second stage/hands off'. Ampt, de Vroome and Ford (2015) considered that their survey was the first to differentiate 'hands off/poised' and 'hands on' into sub-categories and presented midwives with six options, however the RCM (2014) had previously reported using three sub-categories of the 'hands on' approach.

The survey undertaken by Akın et al. (2020) was supplemented with clinical observations of the midwives' practices. The results from the survey and observations provide a conflicting picture with 40% of the midwives reporting that they would use a 'hands on' technique in the survey whereas 90% of the midwives were observed using this technique in the clinical situation. The authors suggest that

this disparity in the data may be due to reporting bias with midwives stating they would use evidence-based practice but not implementing this in reality. The sample size in this study is small (n=20) therefore the statistical data presented should be interpreted with caution, however the conflicting results reported between the survey and observations may suggest that the midwife's practice changed in response to clinical need, or that their understanding of the terms 'hands on' and 'hands poised/off' was different to that of the researchers.

Stride *et al*. (2021) conclude that the number of UK midwives using a 'hands on' approach has doubled (61.4%) compared to the previous survey by the RCM (2014) in which a rate of 31.4% was reported. However, this figure (31.4%) represents the proportion of midwives who use both their hands (on the baby's head and the woman's perineum); 67.5% of midwives reported that they would put their hands on '*either the perineum, the baby's head or both'* (RCM, 2014 p.8). This illustrates the problematic nature created by a lack of standardised definitions and the interpretation of the terms used to describe the position and action of the midwives hands. The overall trend would suggest that fewer UK midwives now use the 'hands on' approach; from 67.5% (RCM, 2014) to 61.4% (Stride *et al.,* 2021). However, of those midwives using a 'hands on' technique, 73.7% report using both hands (Stride *et al.,* 2021) compared to 31.4% (RCM, 2014).

Midwives' method for the management of the perineum reported via survey data	Hands on	Hands off (poised)	Missing data/other
Trochez *et al.* 2011 (UK) n=607	48.6% n=295	49.3% n=299	2.1% n=13
[1]RCM 2014 (UK) n=469	67.5% n=316	32.5% n=152	0.2% n=1
[1]Ampt, de Vroome and Ford 2015 (Australia) n=108	37% n=40	63% n=68	
[2]East, Lau and Biro 2015 (Australia) n=69	60.9% n=42	13% n=9	Variables for 'other'[2]
Barasinski *et al.* 2018 (France) n=1496	91.4% n=1367	5.3% n=79	Other 3.3% n=49
Zhou *et al.* 2019 (China) n=5225	43.2% n=2256	56.8% n=2969	
Akın *et al.* 2020 (Turkey) n=20	40%[3] n=8	60% n=12	
Stride *et al.* (2021) (UK) n=555	61.4% n=341	38.5% n=214	
Total: 8549	54.07% n=4623	44.36% n=3793	0.79% n=63

Table 2.2. Midwives preferred hand positions: results from survey data

[1]more options included in 'hands on' options to denote whether hands were on the baby's head, the woman's perineum, or both

[2]additional options included warm compresses, maternal guidance, and observation of posterior shoulder and a 'one or more' answer therefore figures excluded from % totals

[3]when observed, 90% used a 'hands on' technique

[4]5% 'hands off' the remainder preferring 'hands poised'

The results from the survey data tentatively suggest that experienced midwives may be more likely to use the 'hands poised' position, particularly if they have been taught this method. This suggests that 'hands poised' is a more complex approach than simply keeping the hands off the woman's perineum and baby's head during birth, or that the midwives' hands are 'nowhere near' as has previously been perceived (RCM 2014 p.6). In the survey where free text was used to describe approaches, 'careful observation' was included in the 'hands poised' category (East, Lau and Biro 2015 p.125); a respondent also stated:

> *'One can never tell how a perineum will behave, therefore be poised, prepared and patient'*

Further research needs to be designed to explore the elements of the 'hands poised' approach and to determine how midwives interpret and implement this aspect of perineal care.

2.3.4 Midwives response to changing hand position

Three of the questionnaires (Ampt, de Vroome and Ford 2015, East, Lau and Biro 2015, Trochez *et al.* 2011) presented midwives whose preferred approach was 'hands off/poised' with a list of clinical characteristics and asked them to indicate when they would change to being 'hands on'. In the original survey (Trochez *et al.* 2011) six

clinical indicators were provided, these were expanded to thirteen options to include other scenarios by Ampt, de Vroome and Ford (2015) and Zhou *et al.* (2019) presented eleven options. East, Lau and Biro (2015) presented twelve situations and also included options for 'hands on', 'hands off', 'episiotomy' 'hands on and episiotomy' and 'hands off and episiotomy' and 'other' for all options. The combined data (presented in Table 2.3) suggests that there was no consistent pattern regarding hand position and clinical situation, however, it did demonstrate that midwifery practice was likely to change in responsive to clinical need.

% of midwives who would use a 'hands on' approach in the following scenario	**Trochez, Waterfield and Freeman** (2011) n=607	**East, Lau and Biro** (2015) n=69	**Ampt, de Vroome and Ford** (2015) n=108	**Zhou *et al.*** **(**2019) n=5225
If the woman is Primigravida	3.3%	72.7%	2.9%	13.3%
If the perineum is about to tear/concern over impending SPT	[2]Not reported	71.6%	75%	56.3%
History of a previous SPT	26.8%	35.8%	70.6%	75.9%
Short perineal body (distance between the anus and introitus)	11.7%	63.6%	[1]57.4%	76%
Short stature mother	[2]Not reported	70.1%	4.4%	18.3%
Big baby	15.7%	65.7%	30.9%	72.5%
Prolonged second stage of labour	10%	50%	26.5%	28%
Poor maternal effort/maternal exhaustion	[2]Not reported	58.7%	14.7%	18.3%
Breech presentation	[2]Not reported	9.2%	Not reported	45.9%
Patient's request	[2]Not reported	Not reported	Not reported	14.2%
Woman of Asian ethnicity	Not reported	70.1%	Not reported	Not reported
Perineum is buttonholing	Not reported	4.5%	Not reported	Not reported
Rigid or badly swollen perineum	Not reported	Not reported	[1]57.4%	87%
Uncontrolled maternal pushing	Not reported	Not reported	63.2%	Not reported
Fetal distress or non-reassuring fetal status	Not reported	10.4%	19.1%	Not reported
Regional anaesthesia	Not reported	Not reported	11.8%	Not reported

Table 2.3: Clinical scenarios in which midwives would change from a 'hands off/poised' method

[1]Reported in single category 'short, rigid or badly swollen perineum'

[2]Question included in questionnaire but findings not reported

2.3.5 Use of warm compresses

The use of warm compresses as a perineal care strategy was reported in six of the studies (Akın *et al.* 2020, Barasinski et al. 2018, East, Lau and Biro 2015, RCM 2014, Stride *et al.,* 2021). In the survey by East, Lau and Biro (2015) midwives were asked to use the free text comments to identify the methods they used to minimize perineal injury; the use of warm compresses was cited by 44.9% of midwives. In the study by Akın *et al.* (2020), 25% of the midwives indicated that they would use a warm compress during birth, however when observed in practice, none of them did so.

Barasinski *et al.* (2018) reported that 24% of the respondents would use a warm compress as a strategy to reduce perineal injury. The use of compresses was more prevalent in level I (low risk) units (33.6%) and used the most by midwives with less than five years' experience (26.3%). The use of compresses by midwives in the UK appeared to be less widely utilised, with only 1.1% (n=5) midwives reporting this method in the 'other' category (RCM, 2014) and 10.3% (n=58) (Stride *et al.*, 2021). In the RCM (2014) survey, the category of 'other' also included 'holding a pad over the anus' in addition to the use of a 'warm compress', therefore it is impossible to ascertain how many midwives actually used a warm compress at birth.

2.3.6 Maternal position during birth

Five of the studies reported practices regarding maternal position during birth, with the results indicating that the majority of women birth in a non-upright position (Akın *et al.* 2020, Barasinski et al. 2018, East, Lau and Biro 2015, RCM 2014). The RCM (2014) survey found that 50% of the births reported occurred with the woman in a semi-recumbent position and 7% in the lithotomy position. Other positions included standing, sitting, lying and the McRoberts position. The authors found a significant association with maternal birth position and the position of the midwives' hands ($p<0.001$), with women birthing in the semi-recumbent position being most likely to have the midwife's hands on them in some way (79.6%) and women in the all-fours position the least likely to have 'hands on' (51%). A strength of this study is that the midwives were reporting their practice following a birth rather than reporting their 'preferred' strategy without clinical context.

When comparing the reported strategy of midwives' preference for maternal birth position, Akın *et al.* (2020) found that 70% of the midwives surveyed (n=14) stated that they would use a position other than lithotomy to facilitate birth. When the same midwives were observed, the reverse was reported with fourteen midwives assisting women to birth in the lithotomy position; indicating that what midwives consider they might do in a given situation may not reflect their actual practice in the clinical environment.

The questionnaire designed by Barasinski *et al*. (2018) included a comprehensive section regarding maternal position in both the active second stage of labour and the position for birth. Photographs were used to indicate multiple positions for midwives to select to ensure descriptions and reporting were as accurate as possible. The majority of midwives reported that they favoured a passive maternal position for the active second stage (supine with footholds, lithotomy, lithotomy with knees turned in or lateral) whilst for the birth the use of stirrups was the most common choice. It is a significant finding that only 16.2% of the midwives indicated that it was always left up to the woman to decide on her position for labour and birth, with 58.7% indicating that this happened most of the time. The preference midwives have for women to birth in a passive non-upright position is likely to influence their hand position, with 91.4% of midwives reporting that they preferred a 'hands on' technique.

Maternal birthing position was reported differently in the study by East, Lau and Biro (2015) as it was captured within the free text section used to indicate strategies for reducing perineal injury. Just over a third of midwives (39% n=27) included the use of maternal positions as a strategy to minimize perineal injury including all-fours, lateral, standing/upright, squatting and waterbirth. The all-fours position was the most commonly reported (n=9). A comment made by a respondent in the free-text section may be indicative of how the woman's birth position and hand position are intrinsically linked:

'I also prefer to deliver with [the] woman in semi-upright position as I have good control of advancing/crowning head'

2.3.7 other strategies

Other strategies to minimize perineal injury reported by midwives in the surveys included perineal massage and applying a solution to the perineum. In the study by Barasinski *et al.* (2018), a total of 40.5% midwives reported some form of intrapartum massage with 26.1% massaging both surfaces of the introitus, 7.1% the cutaneous side only and 7.3% the vaginal side; 15.4% midwives would use a lubricant, although the type of lubricant was unspecified. In the study by Akın *et al.* (2020) 40% of the midwives stated that they would apply a solution (unspecified) to the perineum during birth. When the same midwives were observed facilitating birth in the clinical environment, all of them applied a solution.

Barasinski *et al.* (2018) also used questions to determine the method midwives used to manage restitution and the birthing of the baby's body. It is significant to note that only 30.3% of the midwives reported waiting for spontaneous restitution. The majority of midwives (66.5%) indicated that they would use their hands on the baby's head to assist birth by putting one hand on the mandible (jaw) and the other on the occiput (back of the head). These findings give an overall impression that birth is largely influenced by the medical model in France when considered in the context of predominantly passive birth positions and 'hands on' approach.

2.3.8 Discussion

The studies that used a survey design to gather data regarding midwives' practices during birth to minimise perineal injury have been reviewed, however the data should be considered with caution due to methodological limitations. The original questionnaire designed by Trochez, Waterfield and Freeman (2011), and used by Zhou *et al.* (2019) presented two choices of technique to midwives, either the 'hands on' or 'hands off' (poised) methods without any definition or explanation of where the hands are placed and what they are doing. This lack of detail may have led to flawed data collection as the literature indicates that both the terms have different and nuanced meanings for individual midwives. This is illustrated by the free text comment from a respondent in the survey by East, Lau and Biro (2015 p.129):

> *'Not sure if my understanding of 'hands on/'hands off' is correct therefore Q16 was answered the way I understand 'hands on' i.e. Hands 'nearby' – support head/perineum as required. With slow controlled birthing of presenting part'*

Although other researchers expanded these options and provided further detail, respondents were generally still limited to providing a single answer without the clinical context of a birth which assumes that midwives always use the same technique. The data in the study by East, Lau and Biro (2015) is difficult to compare with that of the other studies as although respondents were able to use free text to

describe what they would do, which is a strength of the design, they were therefore able to provide more than one preferred perineal care strategy.

In addition to issues of terminology and lack of clinical context, reporting bias can be a limitation of using self-completion questionnaires as respondents may provide what they perceive to be the 'correct' answer. This is illustrated in the study undertaken by Akın *et al.* (2020) where there was inconsistency in the practices midwives reported and the practices that were observed. In contrast, a strength of the RCM (2014) survey was that midwives retrospectively reported which technique they had used at a birth and provided specific clinical details to allow consideration of other variables such as maternal birth position and place of birth on the midwife's hand position.

The inclusion of questions in some studies that were designed to elicit whether midwives who preferred to use a 'hands off/poised' technique would change to a 'hands on' approach in certain clinical situations are interesting to consider, as they suggest that a 'hands on' approach may be more appropriate in certain situations, although the evidence to support this is not conclusive. These questions also lack the detail regarding where the midwife's hands would be and what they would be doing in the 'hands on' scenarios. Apart from the questionnaire designed by East, Lau and Biro (2015) there are no questions to ascertain when a 'hands off/poised' approach would be considered more appropriate than 'hands on'.

Some of the free text comments from clinicians in the study by East, Lau and Biro (2015 p.129) suggest that perineal practices at birth are largely dependent on the clinical context and are not easily captured through questionnaire completion:

> *'None of these questions are yes or no answers. It's all dependent on each situation and birthing situation. Each birth is individual not the same for every woman'*

2.3.9 Conclusion

The data from the studies that surveyed midwives' practices to reduce perineal injury provide an insight into the practices midwives consider that they employ and actually do during birth. The data collected regarding midwives' hand positions is difficult to interpret and assimilate due to the wide variation in definition of terms and lack of detail and clinical context. The widely used simplistic terms of 'hands on' or 'hands poised/off' does not indicate where the midwives' hands are, what they are doing or what the action is thought to achieve. The data suggest that practice is not standardised globally, nationally, or locally, however there are indications that midwives used clinical judgement to determine the best approach to take in each birthing situation. What has not been determined is the detail of each approach nor the elements of the decision-making process that leads midwives to select one approach over another.

2.4 Evaluation of the literature presenting qualitative data

2.4.1 Design of qualitative studies

The four qualitative studies reported in the five articles used semi-structured interviews to gather data from midwives (Allen, Small and Lee 2021, Begley *et al.* 2019, Jefford *et al.* 2018, Lindgren, Brink and Klingberg-Allvin 2011, Smith *et al.* 2017). Lindgren, Brink and Klingberg-Allvin (2011) aimed to describe the practice of midwives in Swedish homebirth settings with a focus on reducing perineal injury. The researchers identified that the incidence of perineal injury was lower among women who gave birth at home in comparison with those who birthed in the hospital setting. The study was therefore designed to explore the factors that midwives attending homebirths considered were important to minimise the occurrence of perineal injury.

The study reported by Smith *et al.* (2017) and Begley *et al.* (2019) also explored the practices midwives considered important when trying to keep the perineum intact during birth. The study was known as the MEPPI (midwives' expertise at preserving the perineum intact) study, and the findings reported in the two papers. The researchers identified 'expert' midwives from Ireland and New Zealand and invited them to take part. The term 'expert' was defined as midwives who had achieved a 40% or higher 'no suture rate' (intact perineum or first-degree tears not requiring suturing) for nulliparous women in the three and a half years before the study.

Midwives were also required to have an episiotomy rate of less than 11.8% and an SPT rate of less than 3.2% to be included in the study

Jefford *et al.* (2018) explored midwives' clinical decision-making skills during the second stage of labour, specifically regarding the decisions they made about perineal care during birth using the Enhancing Decision-Making and Assessment in Midwifery (EDAM) tool. In contrast, Allen, Small and Lee (2021) evaluated how midwives had navigated changing their practice when a new perineal practice policy ('the bundle') was implemented, effectively removing the need for clinical decision making and applying standardised practice for *'every woman every time'* (p.2).

The data in the studies was collected via one-to-one interviews, either in person or using videoconferencing software. The researchers used interview schedules to structure the dialogue with the participants, and these were all available to review. Interviews differed slightly in format, however all authors reported collecting some degree of demographic data, although not all presented this in the articles reviewed.

Allen, Small and Lee (2021) asked midwives to describe how they supported a woman birthing in the second stage to prevent perineal injury and how their practice had changed following implementation of the 'bundle'. The interviews undertaken by Lindgren, Brink and Klingberg-Allvin (2011) and in the MEPPI study (Smith *et al.* 2017, Begley *et al.* 2019) also asked midwives to describe what they did during the second

stage of labour. The midwives attending home births were asked general questions regarding their practice and to describe any techniques they used to minimise perineal injury. In the MEPPI study, midwives were asked to imagine they were caring for a primigravid woman, in the second stage of labour where the baby's head was visible and then describe what they would do. Although the researchers gathered data that correlates and suggests that there are a set of core practices midwives use, a limitation of this type of discussion is that there are multiple variables that are difficult to consider when the birthing scenario is imagined or generalised out of context.

Jefford *et al*., (2018) asked midwives for two narratives of births they had attended, one in which perineal integrity was preserved and another in which perineal injury occurred. These narratives were subsequently assessed by the researchers using the EDAM tool to determine whether good clinical decision-making and good midwifery practice was described. The midwives provided candid detail within the narratives suggesting that the stories they told were honest and a true reflection of their decision making.

2.4.2 Scope of qualitative studies

The four studies represent the views of midwives in two European and two Australasian countries. The sample sizes of between seven and twenty are considered appropriate for the research approaches and study designs (see table 2.4).

Authors	**Country of study**	**Number of midwives and units represented**
Jefford *et al.* (2018)	Australia	7 midwives from one regional maternity unit
Lindgren, Brink and Klingberg-Allvin (2011)	Sweden	20 midwives who had assisted at home births From multiple locations
Begley *et al.* (2019) Smith *et al.* (2017)	Ireland and New Zealand	7 from two units in the Republic of Ireland 14 case loading midwives in New Zealand
Allen, Small and Lee (2021)	Australia	12 midwives from five participating sites in Queensland

Table 2.4. Scope of qualitative studies

2.4.3 Themes identified

Following analysis and synthesis of the literature, four key themes were identified that midwives highlighted as important factors in reducing perineal injury during

birth: *A calm birth environment and unhurried birth*, *Knowing the woman, Knowing the physiology* and *Considered interventions*. In the studies, midwives also shared their experiences of how they learned the art of maintaining perineal integrity; a final theme, *Ways of Knowing,* was subsequently identified.

2.4.3.1 A calm birth environment and unhurried birth

Midwives in all of the studies spoke of the importance of a calm and unhurried approach to birth to avoid perineal trauma. A theme identified by Lindgren, Brink and Klingberg-Allvin (2011) was *'Creating a sense of security'* which included a focus on both the physical birthing space and a psychological sense of security for the woman. Midwives highlighted how the right environment was vital for the woman to be able to relax and have confidence in her own abilities:

> *'…if the woman feels calm and relaxed, it makes her perineum relax and she feels that it will be alright, we have few lacerations at home…'* (Lindgren, Brink and Klingberg-Allvin 2011 p.3)

Several midwives in the MEPPI study spoke about how they created an atmosphere of calm in the birthing room and the importance of ensuring it was a safe space for women. Midwives stated that they adapted the birth room to create this by ensuring the room was dark and warm, minimizing the number of people in the room,

speaking quietly and patiently, and helping the woman to be calm and remain in control (Begley et al. 2019).

Midwives also identified how respecting the natural flow of labour progress and not being constrained by time limits was an important factor in reducing perineal injury. During labour midwives reported paying close attention to the woman and her behaviour, calmly observing to ensure progress and not hurrying the natural processes of birth:

> *'We do not think of watches as machines, but I would say that it is the one subject that really threatens normal birth and makes the women tear.'* (Lindgren, Brink and Klingberg-Allvin 2011 p.3)
>
> *'I'll happily leave it for as long, as long as you are seeing progress…'* (Begley *et al.,* 2019 p.94)
>
> *'…I will get my pack out, and my pack of gloves. And a cord clamp, and that's it. And I just wait…I don't do hands on…I have my hands poised…'* (Allen, Small and Lee, 2021 p. 5)

A slow and controlled birth of the head was highlighted as an important feature in reducing perineal injury in all of the studies:

'…any bad tears that I've had would've found the mums would have been extremely expulsive with their pushing…' (*Smith et al. 2017 p.87)*

'…I just literally get her to do a push breathe, do a push breathe, do a push breathe, and do hands off…' (Allen, Small and Lee 2021)

'You're blowing the baby out with her…you try and keep her in that rhythm and like, let the baby's head crown, as gently and as slowly as it possibly can.' (Begley et al. 2019 p.94)

'My aim is to help handle the pain so that she can be in contact with her body and follow its signals. I do this by talking to her, touching her and encouraging her to hold on for a moment or two.' Lindgren, Brink and Klingberg-Allvin 2011)

2.4.3.2 Knowing the woman

The midwives attending homebirths (Lindgren, Brink and Klingberg-Allvin 2011 p.2-3) spoke of the importance of knowing and understanding the woman, particularly in relation to her fears about perineal injury, so that they could discuss this together and reduce the woman's anxiety. Building a relationship with the woman prior to providing care in labour was also considered a key part of building trust, which subsequently reduced fear during the birth:

> *'It's easier to communicate when I know what the woman is afraid of and what her previous births were like. She also knows that she can trust me'. 'Fear causes tears'.*
>
> *'If you really care for a woman in labour you do what it takes to fulfil her wishes. The women usually know what feels best for them and when they don't know you can listen and make suggestions so that they can find out for themselves.'*

Lindgren, Brink and Klingberg-Allvin (2011) note that this level of personal security created in the homebirth environment is rarely achieved in the hospital setting. This is highlighted in one of the midwife's narratives in the study by Jefford *et al.* (2018 p.61) in which the woman sustained a perineal injury:

> *'Maybe if I'd had longer with her in from the beginning maybe that might have been more helpful but in the hospital system when you met a woman when you arrive on shift you don't always get to know the person'.*

Midwives in the MEPPI study also identified that a reciprocal relationship of trust was a key feature in reducing perineal injury, and that through building trust they could work in partnership with the woman to help her stay in control during the second stage (Begley *et al.* 2019). The importance of discussing perineal care with women before labour was also highlighted and included how a woman might prepare her

perineum using perineal massage, reviewing the birth plan together and explaining how to control the birth of the baby's head slowly with breathing during the birth (Smith *et al*. 2017).

Jefford *et al.* (2018) highlighted examples in the midwives' narratives that illustrated how knowledge of a woman's preferences ensured that she was able to make informed decisions and be the final decision-maker in her care. In contrast, participants in the study by East, Small and Lee (2021 p.5-6) spoke of the lack of information provided to women when they were expected to implement the perineal care bundle and that they *'did not describe or recall information about facilitating informed decision-making'*. However, midwives did not always subscribe to implementing the bundle, respecting the need for an individual approach:

> *'…there can't be a blanket rule for everyone because different bodies are different, there's the different anatomy, different beliefs, different tissues, different traumas. I just think that you need to customize something to each individual woman…'*

2.4.3.3 Knowing the physiology

> *'When I have a home birth I focus completely on the birth process and use all my skills to support the woman'* (Lindgren, Brink and Klingberg-Allvin 2011 p.4)

A knowledge of both birth and perineal physiology was highlighted by midwives as an important factor when considering which practices to implement to reduce perineal injury. Midwives spoke of the importance of birth position in reducing pressure on the perineal tissues and explained how different positions facilitated women to retain control over the birth and subsequently reduced perineal injury. Being mobile and able to change position was considered important with the upright leaning forwards and all-fours positions those most frequently cited as being protective:

> *'I always try to help her find the most comfortable position because she can then relax and her pelvic floor is more relaxed too'.* (Lindgren, Brink and Klingberg-Allvin 2011 p.5)

> *'…for them to kneel with one foot up, or one knee up, because if they're standing straight they tend to lock their knees, which tightens all those muscles…through the perineum…'* (Begley et al. 2019 p. 91)

Midwives in the study by Allen, Small and Lee (2021 p.7) however, considered that the application of the perineal care bundle appeared to work best when women were

supine on the bed, conflicting with the midwifery philosophy of active birth and women's autonomy:

> *'I definitely think that there are more bed births to make it easier for the midwives to do hands on and to do the perineal compresses, um, so I do feel it is impacting on women.'*

All of the articles reported data on midwives' observations of the perineum during birth and the importance of understanding perineal physiology in preventing tears. In the narratives provided by midwives, Jefford *et al.* (2018) consider reference to perineal observation part of the cue acquisition and clustering required for sound decision-making:

> *'I could see the perineum was pink, there were no signs of pocketing, when it goes a whitish colour and dimples, the bulb of the perineum was not showing signs of getting swollen, or oedematous…there was no bleeding…'*

> *'I had full view of Grace's perineum, it was stretching beautifully, and it was pink. There was no perineal tissue holding the head back, it didn't blanch, it didn't show any signs of breaking…and there was no evidence of bleeding.'*

Being attentive to the changes in the perineum, observing the perfusion of the tissues, the consistency and perineal stretch were characteristics also reported in the MEPPI study and determined to be important factors for midwifery decision making.

> *'Just really watch the perineum…after they stop pushing, and wait for the circulation to start coming to the area…'Cos I find once the perineum goes white, it will probably ping. So if…the circulation has stopped, I'll ask them to just slow down, breather…when it starts going pink again, you know they can push.'* (Begley *et al.* 2019 p.93)

The importance of understanding and working with the physiology of birth to minimise perineal injury was universally recognized, therefore it was not surprising that in the units where the perineal care bundle had been implemented, midwives felt conflicted by the requirement to educate student midwives whilst implementing a policy that did not support this:

> *'How they're taught at the university does not support the bundle in its entirety, so I feel that they are very conflicted by that…They feel like we are taught this to support women and support physiology yet we've got to do this in practice…'* (Allen, Small and Lee 2021 p.7)

2.4.3.4 Considered interventions

Midwives in the MEPPI study mentioned the use of a lubricant during birth to help the baby's head move through the perineum, others spoke of the importance of antenatal perineal massage. Midwives in the MEPPI study also referred to the use of complementary therapy techniques as part of their perineal care practices including homeopathy and acupressure.

> *'I also use a homeopathic called lobelia which is great for rigid perineums…and it's usually 2 contractions later you suddenly see the perineum just relax…'* (Begley et al. 2019 p.92)

In addition to perineal massage and the use of lubricants, midwives also referred to using warm compresses or cloths on the woman's perineum to avoid tears:

> *'…putting that warm compress there is a way of saying 'I can give you some physical comfort, and what you are feeling is okay and I'm here for you'…'*
>
> *'…I'll have a hot flannel there…'* (Begley *et al.* 2018 p.91)
>
> *'I assisted a woman who had asked for warm cloths during her previous delivery at hospital but was then told that they were of no use. She had a severe rupture in that birth and this time she was very anxious to have them'* (Lindgren, Brink and Klingberg-Allvin 2011 p. 5)

The 'hands on' or 'hands off' debate was highlighted in the MEPPI study (Begley *et al*. 2019), as initially the participant midwives' opinions were equally distributed between those preferring the 'hands on' and those preferring the 'hands off' approach. The researchers undertook further interviews to explore this in more detail and concluded that the terms midwives used to describe their practice was inconsistent, and that analysis of the data was challenging and caused debate between the authors. Re-analysis of the data led to the conclusion that midwives used the 'hands off' approach for women who were very much in control and birthing the baby's head very slowly, with 'hands on' being used to control the head if there was concern that birth may happen too quickly and cause perineal damage. They also determined that 'hands off' was much more likely to mean 'hands poised' in which the midwives were prepared to apply pressure to slow the baby's head if necessary.

'No touching' was a theme identified by Lindgren, Brink and Klingberg-Allvin (2011); some midwives spoke of using warm cloths to support the perineum and others do not touch the perineum at all unless the woman asked them to or they recognise a need to do so, similar to the responses of the midwives in the MEPPI study. Midwives also reflected on how the observation of other practices by colleagues had impacted their own perineal care strategies:

> *'I feel sick every time I see a colleague stretch a woman's perineum with her fingers while the woman is having to cope with all the pain from inside due*

> *to the pressure. There is no reason to make something that is difficult even worse.'* (Lindgren, Brink and Klingberg-Allvin 2011 p.5)
>
> *'…I stopped doing that because I noticed…they'd often have bruised perineums where the finger tips, you could see where the fingers had been, you know. So I thought 'I'm not going to do that'…'* (Smith *et al*. 2017 p.85)

The importance of women being in control of the emergence of the baby's head was identified within the previous themes of both '*A calm birth environment and unhurried birth'* and '*Knowing the woman'*. In some cases, midwives referred to the importance of women doing this by judging the speed of the birth by using their own hands:

> *'For first time mothers it is really rewarding to feel the baby's head. The labour might have felt as though it would never end, and now she can feel with her own hands that it will soon be over'.*
>
> *'When the mother follows the delivery of the baby's head by putting her hand on the head she pushes the exact amount it takes to help the baby out without tearing'* (Lindgren, Brink and Klingberg-Allvin 2011 p.5)

Midwives spoke of the judicious use of episiotomy to minimise perineal injury and considered that the primary indication would be in relation to a concern over the wellbeing of the baby and rarely in cases of a tight perineum or previous SPT:

> *'I definitely would think a lot about it before doing an episiotomy…it wouldn't be something that I would, like obviously, routinely do…'*
>
> *'…I've looked after women with previous third degree tears; that to me wouldn't be an indication for an episiotomy.'*
>
> *'She'd done a prophylactic episiotomy and I, I sort of, say to her, how can you justify damaging in order to prevent damage?'* (Smith *et al.* 2017 p.85, 87)

2.4.3.5 Ways of knowing

'Sources of knowledge' was a theme identified in the MEPPI study (Smith et al. 2017). The ways that midwives learned the art of perineal care was predominantly from being taught techniques as a student midwife and from more experienced colleagues as they developed their own practice as professionals:

> *'…maybe just taking note of what other midwives maybe with more experience…what they were doing…just kind of building up, you know, my own experience and my own techniques as time went on.'* (Smith *et al.* 2017 p.86)

Feedback from women was also considered an important source of practice-based learning. Lindgren, Brink and Klingberg-Allvin (2011 p.3) identified that through reflecting on their previous experiences of attending many births, the midwives in their study had developed intuitive knowledge of when the perineum was at risk of injury and were able to put strategies in place to minimise the risk of it occurring. Storytelling of birth experiences was also a way of learning from colleagues:

> *'I had a very experienced midwife who was like a mentor to me. She once told me a story about the birth of a 5kg baby; in the first birth the woman had had a sphincter rupture…the midwife was very close to the woman and guided her through each millimeter during the pushing phase. Their collaboration saved the woman's perineum completely.'* (Lindgren, Brink and Klingberg-Allvin 2011 p.3)

In contrast, there were cases where midwives reported not developing their practice through experience but applying practices routinely as they had been taught as students, or by applying policy such as the perineal care bundle without active clinical decision making or considering the woman's needs and preferences. A feature of poor midwifery practice that Jefford *et al.* (2018 p.63) term 'midwifery abdication', is a situation in which the safety and efficacy of midwifery practice is undermined and the autonomy of the woman is compromised. This is illustrated by midwives in the study by Allen, Small and Lee (2021) when they abdicate responsibility for perineal injury through application of the perineal care bundle:

'To be honest as a new grad I don't mind being told what to do…I suppose in a sense the [bundle] was kind of like a safety net because you had this thing where you had to do it…no one could question it [you] because you're following the bundle that the hospital has put in place.'

'I was really excited because [in a new job as a new graduate] I was like, finally…I'll get to make a choice about what I do. And on my first day in the birth suite they were like hey, we need to talk to you about the bundle…I've never actually had the opportunity to make a choice.' (Allen, Small and Lee 2021 p.6)

'We have a 'hands on' policy and it was the way I was taught in my training…'

'…I'm old school and always have 'hands on' to protect the perineum…' (Jefford et al. 2018 p.60)

2.4.4 Conclusion

The data from the qualitative studies suggests that the majority of midwives use a multitude of techniques to reduce perineal injury. Key factors included the importance of trust and relationship between the midwife and birthing woman, close and careful attention to the process and physiological signs of birth and the use of interventions such as warm compresses and using the hands to slow the birth if necessary. The findings also suggest that most midwives react to each birthing

situation in a responsive way, adapting their perineal care practice to the needs and preferences of the woman as required.

The data from the studies by Jefford *et al.* (2018) and Allen, Small and Lee (2021) however, identify that midwives do not always adapt their practice appropriately and in a few cases, poor decision-making and poor midwifery practice were identified. In the midwifery units where a policy regarding perineal care was implemented, midwives did not always follow the policy and devised strategies to avoid compromising their practice whilst appearing to conform to the expected norms. In other cases, midwives implemented the policy without applying good clinical decision-making skills, utilising the evidence or including the woman in the decision-making (Jefford *et al.* 2018).

2.5 Discussion and chapter conclusion

The review of the literature has identified some key areas of similarity in findings as well as contention and identified aspects of midwifery practice that need further exploration. It is apparent that there are factors that influence the incidence and severity of perineal injury beyond the previously identified 'risk factors', and that the midwifery art of maintaining the integrity of the perineum at birth is far more complex than simply adopting a 'hands on' or 'hands off/poised' approach. The creation of a trusting woman-midwife relationship, a calm environment conducive to a slow birth and a recognition of and respect for the natural rhythms of labour and

birth are important elements that may frequently go unrecognised in environments where the medical model of birth dominates.

This literature review has confirmed the findings from previous reviews that the terminology and definitions of the terms 'hands on', 'hands off' and 'hands poised' mean different things across the studies and are not interpreted consistently by midwives in practice locally, nationally, or globally. In order to accurately record the perineal care techniques used during birth so that retrospective evaluation of perineal injury can occur, a systematic reporting system needs to be developed.

Prevention of perineal injury is complicated and involves many factors, and most importantly should involve communication with each woman to ascertain her needs and preferences. An exploration of how midwifery clinical decision making occurs in this context, and how midwives enable women to make informed decisions in the absence of conclusive evidence urgently requires investigation.

In maternity units where perineal care bundles are implemented as policy, and standardised practice is expected to be implemented for 'every woman every time', midwives may not engage in clinical reasoning. This may ultimately lead to midwifery abdication, compromising professional accountability. There are contextual, political and philosophical issues that need further exploration in relation to the midwifery

art of maintaining perineal integrity during birth. Following the review of the literature, the research question has been determined as:

> *What do midwives do to reduce perineal injury during physiological birth and what influences their decision making?*

This chapter has presented a structured scoping review of the literature to identify what is already known about the methods midwives use to maintain perineal integrity and reduce injury during birth. The findings confirm that there is no standardised approach to this aspect of intrapartum care and that where this is imposed through policy, it remains a contentious issue impacting on women's autonomy and midwives' professional accountability. Midwives reported that they would or did use a particular aspect of perineal care, however when observed or interviewed a discrepancy between reported and actual practice was identified.

Most midwives adapt their practice according to the woman's needs and the clinical situation and use a variety of methods to ensure a calm and unhurried birth. Midwives develop the art of maintaining perineal integrity through reflecting on and learning in practice, learning from colleagues, and listening to women. The terms 'hands on', 'hands off' and 'hands poised' are not universally defined and are used by midwives and researchers to mean different things, which creates problems with maintaining a meaningful professional dialogue.

This chapter has created the landscape and rationale for this thesis, building on the historical and contextual background of perineal care provided by midwives during childbirth. The following chapter presents the methods selected to explore the research question, introduces the research setting, and provides detail of the data collection and data analysis. The ethical issues considered in the planning of the study and encountered in the field are also explored.

Chapter 3 Methods

3.1 Introduction

The previous two chapters have introduced the research topic and explored the literature and evidence relating to the key areas for investigation within the study, identifying that minimising perineal injury at birth is an important issue for women, midwives, and health service providers. Chapter 2 explored the relevant literature, discussed the prominent themes and identified the gaps in the current knowledge. The terms 'hands on', 'hands poised' and 'hands off' have not been fully defined beyond simplistic terms and are not used consistently in clinical practice or in the literature. Identification of these gaps in the evidence led to the formulation of the research question and the study aims and objectives.

This chapter presents the theoretical framework which guided the direction of the study and the methodology selected to investigate the research question. A detailed account of my positionality and the methodological and philosophical assumptions of the study is provided, demonstrating that the selected approach of ethnography was the most appropriate way to address the research aim. The ethical issues are explored and the research setting, data collection and data analysis methods are presented.

3.2 Methodology

3.2.1 Theoretical framework

The theoretical framework for any study is the set of ideas which help to frame and shape the direction of the research. The nature of the framework depends on the researcher's view of how one comes to know about the world, and the overarching theories and orienting ideas that derive from the research tradition or paradigm (Lederman and Lederman, 2015). The overarching theories can be considered as that which derive from specific schools of thought, commonly presented as the positivist and interpretive paradigms.

The philosophical background of a research study is often implicit however it is these assumptions which form the foundations of the research, and enable the researcher to guide the direction, meaning and implication of their work (Gilbert, 2008). Although consideration of the theory is important in framing the research, there should be caution when considering that one particular paradigm is superior to another. The function of philosophical theory is to guide the researcher toward the most appropriate approach to access the phenomenon under study and to answer the research question (Hammersley, 2015).

Hammersley (2015) recommends an approach in which the researcher is continuously and recurrently thinking about the research question and is aware of the options of enquiry available to them, engaging in an approach which is

continuously thoughtful and reflexive. Although careful attention should be given to the philosophical questions, this should not lead to an approach that is theory-bound and constrained by a recipe-type framework (Atkinson *et. al.* 2007, Hammersley 2015). To select the most appropriate theoretical framework and methodology for the study, the research question was reviewed and refined.

3.2.2 Refining the research question

Following review of the relevant literature, a two-part research question was defined as:

> *'What do midwives do during birth to minimise perineal injury and what influences their decision?'*

The original question was refined due to the complexities revealed through the literature review, as it suggested that the choices available to midwives are limited to either using a 'hands on' or 'hands poised/off' approach. The review of the literature revealed that midwives use multiple strategies to minimise perineal injury beyond these binary definitions but that these have not been clearly defined or systematically documented.

As registered healthcare professionals, midwives have an obligation to provide high quality care based on the best available evidence (NMC, 2018). The most widely accepted model of clinical decision-making in medicine and nursing is based on the

concept of evidence-based practice (EBP), which considers the utilisation of the best available evidence, the expertise of the clinician and the needs and preferences of the individual (Sackett 1996). Page (2006) presented a five-step model of evidence-based midwifery with the aim of augmenting the model presented by Sackett (1996) to reflect unique nature of midwifery practice in which the woman should be supported to be the ultimate decision-maker. Step 3 of this model requires the midwife to seek and assess the best available evidence to inform the decision being made. Other models of midwifery shared decision-making have been proposed, all of which include the requirement for the midwife to evaluate and discuss the evidence with the woman to facilitate an informed, shared decision (Jefford 2019, Menage 2016a, 2016b). Clinical guidelines are a useful tool that enable midwives to access the available research evidence to support decision making for specific circumstances (Ménage 2016b), however there is currently no high-quality scientific evidence to suggest that either the 'hands on' or 'hands poised' techniques significantly improve perineal outcomes (Aasheim *et. al.* 2017). The current UK guidelines from NICE (2017) state that:

> *'Either the 'hands on' (guarding the perineum and flexing the baby's head) or the 'hands poised' (with hands off the perineum and baby's head but in readiness) technique can be used to facilitate spontaneous birth'* (NICE 2017 p.60).

I was therefore interested in exploring two separate aspects of midwifery practice in relation to perineal care during birth. Firstly, if midwives used a 'hands on' approach,

I wanted to find out what they actually did with their hands to 'guard' the perineum and/or flex or extend the baby's head as the baby emerged from the birth canal. If midwives used the 'hands poised' technique, I wanted to understand the elements of this approach and determine whether it was the same or different to being 'hands off'. Secondly, I wanted to explore why midwives selected a particular technique and what influenced their choice. The aim of the study was therefore to capture the elements of practice that were beyond the simple definition of 'hands on', 'hands off' or 'hands poised' within the context of different birthing environments, and to explore how midwives decided what to do.

The objectives of the study were to:

1. Observe and record the elements of perineal care that midwives utilised to protect the perineum during physiological birth

2. Explore the factors that influenced midwives' decision making in determining which elements of perineal practice to use

3. Create an inventory of the components of the 'hands on', 'hands off' and 'hands poised' methods to enable future accurate reporting

3.2.3. Research approach

> *'Whatever the details of a given birthing system – it's practitioners will tend to see it as the best way, the right way, indeed* ***the*** *way to bring a child into the world'*
>
> (Jordan, 1993 p.4).

The review of the literature presented in Chapter 2 illustrated how the biomedical and social models have what appear to be parallel discourses of childbirth. In maternity care a tension can arise when professionals consider that their way of knowing is the only credible source of knowledge and this takes precedence as the authoritative source. Jordan (1993) identified this tension whilst exploring birth in different cultures and considered that to make sense of and manage the existential uncertainty of birth, a set of practices and beliefs are designed and subscribed to. When individuals subscribe to different practices and beliefs within the same birthing environments, these can become contested spaces in which authoritative knowledge and practice can shift *'depending on which group has the strongest voice at any one time'* (Downe, 2010 p.24).

The seminal work of Berger and Luckman (1966) presents the concept of the social construction of knowledge, as different perspectives held about the nature of knowledge are taken for granted within any given society as *'human 'knowledge' is developed, transmitted and maintained in social situations'* (Berger and Luckman,

1966 p.15). Multiple sources of knowledge and evidence are acknowledged as being important and valid in the midwifery profession, including both scientific knowledge and intuitive, tacit knowledge. This inclusive philosophy recognises that '*one source of knowledge, evidence or type of research could never reflect the many facets of midwifery*' (Cluett and Bluff, 2006 p.14).

One of the research objectives was to explore how midwives utilised the various sources of evidence and knowledge to inform their practice and decision-making. The research approach therefore needed to be flexible and responsive in order to fully explore how midwives' knowledge about perineal care had been constructed. Following consideration of the research question and my positionality, an interpretive approach was considered the most appropriate to answer the research question as this perspective seeks to understand the world of human experience from the viewpoint of the person experiencing it, recognising that there are multiple realities (Panke, 2018, Silverman, 2013). Although there are many different approaches within the interpretive tradition, the central features are identified as those which seek to understand, describe and possibly explain social phenomena by attempting to record and analyse how people construct and make sense of the world around them (Angrosino, 2007).

The study approach and data collection methods were informed by the limitations identified in previous studies that sought to explore the phenomenon of midwifery perineal care practices during physiological birth. The use of a questionnaire to gather data was rejected due to the difficulty in formulating questions to gain

sufficient detail whilst not being overly complex, particularly when the terminology related to perineal techniques is not interpreted consistently. Survey approaches using questionnaires have been undertaken; however, these have not been able to elicit the full picture of midwifery practice as they lack contextual detail (Akın *et al.,* 2020, Ampt, de Vroome and Ford, 2015, Barasinski *et al.,* 2018, East, Lau and Biro, 2015, Trochez *et al.,* 2011, RCM, 2014, Zhou *et al.,* 2019). There are other recognised disadvantages with using this type of approach including response bias and variable response rate (Gilbert, 2008, Bowling, 2009).

Interviews were initially considered as the primary data collection source; however, this would require midwives to consider their practice in relation to a theoretical scenario or to personal experience. Limitations with using theoretical scenarios, such as those used in the MEPPI study (Begley *et. al*., 2019, Smith *et al.,* 2017) are that participants may not respond in a way that is a true reflection of their practice, as the scenario would not be able to present the full contextual detail of a given situation. Participants may also respond in the way that they perceive the interviewer wants them to or try to give what they perceive to be the correct answer, known as social desirability bias (Bou Malham and Saucier, 2016). There are also limitations when asking participants to discuss their practice in relation to a birth they have facilitated such as the study using narratives by Jefford *et al.* (2018), as there may be recall error and the complex and contextual factors may not be fully remembered after the event.

Following a Delphi study to ascertain expert's opinions of the 'hands on' and 'hands poised' perineal care practices, Ismail *et. al.* (2014) recommended that research was required to create descriptive summaries of all the possible techniques used by clinicians due to the wide variety in methods and terminology used. This recommendation was considered, and it was determined that such summaries could only be created through direct observation and demonstration by practitioners. The use of a systematic observational technique such as that used by Ross-Davie, Cheyne and Niven (2013) to collect quantitative data was considered, and subsequently rejected due to the need to record the nuanced and contextual details, and to explore the midwife's process of clinical decision-making during the birth.

When considering the most appropriate method of enquiry to explore the research question, it was important to recognise that what people do and what they say they do are not always the same thing, demonstrated in the study by Akın *et al.* (2020). Recognising that this disparity exists, Shorrock (2016) identified different varieties of 'work': work-as-prescribed, work-as-imagined, work-as-disclosed, and work-as-done. Data collection methods such as interviews, questionnaires and surveys rely on recall and reporting, which Shorrock calls work-as -disclosed. This study sought to explore the more accurate representation of what is termed work-as- done, which is difficult to achieve without naturalistic observation. What midwives do is likely to change through interaction with others, in response to the clinical situation, and to women's preferences and behaviours as the events of birth progress. There was also the need to question the taken for granted assumption that there is simply a binary

choice, with midwives choosing to adopt either a 'hands on' or a 'hands off/poised' approach.

Therefore, to be able to create descriptive summaries of the perineal care strategies used by midwives, directly observing practice within the different contexts of birth was considered the most appropriate approach to take. The need to understand the context of the decision-making, in addition to observing it, formed the rationale to use a naturalistic method. It was also considered that a long-term commitment to the study was required so that a relationship with the participants could be developed and effective observation, informed by an understanding of the context, could be achieved. Engaging in an ethnographic approach was determined to be the method which would allow the most authentic exploration of this phenomenon.

Ethnographic enquiry can focus on a wide variety of phenomena; however, a consistent and important feature is that there is an exploration of social action, of what people do and why (Hammersley and Atkinson, 2007). Emerson *et al.* (2011 p.4) have suggested that through ethnography, the researcher is exposed to the varying priorities and points of view of those in the chosen setting, and as a result is able to follow the *'political fault lines'* in the setting and is subsequently able to reveal the *'multiple truths'* present in the lives of others. Ethnography also aims to study knowledge that is both explicit and intuitive, and therefore requires the researcher to not only observe behaviour but to *'make inferences about what people know by listening carefully to what they say…'* (Spradley, 1980 p.11).

3.2.4 Ethnography

> *'Through participation, the field researcher sees first-hand and up close how people grapple with uncertainty and ambiguity, how meanings emerge through talk and collective action, how interpretations change over time, and how these changes shape subsequent actions'* (Emerson et al., 2011 p.5)

Ethnography is the term used to describe a type of interpretive enquiry, originating from the discipline of anthropology, concerned with observing and recording the culture and interactions that occur within a community or society; and is a way of collecting, describing and analysing the ways in which others make sense of, and behave within, their culturally constituted environment (Angrosino 2007, Van Maanen 2011). The term has not been used consistently however, which means that the type of study described as ethnographic may vary due to the different contexts in which it is carried out. A key feature of ethnography is the focus on the written experiences from the field and the production of two main products: the fieldnotes and the final ethnographic product (Reeves *et al.*, 2013).

Ethnographic research *'escapes neat categorisation'* and '*the intellectual terrain is normally contested: authority and tradition are constantly undermined'* (Hammersley and Atkinson, 2007 p.1). However, a consistent feature of ethnography, is that the researcher is immersed in a community so that the behaviours, customs and beliefs of those being studied within their social context can be observed. The central principles of an ethnographic study are that it is field-based, personalised,

multifactorial in method, long term, inductive, dialogic and holistic (Angrosino, 2007). Other key features of ethnography include participant-observation, detailed interviews and the examination of documents and artefacts. Through this combination of data gathering, Van Maanen (1995 p.20) considered that a unique quality of ethnographic research is the ability to *'make the familiar strange in order to illuminate otherwise unseen perspectives'*. The ethnographic approach is '*not an experimental science in search of law but an interpretive one in search of meaning'* (Geertz, 1973 p.5), and therefore a method ideally suited to the exploration of sense-making within a defined culture, such as the process of clinical decision-making during birth.

Although ethnography has key defined features, the methods of analysis and the presentation of ethnographic data are not standardised. The processes used by ethnographers aim to identify patterns of behaviours, practices and interactions within the community observed; and to provide rich, holistic insights into people's views and actions, as well as the sights and sounds of their environment (Flick, 2007, Reeves, Kuper and Hodges, 2008). The process of data collection in ethnography is relatively unstructured and gathered through the participation of the researcher in the lives of the participants; watching what happens and what is said and asking questions to find out what is going on (Hammersley and Atkinson, 2007). The ethnographic approach has been used successfully in several studies where midwife researchers have explored the behaviour and interactions of midwives within their cultural context (Dove, 2013, Hunter, 2005, Kirkham, 1999, Liberati *et al.*, 2019, Marshall 2005, Newnham, McKellar and Pincombe, 2017, Walsh, 1999 and 2004,

Wheeler, 2014 and Altaweli, 2015). Hunt and Symonds (1995) consider that ethnography provides the opportunity to consider the complexity of the events and interactions in birth environments, explore what it might mean and why midwives do the things they do.

3.2.5 Participant observation

It has been recognised by both anthropologists and sociologists, that participation in the field under study creates the capacity to understand what is happening and why, to a far greater extent than just by simply being there (Atkinson, 2015, Van Maanen 2011, Pole and Hillyard 2016). Atkinson (2015 p.39) considers that some form of participant-observation is central to any *'ethnographic enterprise'* and without it, doing justice to the complexity of ethnography is *'all but impossible'*.

There have been attempts to define the differing degrees of participation that the ethnographer may take, most often based on the fourfold typology attributed to Gold (1958) based on original work by Junker (1952). These roles are based on four theoretically possible roles that researchers may undertake when conducting fieldwork, which are those of complete participant, participant as observer, observer as participant and complete observer (Table 3.1).

Complete participant	**Participant as observer**	**Observer as participant**	**Complete observer**
Risk of going native decreases →			
The researcher interacts naturally with those being observed. Those being researched are unaware of the researcher's purpose and identity.	There is an awareness that the researcher is an observer who develops relationships with those being observed over time. Observation is both formal and informal.	The researcher may engage only briefly with those being observed and the relationships may be superficial. Observation is generally formal.	The researcher is not engaged in social interaction with those being observed. Those being observed may or may not be aware of the researcher's observations.

Table 3.1 Gold's typology of participant observation

Gold (1958) suggested that by identifying with a distinct role, the novice researcher could be mindful of the risk or mitigation for 'going native', as the risk of this decreases as the level of participation reduces. The ethnographic concept of 'going native' occurs when the ethnographer feels at home in the environment under observation and is at risk of becoming involved as a complete participant, minimising or losing the observer aspect of the role. Going native can obscure the objective view, prevent academic thinking, and *'invade the space'* where the analytical work of the

researcher takes place, jeopardising critical, reflexive ethnography (Hammersley and Atkinson, 2007 p.90, Rock, 2001).

It has been suggested, however that considering such clearly defined roles in the planning and reporting of ethnographic research may not be useful, as engagement in the field must be in some way both participatory and observational (Atkinson, 2015, Wolcott, 2005). O'Reilly (2012) considers that the two middle positions of participant as observer and observer as participant are more reflective of the reality of the ethnographer's position which is constantly negotiated and dynamic.

Within the role of participant as observer, effective participation in the field has been categorised as having both active and passive elements, although this categorisation is not an attempt to suggest that fieldwork is mechanistic or formulaic, rather to make the seemingly intangible process of fieldwork more tangible (Pole and Hillyard, 2016). The active elements of fieldwork are those which require the ethnographer to participate in some way with the activities of the field, the 'doing'; whilst the 'being' skills of observing and listening, watching and recording are the passive elements. These aspects of fieldwork are considered within the data collection methods presented in section 3.8.

However it is categorised or defined, it has been acknowledged that participant-observation is a complex activity which requires the researcher to manage the concurrent roles of being both involved in the situation, whilst also being detached from it so that they are able to observe what is going on within it. This has been

described in the context of ethnography as the process of both *'stepping in and out of society'* (Powdermaker, 1966 cited by Davies, 2008 p.5).

The positions of the 'insider' and 'outsider' researcher positions have been explored in the context of relative objectivity (Angrosino, 2007). The 'insider' position is one in which the researcher is familiar with the field and already has some understanding of the culture of the environment being studied. This 'marginal native or 'on the margins' role described by Shaw (1996) is not always easy one to maintain when the researcher is working in the field that is familiar to them (O'Reilly, 2012). Familiarity as an insider brings with it both advantages and disadvantages. The advantages include an easier access to the field and the participants within it, the benefit of knowing about the topic in detail and understanding the context and potential nuanced reactions of the participants (Berger, 2015). The disadvantages of familiarity include a greater level of participation and therefore an increased risk of going native. Role boundary blurring can also occur, particularly in healthcare settings which may bring the additional complexities that come with professional accountability (Ledger, 2010, Moffatt, 2014, Wind, 2008).

Strategies to prevent going native and role boundary blurring include engagement in reflexive practice and periods away from the field to reflect on and consider the conversations and the activities participated in and observed. This type of short-term withdrawal has been recommended to enable the ethnographer to gain perspective on the research environment, and to balance and blend the two roles of the participant and observer *'in order to learn the experiential world from within and*

analyse it from without' (Rock 2007 p.32). Extracts from my fieldnotes and reflexive memos are included in Chapter 4 to illustrate the issues I encountered as a participant-observer in a setting that was familiar to me.

3.2.6 Feminism and ethnography

The issue of power and patriarchy over childbirth and the concept of the conflicting social and medical models within the territory of birth have been discussed in Chapter 1 and were identified as one of the initiating factors to commencing the study. Perineal care research that has been undertaken through the lens of the biomedical model of birth, has a focus on the identification and management of risk factors, and the implementation of technical manoeuvres to maintain the integrity of the perineum during birth. Studies that are designed from the perspective of the psychosocial model of birth have tended to explore the issue from a woman-centred or woman-midwife relationship approach. As Downe (2010) identified, the different childbirth discourses have always run in parallel to each other, with the strongest voices at any given time determining the direction of clinical research and practice.

The literature search revealed a predominant research focus on evaluating the interventions of practitioners to maintain perineal integrity; the 'doing to' women aspect of birth rather than the 'being with' aspect. This juxtaposition created by the dominant technocratic discourse to minimising perineal injury during the normal physiological process of childbirth is significant, as in many birth environments, women's power and autonomy are eclipsed by aspects of medical control and patriarchy. The biomedical model of birth, although frequently challenged, remains

widely accepted as the authoritative discourse (NHS England 2016, WHO 2018). This situation led me to explore feminism in research and feminist approaches to ethnography.

Many authors have debated the value and authenticity of feminist ethnography, particularly since the development of a postmodern 'critical' ethnography (Abu-Lughod, 1990, Acker, Barry and Esseveld, 1983, Ackerly and True, 2010, Barnes, 1999, Stacey, 1988, Wheatley, 1994). This line of argument suggests that feminist research is outdated by the postmodern approach and an era of greater gender equality. However, it has also been suggested that there is still a place for feminist ethnography, as the approach can facilitate deconstruction of the dominant discourse and allow otherwise hidden assumptions to be revealed (Kristin, 2008). As the current dominant discourse of childbirth in England is that of the medical model, where pathology and risk are key features (NHS England, 2016), seeking to explore how this affects midwifery decision-making in the clinical contexts of birth was an important aspect of this study.

Just as there are wide variations in the application of ethnographic theory, there is also a lack of agreement within approaches, an aspect which is also apparent in feminist ethnography. The feminist ethnographic approach does not have a single, coherent definition due to the multiple practices of ethnography and the definitions and goals of feminism. The imperatives for feminist ethnography, however, have been suggested to include producing knowledge about women's lives in specific cultural contexts, recognising the potential detriments and benefits of

representation, exploring women's experiences of oppression along with the agency they exercise in their own lives, and feeling an ethical responsibility towards the community in which the research takes place (Schrock, 2013).

Other authors suggest that there are three principles of feminist research: research should contribute to women's liberation through producing knowledge that can be used by women themselves, should use methods of gaining knowledge that are not oppressive and should continually develop a feminist critical perspective that questions dominant intellectual traditions (Acker, Barry and Esseveld, 1983). Stacey (1988) has suggested that a central feature of feminist ethnography is a research relationship that involves a woman researcher studying women in order to promote their interests, and that by adopting this approach, the imbalance of masculine dominated scholarship can be redressed. Similarly, Abu-Lughod (1990) considered that feminist ethnography should have women at the centre, be undertaken by women and be for the benefit of women.

Walsh (2016) highlights the harmful effects of gender inequalities and patriarchy in maternity service provision and argues that midwives should adopt a feminist lens to view their own practice and research to facilitate gender-equality and woman-centred care. Through adopting a feminist perspective, the needs of women are held central within all aspects of research activity and inquiry. This was considered an important approach to take for the duration of the study, as access to observe the personal and private process of birth had the potential to have a detrimental effect on the mother-midwife relationship and/or the physiological processes of birth.

3.3 MPhil to PhD upgrade

An ethnographic study with a feminist perspective was designed to explore the research question and study aims and objectives, with a focus on clinical observation. The initial proposal was submitted within the documentation required as part of the Kingston University transfer process from MPhil to PhD registration in February 2015. Following a viva voce[1] on 16th March 2015, the proposal was reviewed and refined to ensure the broader professional and cultural elements embedded in midwifery practice could be explored through the traditional ethnographic approach, in addition to the structured clinical observations and interviews. The ethical considerations for the study are presented in the following section.

3.4 Ethical considerations

All research involving human participants raises ethical concerns to a greater or lesser extent and it is imperative that the researcher considers the wellbeing of the participants, to ensure that their rights are protected and that they are unharmed by any aspect of the research process (Murphy and Dingwall, 2007). Ethnography presents a unique range of ethical issues to the researcher, in addition to those usually considered to be central to ethical healthcare research due to the nature of the method; which involves participant observation and often an intimate and long-term involvement in the lives of the participants (Hammersley and Atkinson 2007, O'Reilly 2009). Skeggs (2017) also refers to the feminist ethical principles of reciprocity, honesty, accountability and equality, which should be upheld in order to

[1] Examiners: Professor Scott Reeves and Emeritus Professor of Midwifery Diane Fraser

treat the participants of ethnography with respect, acknowledging that their time is important, and that the intention of non-exploitation is established.

The ethical principles identified by Beauchamp and Childress (2013) of beneficence, non-maleficence, respect for autonomy and justice were considered in the planning of the study and particular attention paid to the issues of informed consent, privacy, harm and exploitation in the context of ethnographic fieldwork (Hammersley and Atkinson 2007). When undertaking any research with individuals or communities, upholding ethical principles supersedes any personal goal including that of knowledge generation (Madison 2012). The professional standards of practice as determined by The Code (NMC 2018) were upheld, to ensure that the rights and needs of both the midwives and labouring women who participated in the study were protected.

3.4.1 Informed consent

Valid, informed consent is an essential component of any ethical enquiry and may be acquired in various forms both prior to and throughout a study, particularly if there are key points of vulnerability for participants (Madison 2012). Although the concept of informed consent is considered a fundamental ethical principle, it has been suggested that for the conduct of ethnographic research certain aspects can be problematic (Atkinson 2015, Pole and Hillyard 2016).

As the nature of ethnographic fieldwork usually includes the observation of social processes within a community as well as individual research participants, different approaches to recognising autonomy and gaining consent are required for the various elements of data collection. In this study, the principle of autonomy was upheld by recognising that the participants had the ability to withdraw from the study at any time should they wish to do so. This could, however, only be applied to the clinical observations and interviews where the participants were recruited on an individual basis. The complexities of informed consent in the context of ethnographic research have been differentiated into the consent of the membership through negotiated and privileged access, and individualistic modes of enrolment (Atkinson 2015). These different forms of gaining consent are discussed in more detail in the following sections.

3.4.1.1 Non-clinical observation: Membership through negotiated and privileged access

During ethnographic studies the researcher, in the role of complete observer, may undertake covert observation during which some or all of the participants are unaware that research is being undertaken (Hammersley and Atkinson 2007). Although at times during the study I assumed the role of a complete observer, the participants were always aware of the purpose of my presence as a researcher.

My role during the fieldwork was one that was constantly shifting between that of complete observer to participant-observer. I was either sitting and listening to and observing midwives, participating in appropriate non-clinical activities or observing the events of labour and birth. It was important that whatever my role, the midwives were aware that research was being undertaken. At the beginning of each shift, during handover, I introduced myself as a researcher and explained why I was there. Notices on the staff notice board and in the staff social spaces were updated with each date that I would be present and the main study posters were visible in all the clinical areas and served as a visual reminder for staff (Appendix 3.1). Discussion of the study aims and objectives at the departmental meetings and through personal conversations also contributed to raising awareness and facilitated the negotiated and privileged access to the clinical areas that I required. When midwives sought me out to share their stories or demonstrate a technique they had learned, I sought verbal consent to document our conversation, and wrote or sketched directly in my notebook, seeking confirmation that I had captured both the technique and the explanation accurately.

3.4.1.2 Clinical observations: Individualistic modes of enrolment

For recruitment to the clinical observations, midwives and other staff were made aware at the beginning of each shift that I would be seeking to recruit midwives and women participants to the study. Prior to the commencement of the study, individual emails had been sent to all registered midwives to make them aware of the study

and contained the participant information sheet for the clinical observations (Appendix 3.3). Midwives were the gatekeepers to the clinical observations as they helped to identify women who met the inclusion criteria for the study when they were admitted in labour, either through triage or directly to the birth centre. They also self-selected for inclusion in the study as participants themselves at times, with consent subsequently gained through an individualistic mode of enrolment. There were occasions when midwives consented to being observed but the woman or their partners declined, and instances where midwives changed at the shift-hand over and the midwife taking over the care of the woman declined to participate or did not meet the inclusion criteria.

Written consent was sought from all individual participants prior to undertaking any clinical observations (Appendix 3.4 and Appendix 3.5). The process of gaining consent was flexible depending on how the women were recruited. If the woman was identified as a potential participant through the triage process, she was approached first, followed by gaining consent from the midwife allocated to care for her. If the woman was already allocated to a midwife when she was identified as a possible participant, consent was sought from the midwife first. If consent was not gained from both parties, the clinical observation did not take place, or it was terminated if it had previously been commenced.

3.4.2 Privacy

The principle of privacy in the context of this study relates to the privacy of data maintained through anonymity and confidentiality. One of the fundamental aspects of ethnographic research is that the researcher makes public that which was said, done or seen in private, creating complex ethical issues for the ethnographer to navigate (Pole and Hillyard 2016, Hammersley and Atkinson 2007).

To uphold the participant's privacy, identities were kept confidential by anonymising data from observations and interviews and ensuring that identifiable features were not presented in the participation profiles or interview excerpts. The women in each of the observation episodes were identified by an alphabetical letter, allocated at the start of each observation period. Midwife participants were initially identified by a number, which was later replaced by a pseudonym with referencing information kept in a separate password protected file and deleted after follow-up interviews to prevent identification.

The semi-structured interviews with midwives were audio recorded and stored securely on a password protected computer until transcription was complete. Following transcription, all audio files were deleted to prevent identification of participants through recognition of their voice. Transcripts were stored on a password protected personal laptop and uploaded into the CAQDAS programme NVivo 11. All research data will continue to be stored securely on the university

network drive for a minimum of ten years in accordance with Kingston University research data management policy (Kingston University 2016).

3.4.3 Harm

3.4.3.1 Observation

Ethnographic research is characterised by participant observation which, in healthcare environments, could lead to the potential for harm to be caused through the researcher's participation (Hammersley and Atkinson, 2014). I was mindful of the need to manage my role carefully in order to prevent harm to any of the research participants. Midwives in the clinical settings were aware that I was a midwife and needed to manage my role identify carefully. To ensure that I did not compromise the safety of the women, their babies or the midwives I reminded midwives that my role was that of a helper, and therefore I would not be undertaking any clinical activity. This aspect of ethnographic research in a known environment was particularly challenging and is a feature recognised in the literature (Pole and Hillyard 2016). There were situations in which my role was challenging to manage, which is discussed further in Chapter 4.

3.4.3.2 Interviews

It has been recognised that when individuals are invited to participate in a research interview, there is the potential for distress to occur through the process of creating

space for open dialogue (Pole and Hillyard, 2016). The potential for this to occur was important to recognise for midwife participants, who could have become distressed if they were asked to discuss situations in which poor maternal outcomes had happened.

Previous research has identified that when untoward incidents such as severe perineal trauma occur, midwives often express feelings of guilt, shame and failure and that recalling such events may be traumatic for them (Elmir *et al.* 2017, Lindberg *et al.* 2013). Midwives were made aware before the interviews that if they became distressed, the interview would be paused or concluded, and the midwife advised to seek support from their Supervisor of Midwives[2]. This information was also provided in the participant information sheet (Appendix 3.3) and participants were reminded of the support available to them at the conclusion of the interview, if they required it.

3.4.3.3 Observation of unsafe practice

As a registered midwife I was aware that in my role as a researcher I was accountable for raising concerns if, during the fieldwork, I observed or was made aware of any unsafe practice (NMC 2018). This was clearly stated in the participant information for

[2] The Supervisor of Midwives was a role that was effective for the duration of the data collection, however ceased to exist from March 2017

both midwives and women (Appendices 3.4 and 3.6) and midwives and women were reminded of this during recruitment.

3.4.4 Exploitation

During periods of clinical observation, I was mindful of the need to ensure that the birthing environment was not compromised by my presence and that I consciously recognised the vulnerability of the birthing women. Regardless of my primary role as a researcher, as a registered midwife I was aware that I needed to continue to uphold the standards set within the professional standards of practice and behaviour and:

> *…act in line with the Code, whether they are providing direct care to individuals, groups or communities or bringing their professional knowledge to bear on nursing and midwifery practice in other roles, such as leadership, education, or research. The values and principles set out in the Code can be applied in a range of different practice settings, but they are not negotiable or discretionary.* (NMC, 2018 p.3)

When situations arose in which I considered that my presence was not in the best interests of the woman, or conducive to creating an optimal mother-midwife relationship, I withdrew from the observation. Illustrative extracts from my fieldnotes of situations when this occurred are presented in Chapter 4.

3.4.5 Ethical Approval

Ethical approval was gained via the National Research Ethics Service (NRES) using the Integrated Research Application Service (IRAS). Favourable opinion was received on 11th November 2015 from Wales REC4 (Appendix 3.7) and the decision was subsequently recorded by the Kingston University Faculty Research Ethics Committee. Permission to gain access to the midwifery unit and to obtain an honorary contract was granted on 18th December 2015 (Appendix 3.8) with local NHS Trust site permission gained on 18th January 2016 (Appendix 3.9). Following approvals and permissions, fieldwork commenced in February 2016.

3.5 Positionality

Prior to beginning data collection, it was important to consider my positionality as within the tradition of interpretive enquiry, researchers themselves are considered an important part of the research process in terms of personal presence in the field, their personal experiences and the reflexivity they bring to role as a researcher (Angrosino, 2007, Flick, 2014). It is acknowledged that the activities and results of social research are:

> *'constructed from and reflect the sociohistorical context of the researcher and the disciplinary context to which they belong'* (Davies, 2008 p.9)

Therefore, the researcher becomes the data collection instrument, which requires consideration of a level of objectivity and engagement in reflexivity to make what is perceived as the familiar, strange and prevent what is initially strange becoming familiar (Van Maanen, 1995). In order to enable the reader to make a judgement about the quality of the research they present, and to allow them to put the findings in context, the researcher should make their philosophy and positionality clear (Denzin and Lincoln, 2013).

The researcher's positionality affects the way they make sense of the world, the language they use and the questions they ask which can shape the nature of the relationship with the participants. The researcher-participant relationship is important as it can affect the way the researcher is viewed and the information that the participants are willing to share. Positionality also creates the researcher's lens for filtering the data and making meaning from it, ultimately shaping the findings and conclusions of the study (Berger, 2015).

Recognising my own positionality was important so that I could be open to and aware of other positions and views held by the midwives in the study. I was interested in exploring the influences that shaped their views and wanted to understand their decision-making process without judgement. Recognising my positionality was important in helping me manage the complex issue of multiple identity, my position as a participant observer and negotiating the role boundaries as a researcher and registered midwife.

3.5.1 Bracketing

Bracketing is a term used within the interpretive research tradition to describe the process of laying aside or looking beyond one's own preconceptions to prevent such views obscuring the phenomenon being studied. Theoretically this enables the researcher to view the world of those being researched as it really is, rather than the way it has been constructed through the cultural lens of the researcher (Caelli, 2000). The concept originated within the research tradition of Husserlian phenomenology, and has subsequently been widely debated, initially by Heidegger who considered that fully comprehending someone else's lived experience is, in essence, an interpretative process and that bracketing out preconceptions may be neither possible nor desirable (Tufford and Newman, 2010). The term 'bracketing' has been interpreted and utilised in a variety of ways within interpretive research approaches, however the central tenets are that it requires the suspension of the internal suppositions of the researcher which includes their personal history, culture, experiences, knowledge and values (Gearing, 2004).

As a woman, mother, midwife, educator and researcher my socio-historical context includes personal experience of perineal trauma, development of my own practice to reduce or minimise perineal trauma in different birth environments and cultures and providing support to students and midwives as they try to understand the concept and refine their own knowledge and skills. I am aware of the cultural lens

through which I view the world, and my own system of knowledge construction, and acceptance of the varied sources of knowledge that constitute authoritative midwifery knowledge.

My personal philosophy supports the social model of midwifery in which birth is viewed as an empowering and transformative process with women's needs central to care provision, respecting the physiological processes of childbearing. As a student midwife I was taught to always 'guard' the perineum and apply pressure to the baby's head to maintain flexion and control the speed of the birth. As my midwifery practice developed with experience and reflection I learned that this was not always necessary and that women were able to safely birth their babies without my manual intervention.

I identify as a feminist and recognise that in many areas of the world, patriarchy and male domination over birth persist and that the places of birth are often contested spaces where issues of power over the birthing woman are played out (Fahy, 2008, NHS England, 2016, WHO, 2018). I recognise that in some birth settings, midwives are not able to work in partnership with women and make autonomous decisions regarding birth practices.

The process of undertaking the research allowed me to reflect on my own pre-conceived beliefs and understandings as a woman, mother, midwife, educator and researcher. Such beliefs and feelings would have been impossible to suspend or bracket, therefore I needed to fully engage in the process of reflexivity (Davies, 2008).

3.5.2 Reflexivity

Reflexivity has been described as the practice of *'a continual internal dialogue and critical self-evaluation'* of the researcher's positionality in addition to conscious acknowledgement and explicit recognition that this may affect both the research process and outcome (Berger, 2015 p.220). Engagement in this process of self-awareness challenges the notion that knowledge generation is an objective activity independent of the researcher and requires the researcher to take personal responsibility for the impact of their presence in the research setting. Engaging in reflexivity is not a discrete activity that is separate from the research process, but integral to it, consisting of a continuous process of critical reflection that enhances the trustworthiness of the data by addressing issues of bias and subjectivity (Marshall, Fraser and Baker, 2010). Examples from my fieldnotes and reflexive memos are included in Chapter 4 to illustrate this process during the study.

3.6 Research setting

The research setting consisted of the intrapartum environments of a large tertiary teaching hospital in London where over 5,000 women a year give birth. The unit has a four-room midwife-led birth centre and a large delivery suite incorporating the triage area, nine birth rooms, obstetric theatres, a bereavement suite, a four-bed induction of labour area and a five-bed high dependency unit. There is also a dedicated home birth service.

The birth centre is located within the same wing as the delivery suite but is on a different floor, and therefore managed as a separate unit. When women require admission to a birthing environment, the usual process is via the triage midwife who undertakes an assessment and makes a recommendation regarding the most appropriate setting for birth. Women who have already requested to use the birth centre liaise directly with the birth centre midwives.

The choice of site was affected by the impending implementation of the OASI care bundle, a joint RCOG and RCM initiative to reduce severe perineal injury (Bidwell *et al.*, 2018) at a number of other local Trust sites. It was imperative that midwifery decision-making was observed and discussed in a clinical setting where there was freedom for midwives to decide how to implement strategies to reduce perineal injury without being influenced by policy or intervention studies.

3.7 Recruitment

Recruitment to the study was complex due to the nature of ethnographic data collection which included observation in the clinical and non-clinical areas, and informal and semi-structured interviews. As my role continually shifted from that of complete observer to participant observer, the recruitment process to each aspect of the study required careful consideration to ensure ethical standards were maintained.

3.7.1. Recruitment of midwives

I was aware that I would be known to some of the midwives who worked in the unit, either as a colleague or lecturer; having worked there as a midwife twenty years previously and as one of the link lecturers supporting students on placement until a year prior to commencement of the fieldwork. I was conscious that some midwives might be reluctant to participate in clinical observations over concerns that I would be scrutinising their practice, whilst others may welcome participation if they thought I could support their practice development. This aspect of recruitment needed to be carefully managed, and the aim of the study communicated regularly. The study posters (Appendix 3.1) and participant information sheet (Appendix 3.3) quoted the NICE (2014) guidelines and re-iterated that there was no agreed or standardised way to facilitate physiological birth to reduce the concern of surveillance or judgement.

As discussed in section 3.4.2 recruitment of midwives during my non-clinical participant-observation was gained through negotiated access to the birth centre and delivery suite. At the beginning of each episode of fieldwork, I introduced myself to the co-ordinator of the shift, and the triage midwife if I was in the delivery suite, reminding them of my role and the study. Midwives were made aware that fieldwork was taking place during handover and a laminated sheet was also posted on the noticeboard and staff areas to remind midwives of the date I would be present.

Midwives were recruited to the study in several ways. For direct clinical observation episodes, midwives who were caring for women who had already consented to observation were invited to be included in the study. If the observation continued over a shift hand-over, the midwife was invited at the beginning of the shift, or as soon as it was appropriate if handover took place in the birth room. The inclusion criteria for midwives are presented in Table 3.2.

Inclusion criteria for midwives	**Rationale**
Employed by the research site	To ensure that communication regarding the study had been received and that contact with the midwife was possible following the clinical observation to invite for an interview. To facilitate relationship building during the study period.
Not supervising a student midwife during the time of the clinical observation	Observation of midwife's practice rather than a student's practice was required.
Be providing care for a woman who has consented to clinical observation during labour and birth	Consent was required from both the woman being cared for and the midwife providing care.

Table 3.2 Inclusion criteria for clinical observation of midwives

3.7.2 Recruitment of women in labour

Recruiting women in advance of labour was not possible as the timing of the onset of labour and the events of birth are unpredictable. This presented considerable ethical challenges to recruitment that have been discussed in section 3.4.3. Other

midwife researchers have, however reported positive experiences of recruiting women in labour and recommend careful consideration of the process to ensure women are not exploited during a period of emotional stress, physical discomfort and vulnerability (Marshall, 2005, Ross-Davie, Cheyne and Niven, 2013).

To assess the feasibility of the proposed method of recruitment at the research site, I spent time in the waiting room of the triage area to explore this with women and their families. All the women I spoke to indicated that they would be likely to participate, following a clear explanation of the purpose of the study, and an understanding of my role as a researcher and an observer. As recruitment could not take place prior to labour commencing, posters were placed around the unit (Appendix 3.2) and participant information sheets for women made available in the triage area of the delivery suite and office of the birth centre (Appendix 3.6). Women were recruited to the study either through the triage midwife or the co-ordinator of the birth centre, following assessment of suitability and initial discussion. The inclusion criteria for women participants are presented in Table 3.3.

Inclusion criteria for women in labour	Rationale
No obstetric risk factors identified during pregnancy	The purpose of clinical observation was to witness unassisted physiological birth facilitated by a midwife, which was more likely to occur for women without identified obstetric risk.
Pregnant with a singleton fetus	Women with a multiple pregnancy could be more likely to have a managed birth with obstetric involvement.
Over 18 years old	Women under 18 years of age may have additional vulnerabilities (Public Health England 2019) therefore considered inappropriate to include these women in the study.
The ability to give valid informed consent through an understanding of written and spoken English and deemed to have mental capacity by the attending midwife.	Obtaining valid and informed consent is central to conducting ethical research (Health Research Authority, 2019).

Table 3.3 Inclusion criteria for women in labour

3.8 Data collection

The data were collected through four main methods: fieldnotes, clinical observations, semi-structured interviews and informal ethnographic interviews with midwives. Each of these methods are discussed in more detail in the following sections. Where midwives used or explained a 'hands on' approach to perineal care this was documented through sketches and detailed descriptions, collated as an additional source of data alongside diagrams and photographs from documentary sources, presented in Chapter 5.

In ethnographic research, data collection and analysis are a simultaneous process with induction and constant comparison occurring as an iterative-inductive process. This involves a state of continuously moving backwards and forwards between data collection, analysis, reading, thinking and writing (Emerson *et al.,* 2011, O'Reilly, 2009). It is through the process of writing descriptive fieldnotes that the ethnographer becomes involved in an active process of interpretation (Emerson, Fretz and Shaw, 2011). Atkinson (2015) considers that the role of the ethnographer is not simply that of a diarist or journalist, but one in which the dimension of analytic attention and systematic sense making of the social world is employed.

Data collection and analysis occurred as a concurrent process during the study, however, the various methods of data collection are described in the following section, with a discussion of the data analysis methods and process presented in section 3.7. Extracts from my fieldnotes are presented in Chapter 4 to provide thick description and context to the findings in the subsequent chapters. Providing a clear description of the research process creates auditability and increases the trustworthiness of the data (Lincoln and Guba, 1985), which is discussed in more detail in section 3.10.

3.8.1 Fieldnotes

Fieldnotes are a classic feature of ethnography and consist of the '*written record of observations, jottings, full notes, intellectual ideas, and emotional reflections that are created during the fieldwork process'* (O'Reilly, 2009 p.70) and provide the foundation for creating a coherent ethnographic account. Emerson, Fretz and Shaw (2011) recommended that the ethnographer overtly writes fieldnotes from the commencement of fieldwork to establish the role of note-taker in the research setting and set the expectations of those being observed. This also serves the two purposes of being able to capture what is being observed, heard and felt contemporaneously so that an authentic representation can be produced. It is considered that writing notes throughout observation in the field has the advantage of allowing the researcher to being able to remain in the environment rather than needing to leave it to write things down, although this approach has the potential to lead to a feeling of conspicuousness (O'Reilly, 2009).

In the clinical setting, midwives were continuously writing notes, either in paper or computerised forms, therefore writing fieldnotes contemporaneously felt more natural than had been anticipated. Notebooks were used to record the fieldnotes, which included a commentary on what I observed, my feelings, ideas and reflections in real time. These fieldnotes were subsequently transcribed as soon as possible after each time spent in the field, so that an electronic version of the text was available to facilitate search and retrieval of data and to enable constant comparison as the study progressed. Reflections and memos were also recorded as annotations alongside the

text, during and after transcription, to consciously couple observations and analysis (Wolcott, 2005).

3.8.2 Clinical observations

In addition to writing fieldnotes, Hillyard and Pole (2016) suggest that passive participation, the 'being' element of fieldwork, can be facilitated using focused observation schedules. These schedules are drawn up prior to the observation to record activities that the researcher considers may be relevant. To standardise the collection of data during clinical observations, a schedule was designed to document the interactions between midwives and the women they were caring for (Appendix 3.10).

This structured approach to notetaking occurred in tandem with writing field notes and allowed me to focus my attention of observing particular aspects of each labour and birth. Although Hillyard and Pole (2016) suggest that this approach to data collection is passive, it occurred during the time when I was also included within the events of the birth as an observer-participant and had a degree of interaction with all of the participants. Having a structure to focus my observations helped to ensure that I did not become completely immersed in the birthing scenario and lose objectivity as a researcher. Over time, as I became more confident in the type of data I needed to capture, I used the observation template less and wrote more freehand notes to capture the events of the labour and birth.

3.8.3 Non-clinical observations: hanging about and hanging out

Alongside the clinical observations, I observed and engaged with the midwives working in the maternity unit whilst actively participating in a marginal role, which was restricted to providing support through engagement in non-clinical activities. These observations were documented in an unstructured way in my fieldnotes and captured the observed activities and behaviours in addition to my own thoughts and feelings. By using both these methods, the data was augmented, and the thick descriptions situated the focused observations in the context of the environment (Angrosino 2007, Emerson, Fretz and Shaw, 2011). Atkinson (2017 p.12) considers that these ethnographic accounts within fieldnotes, adequately rich in description, can provide the complex layers of order within a particular social world, that becomes visible through the use of the participant's *'accounts, narrative and gossip'*.

Planning and implementing an exit strategy are an important aspect of fieldwork, particularly when the relationship with the participants has been developed over a sustained period of time. The fieldwork was planned to last for 12 months; therefore, the end point was already pre-determined and constrained by a fixed-term research contract. Leaving the field was an aspect of the study that I found much harder than I had anticipated, as midwives seemed genuinely disappointed that the study was complete; indicating that the relationships I had built with the participants were meaningful and authentic (Hammersley and Atkinson, 2007)

3.8.4 Ethnographic interviews

The period of 'hanging about' at the beginning of the fieldwork allowed me to gain a sense of how the clinical environments operated, and to get to know some of the midwives prior to engaging in discussions in relation to the research question. The informal ethnographic interviews began to occur naturally as my position as an outsider 'hanging about' transitioned to the more informal one of 'hanging out' with the midwives on duty.

Ethnographic interviews are conversations with a purpose, in which the conversation is seemingly naturally *'pursued for specific reasons, with the intention of addressing particular issues commensurate with the focus of the research'* (Pole and Hillyard, 2016 p.70). These informal interviews came about as midwives became curious about the research and wanted to share their knowledge and experience with me. Often midwives asked if I had spoken to a particular midwife following a birth they thought I would be interested in, and in some instances went to fetch the midwife or contacted them on my behalf. These ethnographic interviews were recorded in my fieldnotes either as they occurred or as soon as possible afterwards to maintain accuracy and detail.

3.8.5 Semi-structured interviews

Semi-structured interviews are a recognised feature of ethnographic research and occur with a smaller number of participants who have been identified following specific observation or those who are considered to be key informants. Interviews are usually conducted in a flexible way allowing the discussion to be fluid and natural, although the researcher often enters the interview with a list of issues to be covered (Hammersley and Atkinson, 2007). In ethnographic research, interviewing participants following observation is a way of being able to make sense of what has been seen, so that meaningful patterns can be identified between behaviour and dialogue (Angrosino, 2007).

Midwives who were recruited for clinical observations were subsequently invited to discuss the birth I had observed, providing an opportunity for them to inform the data already collected by adding their insights and reflections. Other midwives who were identified as key informants were also recruited. The interviews took place at a time and place agreed with the midwife and were audio recorded electronically and transcribed verbatim.

Initially an interview guide was used with the questions being asked of the participant in a fairly structured way (Appendix 3.11), however, as I became more confident in my interviewing technique and knew the midwives better, the interviews became more fluid and natural. The schedule was subsequently used to generate prompts to help ensure that the relevant data was collected during the less structured

interviews. The interviews lasted approximately 60 minutes, with the shortest lasting 25 minutes (the first) and the longest over 90 minutes.

3.9 Data analysis

As discussed in section 3.6, data analysis in ethnography begins alongside fieldwork during the activities that generate the data such as observations, conversations, interviews and fieldnotes (Green *et al.,* 2007). Preliminary analysis occurred in the field and was captured in reflexive accounts and memos during transcription; however a process of more formalised analysis also occurred and shaped the findings. Hammersley and Atkinson (2007) also consider that analysis begins in the pre-fieldwork phase during clarification of the research problem; formally starting to take shape in analytic notes and memos and informally embodied in the researcher's hunches. There is no pre-determined method of analysis for ethnographic data, however the ethnographer must decide the best approach to make sense of their data and the research product they are generating (Hammersley and Atkinson, 2007).

For the purposes of analysis, the research question was considered in two parts:

1. *'What do midwives do to minimise perineal injury during birth?'*

   and

2. *'What determines what midwives do?'*

The data to inform the first question was collected by recording midwives' actions through sketches and written explanations of what I observed, and the actions midwives explained during the ethnographic and semi-structured interviews. The second question was considered through ongoing analysis of the dataset in the context of the birth environments.

3.9.1 Analysis of 'Hands on' sketches

Sketches were created of any 'hands on' positions that midwives were observed using, or that were explained and demonstrated to me. These drawings were augmented with written descriptions and considered within the context of what is already known about 'hands on' manoeuvres discussed in the previous chapters. The sketches and the accompanying descriptions were reviewed prior to being organised into two main categories of 'active hands on' and 'passive hands on'. Sub-categories within these were subsequently identified and illustrated the multiple methods used by midwives currently known collectively as the 'hands on' technique. Documentary analysis was also undertaken from obstetric and midwifery textbooks, journal articles

and internet searches to identify any other variant of 'hands on' techniques. The descriptive summaries are presented in Chapter 5 and illustrations in Appendix 5.1.

3.9.2 Thematic analysis

Thematic analysis (TA) as described by Braun and Clarke (2006) was selected to explore the research data as it is not constrained by any particular theory and therefore considered to be applicable across a range of research questions and epistemologies (Braun and Clarke 2006, Braun and Clarke 2016). It is acknowledged that the term TA does not relate to one standardised approach to the analysis of qualitative data and is therefore not an homogenous entity (Braun and Clarke, 2016). The type of TA described by Braun and Clarke (2006) is reflexive and organic in nature rather than an approach that is underpinned by quantitative logic such as 'coding reliability' presented by others (Fugard and Potts, 2015).

The type of TA described by Braun and Clarke (2006) is an inductive iterative process during which the data is explored in depth to determine which key aspects of the phenomenon under study are meaningful for the participants. Through this process the researcher can provide a *'rich and detailed, yet complex'* account of the data, and when used systematically, can produce findings that meet the quality criterion of trustworthiness (Braun and Clarke, 2006 p.4, Hammersley 2015).

3.9.3 The analytic process and threshold concept theory

Braun and Clarke (2006) suggest that the two predominant approaches to data analysis and theme identification when using TA are inductive and theoretical. In the inductive approach, more aligned to grounded theory, the analysis is data driven and independent of the researcher's theoretical preconceptions. In contrast, the theoretical approach to analysis utilises the researcher's theoretical interest and the purpose of coding is to explore a specific research question. In ethnographic research the formulation of categories may occur early in the research, informed by the ethnographer's theoretical orientation and the question that the research is designed to address (Davies, 2008).

The theoretical approach to TA was selected as I considered that the research question had been clearly determined from the literature and my positionality was such that bracketing my preconceptions would be difficult to maintain. From the initial exploration of the literature, my own experience as a midwife and educator and from listening to midwives' narratives in the early part of the study, the concept of troublesomeness and liminality seemed to be a recurring feature. Troublesomeness in this context meant that the issue of providing effective perineal care during birth could be seen as difficult, problematic, difficult to resolve and often the cause of conflict. This troublesomeness had the potential to create a state of liminality, meaning stuckness, frustration or confusion; of not being sure of what or who to believe.

Threshold concept theory was first presented by Meyer and Land (2003) in the context of curriculum design, with the idea that grasping a threshold concept can be similar to accessing a portal, which opens new ways of thinking and understanding and transforms the individual's world view. A threshold concept is likely to involve forms of troublesome knowledge which, when mastered enable the learner to make connections to other concepts which leads to both epistemological and ontological shifts that are irreversible. The characteristics of a threshold concept as presented in the literature are that they are: transformative, irreversible, integrative, bounded and troublesome (Meyer and Land, 2003, see Table 4.2).

The notion of threshold concept theory was introduced to me during a teaching and learning conference that I attended towards the end of the participant observation phase of the study. Following further investigation of this pedagogic theory I recognised then that the characteristic elements of troublesome knowledge, liminality and the transformative nature of mastery, were reflected within the study data. The initial themes that had been developed to that point are presented in section 3.1., these were subsequently framed within the overall concept of troublesomeness.

Threshold concept theory therefore informed the remainder of the data analysis to try to explore why perineal care during labour was troublesome for some midwives and not for others; why some had been able to navigate the threshold of this central midwifery concept and others were stuck in a liminal state. This is explored further

in Chapter 4. Throughout the data analysis phase, the observation data and interview transcripts were considered alongside journal memos and fieldnotes and discussed during research supervision meetings.

3.9.4 The analytic process

The six-stage process of TA as presented by Braun and Clarke (2006) was used to analyse the data, which included: data familiarisation, initial code generation, themes development, review and refinement. Data familiarisation was achieved by immersing myself in the data by reading and transcribing the hand-written fieldnotes and annotating them as I reflected on what I had seen and heard and spent further time in the field. Semi-structured interviews were transcribed verbatim and listened to whilst reading the transcripts and reviewing the interview notes. Initial coding began after the first three interviews had taken place and the relevant fieldnotes had been transcribed, and continued throughout the data collection phase, adding and refining codes as patterns began to form. Theme development, review and refinement occurred through discussion with the supervisory team and is explored further in section 3.9.4.

Computer assisted qualitative data analysis software (CAQDAS) was used to assist with data storage, retrieval and coding. NVivo (2015) software was chosen due to the ease of use for novice researchers and access to the package through the university subscription. The main benefit of using CAQDAS was the time efficiency it offered in

comparison to organising and coding data by hand, particularly with multiple hours of transcript data. It has been suggested that this time saving benefit allows the researcher more time to immerse themselves in and reflect on, the meanings within the data (Silverman, 2013).

Although the benefits of using CADQAS may be significant compared to undertaking the process of analysis by hand, there are also some potential pitfalls that needed consideration (Silverman, 2013). A significant issue was that I lost all the data I had stored six months into the fieldwork stage, due to a whole system migration on the university network. This disruption was inconvenient and time consuming to recover, however the process of re-coding the transcripts led to previously unseen meaning and additional nuances in the data being identified, as I had gained new insights from spending more time in the field. The potential for the software to malfunction was, however, always present and created a sense of anxiety whenever the server was unavailable. The software facilitated effective coding, although connecting codes and creating themes took a significant amount of time to ensure that the right information was connected appropriately.

3.9.5 Theme development

Themes are words or phrases developed from coding that identify important elements identified in the data that relate to the research question (Braun and Clarke, 2016). Themes were developed from the coding to capture patterned

responses, meaning and issues of interest within the dataset. Initially formal coding began after the first three interview were transcribed, and the early themes developed from these codes were: *'difficult definitions'*, *'belief, learning and experience,' 'environments and context'* and *'guilt, failure and shame'*.

These initial themes were discussed, in the context of the data, within the supervisory team for verification and refinement. These early ideas informed the subsequent observations and discussions with midwives and were considered in the ongoing analysis of the data collected. These initial themes were reviewed during the period of fieldwork as coding to some themes became more prominent and others appeared less significant. Data analysis involved moving backwards and forwards through the whole dataset as it built, with coding continuing alongside data collection. The final themes identified from the theoretical analysis of the data to explore the research question were: *Troublesome language*, *Troublesome knowledge* and *Troublesome environments* as perineal care during birth was identified as a threshold concept. Subthemes of were identified within these overarching themes and presented in the thematic map shown in Figure 3.1.

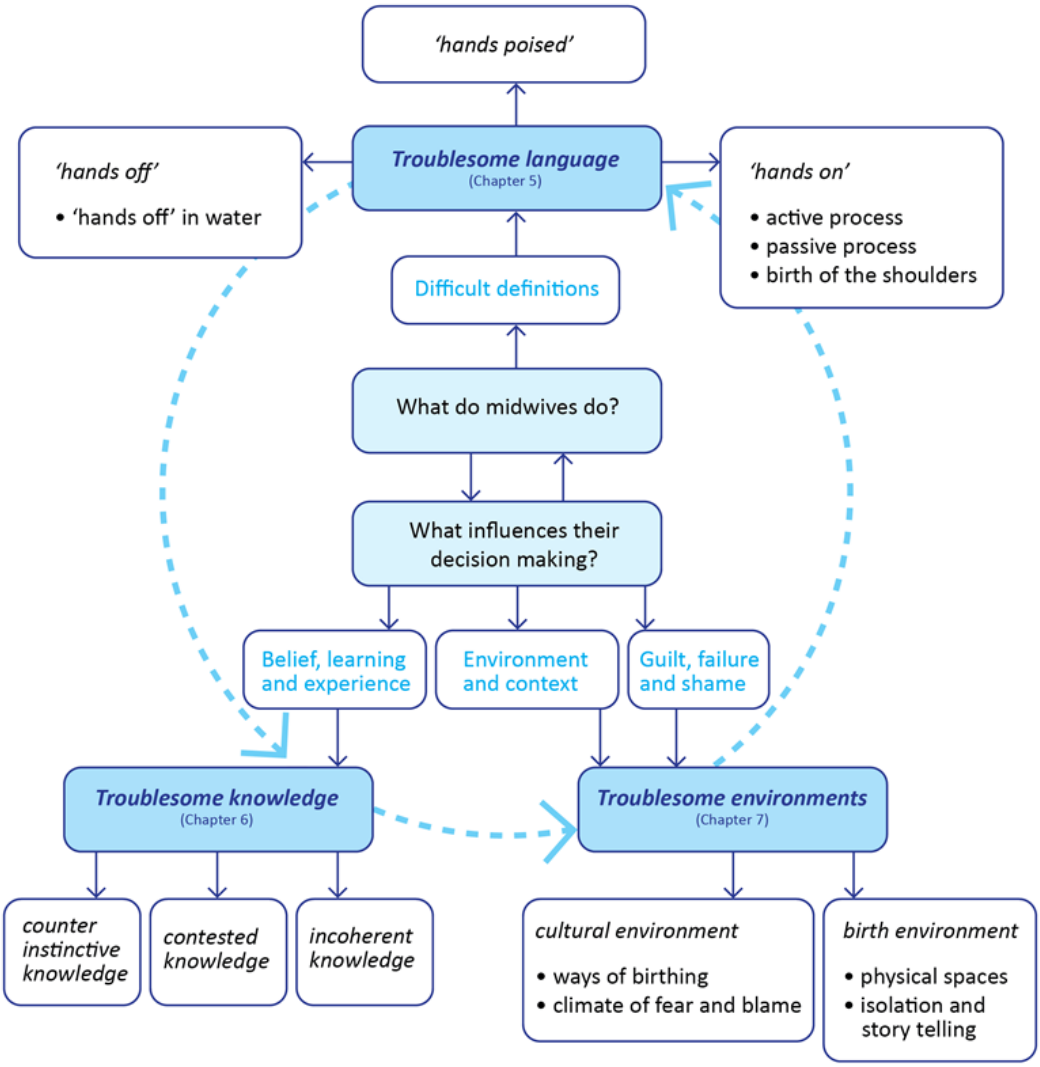


Figure 3.1 Thematic map

3.10 Trustworthiness

Trustworthiness is an important concept in qualitative research as researchers need to demonstrate that their findings are valid. The widely recognised measures of trustworthiness in qualitative studies are credibility, transferability, dependability, and finally confirmability which is established when the other measures have been achieved (Lincoln and Guba 1985). LeCompte and Goetz (1982) also refer to translatability, which requires that the research methods, analytical processes and the characteristics of both the phenomena and group under study are identified explicitly. Reeves *et al.* (2013) also consider that the quality of ethnographic research can be enhanced through the techniques of thick description, triangulation and evidence of reflexivity. Illustrative extracts from my fieldnotes have been included in the following findings chapters to provide thick description and evidence of reflexivity. The strategies used to ensure trustworthiness in this study are presented in Table 3.4, based on suggestions by Korstjens and Moser (2018) and Reeves *et al.,* (2013).

Criterion	Strategy
Credibility	**Prolonged engagement:** Long-lasting engagement in the field with participants and investment of time to become familiar with the setting and context, to test for misinformation, to build trust, and to get to know the data.
	Persistent observation: Identification and detailed focus on the characteristics and elements that are most relevant to the research question.
	Triangulation: Use of different data sources and methods of data collection at different times of the day and night and time of year. Data gathered in different birth environments. Data gathered from different midwives of differing length of experiences. Discussion of coding, analysis and interpretation decisions with supervisory team.
	Member check: Discussion of observation with midwife during interview, clarification of understanding with midwives during prolonged engagement and ethnographic interviews.
Transferability	**Thick description:** Providing description of birth environments and participant profiles, the behaviour observed, and conversations had in the context of the setting.
Dependability and confirmability	**Audit trail:** Providing a clear description of the research process from the start of the project including the processes of data collection and analysis and reporting the findings.
Reflexivity	**Personal reflections:** Examining my own conceptual lens and positionality and presenting this transparently. Reflecting on how this affects the research decisions and presenting extracts of my thoughts, feelings and emotions during the study.

Table 3.4: Strategies to ensure trustworthiness

3.11 Conclusion

This chapter has presented the methods used to address the research question, aims and objectives within the context of the current issues of perineal care presented in Chapter 1, and the current evidence reviewed in Chapter 2. The theories that have informed the design of the study have been discussed and the research approach explained and justified. The management of the ethical issues pertinent to the study have been discussed. The methods of recruitment, data collection and analysis have been described to provide a clear audit trail, and threshold concept theory has been introduced. The following chapter is the first of four chapters that present the findings from the fieldwork. The first includes reflections on various aspects of the data collection to provide evidence of reflexivity and the thick description required to maintain the authenticity of an ethnographic account. Participant profiles are included to enable reader to make a judgement about transferability. The subsequent three chapters present the study findings under main themes relating to troublesomeness: *Troublesome language, Troublesome knowledge* and *Troublesome environments.*

Chapter 4 Findings 1: Fieldwork and the overarching analytic theme of troublesomeness

4.1 Introduction

This chapter reports on the practical aspects of undertaking an ethnography in a maternity care setting. Details of the research environment and the profiles of the midwife participants are included, together with my reflections on key aspects of the fieldwork. The theory of a 'threshold concept' is re-introduced and the process of identifying the overarching theme for the findings, the theme of 'troublesomeness' is described. This chapter therefore provides the context for the subsequent three findings chapters that present the troublesome elements identified within the data: *Troublesome language*, *Troublesome knowledge* and *Troublesome environments*.

4.2 Fieldwork

Fieldwork is a central aspect of ethnography and is a method of both data collection and analysis in which the researcher is involved with what and who they are studying. It relies on personal interaction and engagement between the researcher, those being researched and the research setting, usually over a prolonged period of time (Pole and Hillyard, 2016).

The fieldwork phase of the study took place over twelve months between February 2016 and January 2017, with a pre-arranged long or short shift allocated within my working week to either the birth centre or delivery suite. In between these planned shifts I visited the areas to update the study notice with details of my next visit and to maintain ongoing contact with the midwives. Although I had negotiated access to the clinical areas, the midwives managed my access to the spaces within them, and the opportunities I had to complete observations.

The birth settings were significantly different in the physical layout and type and level of staffing. The delivery suite had a noticeable hierarchy consisting of senior midwife co-ordinating the shift of a midwives of mixed grades (Band 5-7) and an obstetric team, including a consultant present. In contrast, the birth centre had a more horizontal management structure and was usually staffed by midwives of the same grade (Band 6) with the birth centre manager (Band 7) present for some of the time. During the fieldwork, I observed that the different physical layout of the areas contributed to the way the women and their families used the spaces and interacted with the midwives. Diagrammatic representation of both the birth settings are detailed in Figure 4.1 and 4.2.

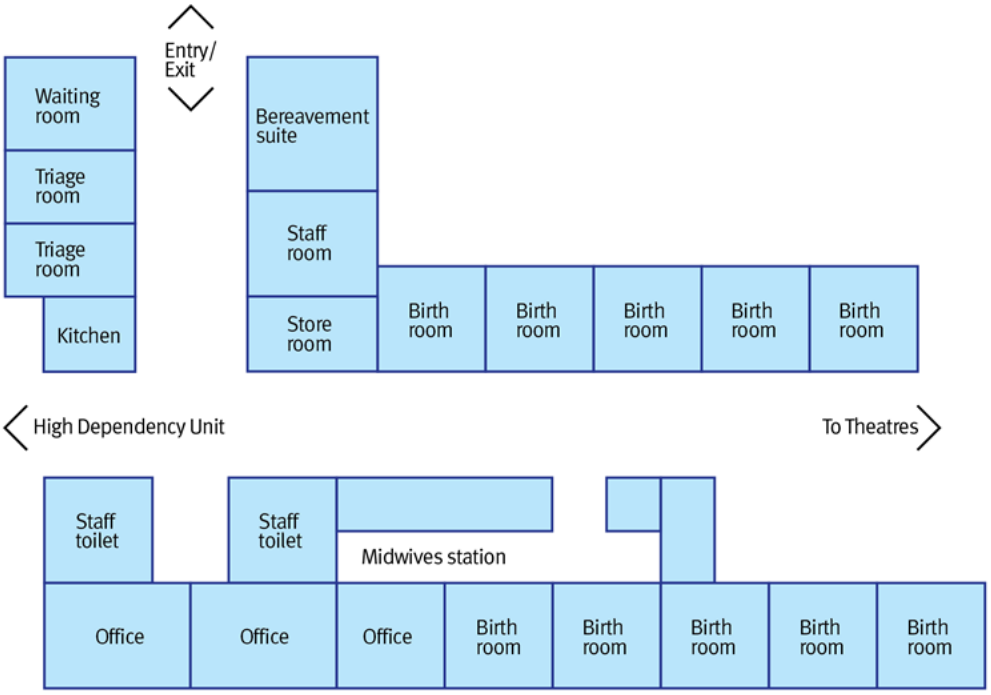


Figure 4.1 Diagrammatic representation of the delivery suite

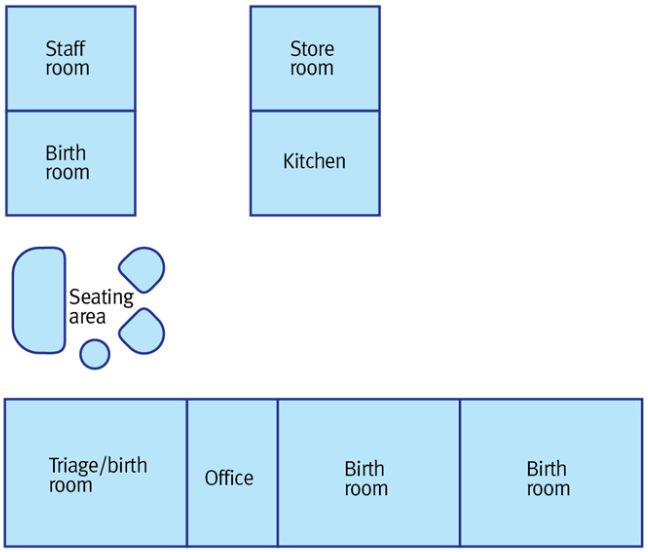


Figure 4.2 Diagrammatic representation of the birth centre

I identified that there was there was a different 'feel' or ambiance in the two birth settings, which was also reflected in the way I was either included and treated as an insider or marginalised as an outsider. I considered that these differences were as a result of the physical settings, the staffing structure and the contrasting cultures I observed within the birth settings. Culture within societies has been studied from an anthropological perspective for many years and has been defined as:

> *'…a set of guidelines (both explicit and implicit) which individuals inherit as particular members of a society…which tells them how to view the world, how to experience it emotionally, and how to behave in it…'* (Helman, 2007 p.2-3)
>
> *'…the acquired knowledge people use to interpret experience and generate behaviour…'* (Spradley, 1980 p.6)

Within the healthcare context, organisational culture has been studied to evaluate the impact the culture within an institution has on the quality of healthcare it provides. Although the definition has been debated, there is broad agreement that organisational culture is formed by the beliefs, attitudes, values, and norms of behaviour shared between colleagues within an organisation. The culture is reflected in the way that situations and events are understood, judged and valued; it can be viewed as *'the way things are done around here'* (Davies, Nutley and Mannion, 2000 p.112).

Hastie and Fahy (2011) suggest that the organisational culture of a maternity unit and the type of 'birth territory' that this culture creates, is predictive of the type of behaviours that are likely to occur there. Whilst undertaking the fieldwork, I observed how both the different physical elements and the behaviours of staff groups created birth territories, and how this affected my experience as both a participant and observer. The concepts of culture within the different birth settings are discussed further within Chapter 7, *'Troublesome environments'*.

On my final day of fieldwork on the delivery suite, an extract from my fieldnotes illustrates how the influence of senior staff had an impact on the ambiance of the delivery suite:

> *Carol is co-ordinating today and the area has the aura of calm which always seems to be the case when she is on duty. She is welcoming as usual and apologetic that there are no suitable women for the study on the unit at the moment...considering it is quite busy, the calmness is notable. The obstetric consultant is also one who has a sense of calm, is very measured and supportive of the midwives – it is one of the dream teams!* (Fieldnotes January 2017)

Although this example from my fieldnotes suggests that I was accepted and welcomed in the settings, the fieldwork was a challenging aspect of the study for a

number of practical and psychological reasons. It has been acknowledged that fieldwork in ethnography can often be a difficult time for the researcher due to the balance between interaction and marginality that it requires. This balancing act can create a continual sense of insecurity and ambiguity that can be challenging to manage (Hammersley and Atkinson, 2007, Pole and Hillyard, 2016). In healthcare settings this can be particularly complex if the researcher has professional knowledge of the field being studied, as insider-outsider tensions and role management can be complicated by ethical and moral dilemmas. The issues of role identity and role conflict that I experienced are presented in section 4.2.3, with the concept of reciprocity and reflexivity explored in sections 4.2.4 and 4.2.5 respectively.

4.2.1 Midwife participant profiles

It has been suggested that ethnographers should present the characteristics of the group or individuals represented in the data to allow comparability with other groups to enhance the validity and reliability of ethnographic research (LeCompte and Goetz, 1982). During the fieldwork, minimal characteristic and demographic data were recorded; however, midwives who participated in the study were asked whether they had been qualified less than two years, two to five years or over five years during conversations and interviews to provide context for their narratives. For reporting purposes only, midwives were categorised arbitrarily as either novice (less than two years), proficient (2-5 years) or expert (over 5 years) (Benner, 1982). This categorisation was based purely on length of midwifery experience rather than any

assessment of knowledge or skill. It is notable that the majority of midwives observed were either novice or proficient, as most expert midwives were in management roles coordinating the shift during periods of observation rather than attending birthing women, particularly on the delivery suite.

All of the midwives were given a pseudonym to ensure anonymity and maintain confidentiality. The participant profiles of the midwives who took part in the semi-structured interviews and informal ethnographic interviews are shown in Table 4.1. Some midwives participated in clinical observations in both the delivery suite and birth centre as they rotated between both areas regularly. The data collected and analysed is representative of the narratives of 31 midwives.

Pseudonym	Intrapartum environment	Experience category*	Interview type
Emily	Birth Centre/Delivery Suite	Proficient	Semi-structured
Olivia	Birth Centre	Novice	Semi-structured and ethnographic
Ava	Birth Centre	Novice	Semi-structured
Abigail	Birth Centre	Proficient	Semi-structured
Hannah	Birth Centre	Novice	Semi-structured
Ashley	Birth Centre	Proficient	Semi-structured
Alex	Delivery Suite	Proficient	Semi-structured
Mia	Birth Centre/Delivery Suite	Novice	Semi-structured
Sophie	Birth Centre	Novice	Semi-structured
Grace	Birth Centre	Proficient	Semi-structured and ethnographic
Liz	Delivery Suite	Expert	Semi-structured
Erin	Birth Centre	Novice	Semi-structured
Sara	Birth Centre	Expert	Semi-structured
Helen	Birth Centre/Delivery Suite	Expert	Ethnographic
Eira	Birth Centre/Delivery Suite	Expert	Ethnographic
Molly	Delivery Suite	Novice	Ethnographic
Maya	Delivery Suite	Proficient	Ethnographic
Natalie	Delivery Suite	Novice	Ethnographic
Tash	Delivery Suite	Proficient	Ethnographic
Lauren	Birth Centre	Expert	Ethnographic
Amy	Delivery Suite	Novice	Ethnographic
Sam	Delivery Suite	Expert	Ethnographic
Charlie	Delivery Suite	Novice	Ethnographic
Jordan	Delivery Suite	Proficient	Ethnographic
Zoe	Delivery Suite	Novice	Ethnographic
Sally	Birth Centre	Proficient	Ethnographic
Ella	Delivery Suite	Novice	Ethnographic
Terri	Delivery Suite	Expert	Ethnographic
Louise	Delivery Suite	Expert	Ethnographic
Kit	Birth Centre/Delivery Suite	Novice	Ethnographic
Jan	Delivery Suite	Expert	Ethnographic

Table 4.1 Participant profiles of midwives

* Novice: less than 2 years, Proficient: 2-5 years, Expert: over 5 years

4.2.2 Fieldnotes

The multiple methods of collecting data in the field during an ethnographic study can present significant challenges for the novice researcher as there is a requirement to collect data that allows a thick description to be presented in an ethnographic account. 'Thick description' is a term that was first introduced by Geertz (1973) and describes how the ethnographer provides cultural and situational context to what is being observed and recorded, so that those outside of the culture can make sense of the behaviour of those within it. Writing detailed and descriptive fieldnotes therefore not only provides context for the reader but allows the ethnographer to reflect on their impressions of the environment being studied (Rashid, Caine and Goez, 2015).

Charmaz and Mitchell (2007 p.161) recognised that when writing fieldnotes, novice ethnographers may have the challenge of *'seeing data everywhere and nowhere'.* This was also recognised by O'Reilly (2009) who suggested that the response to this should be to write down as much detail as is possible. This continuous recording of detailed fieldnotes is a way in which the ethnographer can achieve emic validity and facilitates the iterative process of ethnography. Whitehead (2005 p.7) provides further context: *'The continuous recording of fieldnotes is also important because of the ethnographer's perspective that his or her product (findings) is interpretive, and those interpretations will often change over the duration of the fieldwork process'.*

The writing of detailed fieldnotes is also considered to be a way in which the ethnographer is able to achieve a level of validity and internal consistency as an audit trail is created, which demonstrates the interconnectedness between observation, data collection, theorising and analysis (O'Reilly, 2009). This type of audit trail contributes to the trustworthiness of the study and enables ethnographers to counter the critique that ethnographic texts could simply be a work of literary fiction.

Becoming familiar with new methods of data collection, in addition to managing multiple identities and engaging with the process of ongoing reflection and analysis was frequently challenging. Knowing how much detail to include in my fieldnotes was difficult at the start of the study, however there was also a level of security to be found in sitting and writing when I was not sure what was important in the things I was observing. An extract from my fieldnotes illustrates how I felt at the time:

> *I have been on the delivery suite for four hours, have drunk numerous cups of coffee and have written very little in the way of field notes. I'm not sure what to write - how much of what I see and hear is relevant? I don't think I've seen or heard anything relevant so far, but what if I'm missing important details? I am finding it very difficult to be sitting and waiting for something to happen and feel as though today may be wasted time. What if every day is like today?*
>
> (Fieldnotes February 2016)

The advice provided by O'Reilly (2009 p.73) proved to be very helpful and when I was in doubt about what to record, I wrote everything down, although much of this seemed superfluous at the time. During transcription of the fieldnotes and reflection during analysis, some of the events and elements I had noted, that seemed insignificant at the time, became highly significant and contributed to my understanding of the culture and context of the birth environments I spent time in.

As a novice ethnographer, I found a sense of security in writing detailed fieldnotes whilst sitting in the clinical areas waiting to recruit eligible women and midwives for clinical observations, as it felt as though I was legitimately 'busy'. Not to be seen to be busy led to feelings of discomfort, and I often sought out non-clinical activities to try to contribute to the work of the team. I was also aware of fulfilling my commitment to reciprocity whilst needing to undertake observations and collect data, often leading to a sense of personal conflict. Hugill (2016), a neonatal nurse reported a similar experience when undertaking an ethnography in a neonatal unit, noting that 'work' in a nursing environment is often only considered 'work' when it involves providing direct patient care. The perception from others during his fieldwork was similar to the way I felt at times, that *'doing fieldwork = doing nothing'* (Hugill, 2016 p.149).

The inclusion of extracts from fieldnotes in ethnographic writing is important as these contain detail of observations, analysis and emotional reflections and together provide the foundation for creating an integrated and coherent ethnographic

account (O'Reilly, 2009). Adequate details, narratives and evidence are important to include within the data-led chapters of an ethnography as this helps the reader to understand how the 'tangled threads' of the world observed has been disentangled and made sense of by the researcher (Hammersley and Atkinson, 2007 p.193). Extracts from my fieldnotes, and from the narratives of the midwives are therefore included in this and the following chapters to ensure that an integrated, coherent and authentic ethnographic account is presented.

4.2.3 Role identity and role conflict

There were a number of practical issues that I experienced during the fieldwork, including the complex issue of role identity and role management as a participant-observer. My reflections on my role as a novice ethnographer are also included in this chapter to provide transparency and enhance the credibility of the findings through an insight into the interpretive lens through which I viewed the process.

As a midwife researching other midwives, I found managing the role of being a marginal insider or marginal native difficult. Hugill (2016 p.147) refers to this position as being *'the quasi-insider-outsider'*, recognising the problems, tensions and risks that occur when attempting to manage multiple identities. The multiple identities that I needed to manage included those of a midwifery academic known to many of the midwives and student midwives, a registered midwife (insider), a postgraduate research degree student and a novice ethnographer (outsider). It was important,

therefore, to recognise how the 'insider' role could exert power in the research process, whilst also presenting moral and ethical dilemmas.

An early, practical dilemma fundamental to managing my identity was what to wear in the clinical areas. This was an important consideration in order to present myself in the correct role to both the women and midwives; as dress has been considered to be one of the factors that can affect researcher and participant relationships (Hammersley and Atkinson, 2007). What to wear whilst undertaking fieldwork has been considered by other healthcare ethnographers and would appear to be an important factor in managing role identity. In hospital settings, insiders are clearly defined by the wearing of work clothing such as uniforms, theatre scrubs and white coats (Hunt and Symonds, 1995, Hugill, 2016). As Hunt and Symonds (1995) noted, it is usual for anyone who is not a member of the public to be wearing some form of uniform or clear identification of role within a maternity unit, however the 'uniform' for a researcher is undefined.

Wearing clothing that would identify me as a midwife was problematic as it may have led to assumptions about my role, however I also considered that wearing my 'usual' clothing might be a barrier to participation from the women if my initial appearance did not convey a sense of professionalism. I decided that I would wear 'uniform' trousers and a navy-blue polo shirt, branded discretely with the university identity. Although this was not my 'usual' clothing and was to some extent a 'uniform', there were a number of occasions when midwives asked if I wanted to get changed into

scrubs at the start of a shift, possibly indicating a misunderstanding of my role and an expectation that I would be involved in providing direct care.

My identity as both a midwife and academic was particularly difficult to manage as I tried to immerse myself into the researcher role. Although I did not know most of the midwives, and had not taught them as students, those who did know me introduced me as such and student midwives who were on duty assumed that I would review their progress or observe their practice. Midwives often asked my opinion regarding perineal care and on occasion asked for feedback on the practice I had observed. My early reflections illustrate how difficult I initially found managing multiple identities and how uncomfortable this made me feel. I was waiting to speak to the triage midwife at the beginning of a shift and wrote in my fieldnotes:

> *I'm not sure where to wait and feel awkward standing in the corridor. The management of my identity is something that I had not considered would affect me to this extent. I have worked in this environment as a midwife (although it was 22 years ago) and as a link lecturer (2 years ago) and now feel like a fish out of water. The internal conflict between an experienced midwife and a novice researcher is very real, and not comfortable!* (Fieldnotes February 2016)

Ledger (2010) reflected on the multiple identities that the practitioner-researcher may hold and suggested that engaging in reflexive strategies is key to managing the potential conflicts this may present. Practising reflexivity to manage the conflicts I

experienced ensured that the balance of the emic (insider) and etic (outsider) view were represented in the research data, and also helped to mitigate against 'going native' and losing the ability to see or hear objectively (Hammersley and Atkinson, 2007, Marshall, Fraser and Baker, 2010). Reflexivity is discussed further in section 4.2.5. Other strategies included attention to self-awareness whilst in the research environment and engaging in regular clinical and research supervision.

4.2.4 Reciprocity

One of the biggest challenges to maintaining feminist ideals during the conduct of the research was the need to be constantly mindful of the impact of recruiting birthing women as participants to the study, and the effect my presence could have had on the birthing environment. Hammersley and Atkinson (2007) suggest that conflicts can arise between maintaining a feminist perspective and researching women, as the nature of recruiting women as research subjects can be considered exploitative and requires thoughtful engagement. To use and objectify others as research subjects has been considered a particularly masculine approach, as the process of scrutiny of the participant engages the researcher in a process similar to that of the male gaze, even when those doing the gazing are women (O'Reilly, 2009, Skeggs, 2007).

Whilst undertaking fieldwork, I very mindful of this critique and needed to consider how my role as a researcher could be managed in the spirit of reciprocity and partnership with both the birthing women and the midwives. Extracts from my

fieldnotes illustrate the dilemmas I felt, particularly in the first weeks of fieldwork when I was feeling anxious about being able to recruit enough women to the study. Birthing women in each of the observation episodes are identified by an alphabetical letter, whilst midwife participants are identified by pseudonyms to maintain anonymity.

> *I am thinking about whether I will be able to recruit anyone today…no-one speaks to me and I want to ask if anyone is suitable to recruit but feel awkward asking, as I know that my research is nobody's priority except mine…Lauren tells me that E is in very early labour and may decide to go home and await events but is currently sleeping…I know the best place to labour is at home, but really want E to stay so that I have the possibility of recruiting and observing today. I immediately recognise that I am interested in my own needs rather than the woman's and instantly feel guilty.* (Fieldnotes February 2016)

E was later recruited to the study, however during the observation I felt that my presence was not in her best interests. I was not able to identify why I felt I should leave but followed my instinct to withdraw. E gave birth 20 minutes after I left the room:

> *After almost four hours I have decided to leave E as I wondered if my presence might be affecting E's ability to labour optimally. She appears to be progressing well, however this was not 'confirmed' through the latest*

> *assessment. Having recruited E to the study, my decision to leave the environment to allow E the privacy to birth unobserved is a difficult one, and I'm not sure what I feel except that this just feels the right thing to do.* (Fieldnotes February 2016)

In another situation, the shift handover resulting in a change of midwives occurred three hours after I commenced a period of observation (N). This led to the difficult decision to cease an observation as I considered that my presence might have been inhibiting the establishment of a meaningful midwife-mother relationship. Ellis was the midwife who had been caring for N at the start of the observation period, and handed over to Nisha at the start of the night shift.

> *Handover has occurred and Ellis has left. I am finding it really difficult to engage with Nisha since she took over from Ellis but know that I need to gain consent from her to continue my observation. N has been so welcoming towards me and I really feel as though we have established a relationship…It feels as though the atmosphere in the room has changed though, as Nisha begins to do N's observations and discusses the management plan for the next few hours with her. N is beginning to get upset, and her mother becomes confrontational with Nisha…N's sister-in-law asks me for my advice about the plan Nisha has suggested and asks if I can intervene. I have to explain my role as a researcher and observer, which isn't easy. It suddenly feels as though there are too many of us in the room and I feel that my presence might be*

> *detrimental to the environment in which N and Nisha need to build a relationship of trust. I make the difficult decision to stop observing and explain to N and her family that will be leaving as the day shift has ended and I need to go home. The decision to leave is difficult, not only because it means I have one less observation episode but because I had built a relationship with N and her family and wanted to stay with them to support them but recognise that this is no longer appropriate. I explain the situation to Nisha and Rebekah, who is co-ordinating the night shift, and leave the unit.* (Fieldnotes October 2016)

In contrast to these episodes, there were other occasions where it felt intuitively right to stay in the birthing environment. Hannah, the midwife had left the room whilst I was discussing the study with F and seeking her consent to participate:

> *The whole atmosphere in the room is very relaxed and feels conducive to physiological birth. I feel less concerned at my presence disturbing this as F and I chat. I feel more like a midwife in this situation than a researcher as I am sat with a labouring woman – not doing anything other than being 'with-woman' as F has a contraction and breathes slowly through it with her eyes closed. Hannah is not in the room…I am not sure whether to stay or leave. I decide to ask F and she says: "no, please stay, don't go!" I stay just sitting beside F and talk with her between contractions.*
>
> (Fieldnotes February 2016)

These episodes highlighted the dynamic nature of my role as observer-participant or participant-observer. My role needed to be carefully negotiated during each period of observation and required constant reflection on how my presence influenced the environment, and to ensure that boundary blurring between that of researcher and midwife did not occur. Managing my multiple identities during clinical observations was particularly challenging, however this was mediated by reflexivity and engaging in reciprocity.

Establishing relationships of equality and reciprocity have been suggested as strategies to engage with the gender inequalities in maternity care (Walsh, 2016). The concept of reciprocity is one in which there is a spirit of partnership and the intentional balancing of any power differential. In the context of ethnographic research, O'Reilly (2009) suggests that:

> *'We can know much more, and much more honestly, if we give of ourselves a little, if we are warm, receptive and accepting'* (O'Reilly, 2009 p.67).

To be able to engage in reciprocity effectively, my role identity required careful management so that I was constantly aware of where the role boundaries lay and how my presence affected those in the birthing environments. I explained to the midwives that whilst in my role as a researcher, I would be able to help with activities consistent with the role of a healthcare assistant rather than those of a midwife. Being able to manage my role as both an insider (midwife) and (outsider) researcher was challenging, and although engaging in reflexive practice and constant

consideration of my positionality facilitated the process, this was frequently a cause of anxiety and stress.

In her discussion of the insider-outsider perspective, whilst researching the culture within male boxing, Woodward (2008) provided an insight into the changing relationships the researcher can develop with those in the field. There is often a transition over the period of the fieldwork where the researcher's position changes from that of an outsider, to one who becomes known and trusted as an insider. This transition can be obtained through sustained 'hanging about' in the field as an outsider, which, over time may change to 'hanging out', as the researcher is accepted by the participants and included into their social worlds. This subtle change in status allows the researcher access to previously inaccessible data.

As I spent time in the field it was clear that my status changed from that of an outsider to that of a known and trusted insider. The awkwardness of my 'hanging about' was replaced by enjoyable times of 'hanging out' when I felt a valued and included member of the team. It has been suggested that although this change in status enables access to data in a way that was previously inaccessible, caution is also required as it is at this point the ethnographer is at risk of 'going native' and ceases to think as a researcher (Rock, 2007). An entry in my fieldnotes on the last day of fieldwork, illustrates how I felt at the conclusion of the study in identifying the role I had created as an ally and supporter:

> *'When I returned from having lunch, Carol asked if I minded being her helper. Which of course I didn't as she is so good at respecting my role whilst I'm on the delivery suite as a researcher and not a midwife…There is lots of other activity and I spend the rest of the shift being a runner, cleaner, re-stocker and drinks maker. Today is my final observation day as my contract has expired. I feel disappointed that there are no women and midwives for me to observe but feel that I am able to contribute to the activities of the unit as a participant in its life. I feel that I have become an accepted presence here – not as part of the team exactly, but as an ally and supporter…* (Fieldnotes January 2017)

4.2.5 Reflexivity

In ethnographic research, reflexive practice can enable the ethnographer to be sensitive to their role in the construction of accounts and to recognise that the ethnographic product is an artefact produced by a process in which they were never a complete insider, and that the interpretation and understanding is therefore limited. The ethnographic product may be able to replicate some of the subjective knowledge of the lifeworld under view, but recognition of the researcher's influence on the data gathered and interpreted must always be considered (Hammersley and Atkinson, 2007, O'Reilly, 2009).

Reflexivity was a strategy I used to recognise my impact on the birthing environments I was collecting data in, those I was collecting data from, and the impact my own

positionality had on the interpretation and presentation of the data. Reflexive practice during the study was facilitated through regular journaling, recorded voice memos, fieldnotes and annotations which served as a basis for regular discussion with the research supervisory team. Reflexivity also enabled me to identify troublesomeness in my own learning journey, explore the concept of liminality and the benefits of recursiveness within the liminal space for the development of new knowledge and understanding. This is discussed further in section 4.4 of this chapter.

4.3 Identifying troublesomeness

When I visited the clinical areas in the early stages of the study to introduce myself and put up the study posters, midwives generally seemed to be very interested in the study and were keen to share their experiences with me. Although the initial stimulus for this study was the confusion expressed by student midwives, during my early interaction with the qualified midwives it was clear that the concept of minimising perineal injury continued to be a source of anxiety beyond the point of registration.

As discussed in Chapter 3 (section 3.9.4), I selected a theoretical approach to thematic analysis of the data based on threshold concept theory (Meyer and Land, 2003). This decision was based on the initial exploration of the literature, my own experience as a midwife and educator and from listening to the midwives' narratives in the early part of the study. Threshold concept theory was first presented in the context of curriculum design, to identify crucial elements of disciplinary knowledge,

without which the learner is unable to progress to the state of 'being' within the particular profession (Cousin, 2006a).

A threshold concept can both constitute and lead to knowledge that is troublesome to the learner and has been identified as the trigger which instigates the threshold concept journey (Shinners-Kennedy, 2016). Experiencing troublesomeness in relation to the acquisition of disciplinary knowledge can create a state of liminality in which the learner can experience stuckness, frustration or confusion (Meyer and Land, 2003). It is also acknowledged that the troublesomeness a learner experiences may not be purely due to the cognitive complexity of the concept, but that it conflicts with their own socio-cultural background and world view, creating an affective component to the learning journey (Cousin, 2006b, Stopford, 2021).

Threshold concepts are considered to be key milestones in the learner's journey and lead to a transformed world view caused by both epistemological and ontological shifts (Felten, 2016, Meyer and Land, 2003). Disciplinary threshold concepts are considered to differentiate from core concepts by eliciting key characteristics, which are that they are bounded, troublesome, integrative, irreversible and transformative (see Table 4.2).

Characteristics of a threshold concept	
Bounded	Threshold concepts are discrete elements within a body of knowledge, that is unique to a profession or discipline and may be considered disciplinary property.
Troublesome	Knowledge can be considered difficult or problematic and may be the cause of conflict. Troublesomeness creates a state of liminality in which the learner can experience stuckness, frustration or confusion.
Integrative	Threshold concepts are key elements of knowledge that enable learners to connect and integrate other aspects of knowledge. They enable access to understanding other key or threshold concepts within disciplinary knowledge.
Irreversible	When a threshold concept is navigated, the process creates epistemological and ontological shifts which are irreversible. The learner is unable to unlearn what they have learned.
Transformative	The process of navigating liminality and grasping the threshold concept transforms the learner by facilitating access to new ways of thinking and viewing the world.

Table 4.2 Threshold concept characteristics (Meyer and Land, 2003)

During the early stages of the study, several midwives had expressed frustration and anxiety that they did not know the optimal approach for avoiding or minimising perineal injury during birth. In the context of this study, the issue of providing effective perineal care during birth was frequently considered to be complex, problematic, difficult to resolve and often the cause of conflict and therefore identified as troublesome. This troublesomeness had the potential to create a state of liminality for some of the midwives, during which they experienced frustration or

confusion; of not being sure of what or who to believe. Meyer and Land (2003) consider this to be a liminal state of 'stuckness'.

Liminality within threshold concept theory is considered to be a state in which a learner is trying to assimilate new information with previous understandings and make sense of the new knowledge; an unstable place of being 'betwixt and between', where there is movement between previous and emerging understanding, often provoking emotional as well as cognitive responses. The position has also been described as: *'being in two states at the same time' or 'between different states, not fully understanding, but being acquainted'* (Tight, 2014 p.255). Meyer and Land (2006a p.16) also consider liminality to be *'a suspended state in which understanding approximates to a kind of mimicry or lack of authenticity'*. Midwives in the study spoke of how as students they were often unsure what approach to take and how their decisions were influenced by the midwife who was supervising them rather than through a reasoned decision-making process. This is presented within the theme of troublesome knowledge in Chapter 6, particularly section 6.4 'incoherent knowledge'.

The transformation that occurs when liminality has been navigated successfully can be exhilarating and liberating, but also unsettling and uncomfortable as the emotional and ontological repositioning takes place (Land, Meyer and Flanagan, 2016, Land, Vivian and Rattray, 2014). The repositioning is usually irreversible, which may account for the difficulty experts often have in articulating or explaining the

concept to others as it has become part of who they are, how they think and feel. This irreversibility is expressed in the study data by the midwives who were using clinical decision making when implementing strategies to prevent perineal trauma rather than the application of an unreasoned standardised approach. It was apparent that the midwives were unable to unlearn what they had learned through reflection on their practice and observation of and discussion with other midwives. This transformation occurred when midwives crossed the metaphorical threshold of this specific aspect of disciplinary knowledge.

This repositioning that subsequently takes place can be considered part of 'being' in a professional context, with the transition from the liminal state of 'becoming' to the transformed state of 'being' (Cousin, 2006a, Wearn, O'Callaghan and Barrow, 2016). The 'becoming' is a transitional state that involves considerable cognitive effort, and for some learners, this can be too uncomfortable or difficult to engage with.

The troublesomeness the midwives identified in this study, was set against the backdrop of the contested spaces of birth in which the midwives provided care for women. The spaces were seen as contested as the culture observed within them was influenced by the dominance of different 'ways of knowing' that shaped the 'ways of being' within them. Culture and enculturation are central concepts to ethnography and are explored in detail within Chapters 6 and 7 in the context of the themes: *Troublesome knowledge* and *Troublesome environments*.

4.3.1 Troublesome language, troublesome knowledge and troublesome environments

During the process of data analysis, the usual characteristics of a threshold concept, shown in Table 4.2 were identified in relation to the disciplinary practice of minimising perineal injury during birth. The concept was bounded within disciplinary knowledge with boundaries that bordered other concepts, it was integrative with other key concepts such as evidence-based practice and consent, it was irreversible once mastered and had the potential to be ontologically transformative. In the study, the key characteristic of troublesomeness became the focus of the analysis as although the other elements were identified, the irreversibility and transformation were only able to occur when the elements of troublesomeness were recognised and navigated.

Features that were troublesome for midwives went beyond that of knowledge and led to an overarching theme of '*troublesomeness'* being identified. Troublesomeness was seen in relation to language, knowledge and the environment; these then become the core themes. The definition of troublesomeness in this context is: 'a difficulty that causes anxiety' (American Heritage® Dictionary of the English Language, 2011).

The first core theme of *Troublesome language* presents the different terms midwives used and their understanding of how and why they used the techniques they did (Chapter 5).Illustrations of the various techniques are presented in Appendix 5.1. The

other core themes of *Troublesome knowledge* (Chapter 6) and *Troublesome environments* (chapter 7) present the additional elements of troublesomeness that the midwives encountered whilst trying to develop the knowledge and skills required to master the concept of minimising perineal trauma.

Troublesomeness		
Troublesome language Chapter 5	*Troublesome knowledge* Chapter 6	*Troublesome environments* Chapter 7
'Hands on': • an active process • a passive process • for birth of the shoulders 'Hands poised' 'Hands off' • hands off in water	Contested knowledge Counter-instinctive knowledge Incoherent knowledge	The birth environment • Physical spaces • Isolation and story telling The cultural environment • Ways of birthing • A climate of fear and blame

Table 4.3. Overarching, core and sub-themes

Although the themes have been ordered to represent a linear pathway through the metaphorical portal, each element is intrinsically linked to the others, an understanding of each aspect is required to enable progress to understand the concept. The language used within a discourse helps to shape an understanding of the concepts under study. If the language itself is troublesome, this has an impact on

the way the information is communicated and understood. The environment in which knowledge is shared and debated will have an impact on the understanding of a concept, particularly if there is a dominant authoritative discourse within that environment, and a particular language used within that discourse. Each element of troublesomeness intersects and therefore has an impact on the others (see Figure 4.3).

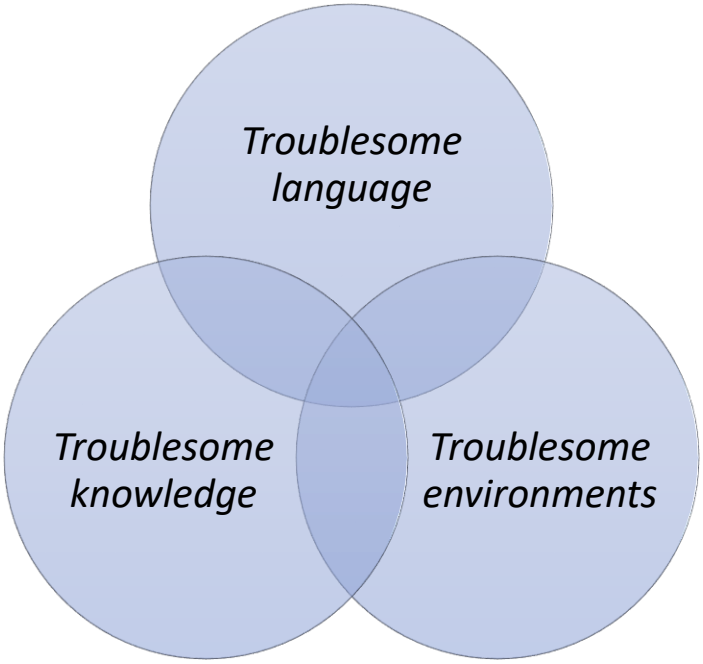


Figure 4.3 The intersection of troublesomeness

4.4 Reflecting on my own liminality

At the beginning of the fieldwork, I felt overwhelmed by the newness of the situation and my limitations as a researcher. I recognised the concept of liminality within my own doctoral journey and my understanding of the methodology as a threshold

concept (Meyer and Land, 2003). As part of my reflexive practice, I was able to recognise parallels in my experience of navigating a new form of practice with those of the midwives in the study. As a novice researcher, I was seeking concrete answers to my questions about how to 'do' ethnography. The fluidity within the method and the answer of 'it depends' to most of my questions, led to a sense of bewilderment and frustration. This situation mirrored the questions midwives were grappling with in terms of the 'right' or 'best' way to reduce perineal injury.

The process of making decisions without a clear framework or structure became overwhelming at times and made me question my choice of method. This position has been recognised by Rock (2007, p.33), who contrasts the image created of the ethnographer in the textbooks as someone with *'penetrating vision who can, from the first, see ahead and understand what is to be seen, who can plan and act purposefully, striding out into the field…'* However, the reality of the novice ethnographer is more likely to be described as one of *'initial confusion and muddle, a lack of purpose and direction, no sense of one's bearings but a reluctance to say so…without expertise, a fraud.'*

As I explored the idea of threshold concepts further, I became aware that this position had previously been identified within the process of doctoral education, with the adoption of a range of metaphors and phrases describing the bounded space that PhD candidates enter. Descriptions such as that of a traveller on a journey, someone undergoing a rite of passage or other rituals through which a

transformation of self occurs have been likened to the doctoral process (Keefer, 2015, Kiley, 2014, Wisker, 2016). It has been suggested that navigating this liminal space is important for achieving doctoral success, although it is recognised that this is often a process characterised by uncertainty, ambiguity, confusion, doubt and crisis (Keefer, 2015, Salmona, Kaczynski and Wood, 2016).

The recognition that this had been experienced by others in a similar position gave me some confidence to continue, but also led to a feeling of imposter syndrome as I wondered if I was exhibiting the coping strategy identified in threshold concept theory of mimicry, to mask my stuckness (Keefer, 2015, Meyer and Land, 2005, Wisker and Savin-Baden, 2009). An extract from my fieldnotes illustrates how overwhelmed I felt during a period of stuckness at the beginning of the participant observation phase of the study, and how the concept of being a fraud was very real:

> *Olivia seems very interested in discussing the study, is keen to be involved and her enthusiasm surprises me. As we talk, she tells me that her first degree is in anthropology, and she seems to know a great deal about ethnography. I suddenly get a real sense of 'imposter complex' and my identity as a novice researcher feels overwhelming. Olivia is relatively newly qualified as a midwife and says that she would really welcome my observation of her practice and the chance to discuss my thoughts afterwards. I realise that another crisis of identity may be on the horizon if the expectation is that I will provide feedback*

either as a peer or teacher to the midwives who consent to being observed.

(Fieldnotes February 2016)

I had made notes in my journal about this episode and had noted that throughout the period of observation, this feeling of imposter syndrome remained. This was also the first time I had considered another aspect of my identity in the research setting and noted that it felt like a 'trinity of identity', a complex intertwining of aspects of who I was as a researcher-midwife-teacher. Threshold concept theory continued to inform the analysis of the data with a fresh understanding and enhanced my own development as a researcher.

4.5 Conclusion

This chapter has presented the practical aspects of undertaking and writing an ethnography and provides the background for the following three chapters. Aspects of fieldwork, writing and using fieldnotes, managing identity and role conflict have been discussed in the context of participant observation, reciprocity and reflexivity. The overarching theme of 'Troublesomeness' has been introduced within the framework of threshold concept theory and liminality. Chapters 5, 6 and 7 present the study findings under the main themes of: *Troublesome language, Troublesome knowledge* and *Troublesome environments.*

Chapter 5 Findings: Troublesome language

5.1 Introduction

This chapter presents the first theme of *Troublesome language*. In this chapter evidence will be presented that demonstrates how the midwives applied the terms 'hands on', 'hands off' and 'hands poised' to their practice to minimise perineal injury during birth. Illustrations were created of the 'hands on' techniques observed, described or demonstrated which are explained and categorised, showing the variety of approaches that this term encompasses. The findings are discussed in the context of the current literature.

5.2 Troublesome language

The literature has identified that the way in which midwives document the process of facilitating birth and minimising perineal trauma is varied, with a lack of standardised terms and definitions. In this study midwives were asked to explain which methods they used and say how they would record what they did. It was found that the definitions of the terms 'hands on, 'hands poised' and 'hands off' varied more widely than previously reported, leading to the identification of the language used to be a source of troublesomeness. The terms were found to be applied inconsistently amongst midwives, but it was also noted that some midwives gave inconsistent information during the same conversation or on a separate occasion. The inconsistent way in which the terms are used in practice creates an additional layer of complexity in the understanding and communicating this aspect of midwifery practice.

5.3 Defining the terms

Through the observation of and discussion with midwives, it was clear that the terms 'hands on', 'hands off' and 'hands poised' were ambiguous with multiple definitions of each being used. The NICE (2014 p.4) guidelines for interventions to reduce perineal trauma define 'hands on' as *'guarding the perineum and flexing the baby's head'* and 'hands poised' as *'hands off the perineum and baby's head but in readiness'* with no reference to a 'hands off' technique. As discussed in Chapter 2, the terms 'hands off' and 'hands poised' are frequently used interchangeably or combined as 'hands off/poised'. In the study by Ismail *et al*. (2013) the terms 'hands off' and 'hands poised' were combined into a single descriptor of 'hands off/poised', with a consensus amongst the expert clinicians that the term 'hands poised' tended to be interpreted as 'hands off'.

During the study, the electronic records system used by the midwives was changed to include a section for recording the hand position used during birth. In addition to the options of 'hands on' and 'hands poised', there was also the option to select 'hands off'. Fieldnotes written at the time illustrate how this added further complexity for midwives to accurately define and record how they had used their hands during birth. I had asked two of the senior midwives about the categories:

> *I wasn't aware that the computer software reporting system had a category to record this* [hands off] *and ask for more details. There are now three categories that midwives can choose from when inputting information*

following birth. They are: 'hands on', 'hands poised' and 'hands off'. I ask what the difference between 'hands poised' and 'hands off' is but the Terri isn't sure: 'Do you know I have never thought about it! I think 'hands poised' would be if you were ready to do something if you needed to and 'hands off' is if you weren't ready to do anything. I don't really know'.

I asked Lauren about the categories for recording hand position during birth: 'Yes, now we have to indicate whether we were 'hands on', 'hands off' or 'hands poised' but it doesn't say what they mean. So, for me 'hands off' is what I was if I didn't touch, and 'hands on' is if I did. I don't think having 'hands poised' there is helpful'.

It seems that the term 'hands poised' for Lauren is her approach to managing the birth, but that ultimately she will either have had her hands on or off the head or perineum, which is what she will record. It does seem that the terms are confusing for midwives, particularly the difference between 'hands off' and 'hands poised'. Terri's interpretation of 'hands off' is 'hands not ready'. (Fieldnotes March 2016)

Through discussions with the midwives during the study, it was evident that there were considerable differences in the interpretation of the terms 'hands on', 'hands poised' and 'hands off'. This lack of consistency led to a variety in interpretation as to what each of the terms meant, and difficulty in knowing how to accurately record what they had done in the electronic record.

5.4 Defining 'hands on': 'a bit of this and a bit of that'

Midwives in the study used the term 'hands on' to describe a wide range of techniques that included a single action or a combination of actions using one or both hands. Midwives demonstrated and described methods that included using one hand to support the perineum, using the fingertips or a hand to either flex or extend the baby's head and/or to assess the speed of extension, guarding the perineum using a warm compress, incorporating a perineal 'pinch' or 'grip' technique and using a modified Ritgen's manoeuvre. There was no consensus between midwives when determining what the 'hands on' technique consisted of, and the term was often used inconsistently during conversations and between observation and recording. When asked to define what her hands were doing when using a 'hands on' approach, Grace's response was: *'Oh you know, a bit of this and a bit of that!'*

The definition of 'hands on' in the NICE guideline (NICE, 2014) suggests that both hands are being used together, one to guard the perineum and the other to flex the baby's head. The definition in the World Health Organisation recommendations (WHO, 2018 p.144) are that a 'hands on' approach involves support to *'the anterior and posterior perineum with both hands to protect/guard the perineum and maintain flexion of, and control, the expulsion of the head'*. There are no pictures or diagrams in either document to show where the hands should be placed to achieve optimal perineal 'guarding'. The descriptor for the 'hands on' method in the HOOP study (McCandlish *et al.,* 1998 p.1263), is that *'the midwife's hands are used to put pressure on the baby's head… and to support ('guard') the perineum, and use lateral flexion to*

facilitate delivery of the shoulders'. A video was made available to demonstrate the 'hands on' and 'hands poised' approaches for the original study, which remains available online (https://www.youtube.com/watch?v=oaEnLD96lzg).

The terms 'guard' (the perineum) and 'flex' (the fetal head) used within the guidelines suggest that the 'hands on' technique is an active process using both hands to actively manage the birth. Some of the midwives used the term in this way, whilst others considered that using just one hand to either guard the perineum or to flex the head was also 'hands on'. A group of midwives considered that any physical contact with the head or perineum, including the application of a warm compress would also be considered 'hands on'. The majority of midwives in the study described something other than the guideline definitions when explaining or demonstrating a 'hands on' technique.

An interpretation of the 'hands on' approach was given by some of the expert midwives interviewed in the MEPPI study (Begley *et al*., 2019). Midwives described applying gentle pressure on the baby's head with one hand to control the speed of crowning and the other on the posterior perineum. One midwife described using the fingers of the hand on the posterior perineum to ease the two sides together to create 'slack', whilst simultaneously holding a warm compress in the palm of the hand. Although a similar approach was described by midwives in this study, a wider variation of 'hands on' techniques was also discussed and observed.

The variation in the definition of the 'hands on' approach observed and discussed was considerable and multifaceted. In addition to the many combinations of hand position, other variables included the use of pressure on either the baby's head or the woman's perineum or both, the application of the hands to assess speed but not apply pressure, and the application of a dry or wet, warm or hot compress to the perineum. For some midwives, the term 'hands on' could only be used if an active process were being undertaken, for others the term could be applied if their hands touched any part of the woman or baby during the birth.

Illustrations were created from sketches of the different 'hands on' techniques observed and described by midwives during the study, and also from those identified from electronic and printed resources. Following analysis of the drawings and descriptions given by the midwives, 'hands on' techniques were categorised into two groups; those in which midwife's hands were active in manipulating the baby's head, the woman's perineum or both, and those where the midwife's hands were used to passively provide support to the perineum or feel the speed of the emerging baby's head. The inventory of illustrations is presented in Appendix 5.1. with reference made to each within the following sections. The illustrations where a hand is used on the baby's head are categorised alphabetically (A-M), and where one or both hands provide perineal support, these are categorised numerically (1-13). Two handed manoeuvres for the birth of the shoulders are presented as S1 and S2. If midwives were observed or referred to using one hand on the baby's head and the other on

the woman's perineum, this is reported in this chapter by the corresponding letter followed by the number.

5.4.1 Hands on: an active process

In discussions with Mia and Sara, they defined 'hands on' as an active process and demonstrated flexion of the head with one hand and the application of downward pressure on the perineum to release the baby's chin with the other, as demonstrated in the HOOP training video (https://www.youtube.com/watch?v=oaEnLD96lzg) and shown in Appendix 5.1 illustrations B and 1. In the birth that I observed with Mia, she used a warm compress on the woman's perineum without any of the active processes. When asked how she recorded this, she considered her actions to be 'hands poised'.

> *'I would say poised, because for me hands-on is that pressure, is that pushing back. For me, hands-on also is the flexion as well. Actually, with a warm compress, I'm literally just holding it with no sort of pressure, just for the dilation. Actually, yes... I'm not putting my hand on the head. For me, hands-on is pressure on the perineum and flexion of the head.'* (Mia)

Sara also considered the term 'hands on' to refer to an active process which involved guarding the perineum and pushing it down under the baby's chin after the head had

crowned, in conjunction with pressure on the head to increase flexion (Appendix 5.1, illustration B and 1).

> *'…it* [hands on] *would be left-hand on to the advancing head…theoretically to increase…the flexion and then to apply pressure on the perineum and then as the head is coming forward to kind of slowly, I guess, manipulate the perineum down.'* (Sara)

The technique described (B1) was not one that Sara used or advocated, however she stated that she would also consider that she had been 'hands on' if she had touched the woman's perineum or baby at all. If the clinical situation required Sara to use her hands, she said that she would only put a hand on the advancing head without applying pressure, demonstrating the position in illustration I (Appendix 5.1), although she subsequently questioned her approach in relation to preventing perineal injury:

> *'…I put my hands on the baby's head. This is so hard to articulate…I put my hands on the baby's head but I'm personally not putting any pressure on. I don't think I personally put hands on to try to prevent a perineal injury, rightly or wrongly. Do I put my hands on when some babies are struggling to come through? Perhaps I do.'* (Sara)

As part of the active 'hands on' approach, other midwives also described manipulating the perineum, either to stretch it with their fingers as the baby's head was advancing (not illustrated) or to push it underneath the baby's chin during extension of the head (Appendix 5.1, illustrations 1,3 and 6).

Alex's description of being 'hands on' also suggested that the midwife's hands needed to be actively doing something to the head and perineum to be effective and questioned whether using a compress on the perineum alone could be considered 'hands on'.

> *'What actually is 'protecting the perineum'? I mean just being 'hands on' is not protecting the perineum, you have to do things, you have to put pressure, you have to control what you are doing, that's protecting the perineum. So, it's like, I don't know, if I put a compress on – yes I'm 'hands on' but is this actually really 'hands on'? This is the question, I believe that you have to do the things right… 'hands on' is active.'* (Alex)

During the interview Alex described a 'hands on' technique which involved the right hand providing perineal support using the thumb and forefinger close to the fourchette, with the other fingers folded into the palm and held against the perineum to provide support through application of pressure. Fingertip pressure from the other hand was applied to the baby's head to prevent sudden extension (Appendix 5.1,

illustrations 3 and B). I observed a birth facilitated by Alex prior to the interview and recorded the use of a flattened hand and outstretched thumb against the perineum rather than the technique described (see Appendix 5.1, illustration 1). During the interview, Alex also described using a technique to support the perineum during the birth of the shoulders (Appendix 5.1, illustration S1), however this was not observed in practice. In a later conversation, Alex also referred to using a 'hands on' approach seen in a textbook, in which both of thumbs were used to support the perineal body at the introitus whilst applying a downward pressure. The rest of the hand supported the tissues of the labia (Appendix 5.1, illustration 11). This was not a technique that I observed during the study, but the image was subsequently found during an on-line search.

Ava also described 'hands on' as an active process but in a way in which the perineum was held firmly between the thumb and forefinger with the other three fingers bent under to form a physical support for the perineum through application of pressure to the perineal body (Appendix 5.1, illustration 3), but without any flexion of the baby's head.

> *'I put my hand under* [demonstrated a grasp between the thumb and forefinger with the other three fingers folded into the palm of the hand] *…just like that…just kind of holding it…with some pressure…here.'* (Ava)

I asked Ava to show me on my hand how much pressure she would exert on the perineum, and she demonstrated the application of moderate pressure. I also asked other midwives to show me how much pressure they felt they needed to use on the perineum. This aspect of the active 'hands on' approach varied widely and was contested between midwives. Often when it was less busy, midwives would initiate conversations with me about the study and their thoughts on reducing perineal trauma. A conversation, recorded in my fieldnotes towards the end of the study period, demonstrated how perineal care practices had changed between the technique that had been taught and that used by the midwife. This may be due to the midwife adjusting their practice following reflection on their technique and perineal outcomes or as a result of misinterpretation or misunderstanding. As I was sitting at the midwives' station on the delivery suite Charlie approached me to ask how my data collection was going, and volunteered information in relation to the 'hands on' technique. I recorded the conversation in my fieldnotes:

> *'Well, I believe that you need to be 'hands on' to apply pressure and counter-pressure – if you don't control the force, the woman will tear.'* I'm interested in this response and ask for more information. *'Well, I do this* [Charlie demonstrated the right hand on the perineum with three fingers against the perineum close to the fourchette, and the thumb and forefinger outstretched] *then this…'*
>
> [In the second movement, Charlie demonstrates how the palm of the left hand is applied to the side of the baby's head after crowning to apply

> downward traction, changing the right-hand position to continue to support the perineum until the shoulders emerge]. I ask how this technique was learned: *'Alex taught me how to do that, and I think Sam taught Alex'.* (Fieldnotes November 2016)

The techniques described by Charlie are illustrated by A, 2 and S2 in Appendix 5.1. Later on, Sam and Jordan joined the conversation, and whilst analysing the data from my fieldnotes I noticed a difference between the way Charlie described the method, and the way Sam described it. Sam had taught Alex, and Alex had taught Charlie. Alex had previously spoken about the need for the 'hands on' approach to include the application of pressure and Charlie spoke of the need to apply '*pressure and counter-pressure* to *control the force'.* It was therefore interesting that in Sam's account of 'hands on' there was no pressure applied, and it involved a different approach to the hand position on the baby's head and perineum (illustrated by D and 2, Appendix 5.1):

'I'm not using any pressure, it's just that the forefinger is feeling the speed and the little finger is between the clitoris, pubic bone and head, which stays there until the head is born.' (Sam)

5.4.2 Hands on: a passive process

Passive 'hands on' techniques were considered to be those where there was no intention to actively manipulate either the perineal tissues or the baby's head, although some pressure may be applied to the perineal tissues. Sam's description of 'hands on' (illustrated by 2 and D in Appendix 5.1) was a passive approach, with neither hand applying direct pressure to the baby's head or perineum, although support was given to the perineal tissues during crowning and the birth of the shoulders (Appendix 5.1, illustration S1), which is discussed in more detail in section 5.3.3. Whilst I was talking to Sam, Jordan joined the conversation and explained her approach, which she considered was similar, and also did not involve applying any pressure. Jordan described and demonstrated a technique illustrated by H and 2 of Appendix 5.1.

During the interview with Sophie, she explained that her interpretation of 'guarding' the perineum was to hold a warm compress against the perineum with minimal pressure and would consider that this approach was 'hands on'. Sophie also referred to the concept of counter-pressure, similar to that in Charlie's account, however she would not touch the baby's head with her other hand but control the speed of extension through pressure on the perineum (Appendix 5.1, illustration 2).

> *'You're just literally holding the sanitary towel there with a certain amount of pressure. You're not using all your pressure…let's say if this was a sanitary*

> *towel and I was holding the sanitary towel, so I'd be like this* [demonstrates flat of hand against perineum with thumb outstretched with minimal pressure]. *It's slowing the head down so that the head's not coming in force. Also, counter-pressuring it with your hand you're protecting the skin and trying to keep the tissues together…holding it together as much as you can'.* (Sophie)

In contrast, during the interview with Sara, she said that she would not record 'hands on' if just a warm compress was used, which could be seen as contradictory to her comment earlier in the discussion where she considered any touching at all to be 'hands on', reported in section 5.4.1.

> *'I wouldn't say that's hands-on because the pad is just being gently put there with the woman's permission obviously just to soothe her…'* (Sara)

I had observed Emily facilitate a birth in water, therefore did not observe her using her hands to prevent perineal injury. During our discussion in the interview, Emily interpreted the term 'hands on' as being a hand on the perineum only, sometimes with a compress, but not with pressure applied in any particular way as an active manoeuvre (Appendix 5.1, illustration 10).

> *'I put my hand on the perineum only, not on the head at all. I use my hand like this* [demonstrated using flattened hand with thumb alongside fingers] *either just my hand or with a warm compress…I just support the perineum as the head is crowning.'* (Emily)

Most of the 'hands on' techniques involved either one or both hands, with one on the baby's head and/or the other on the woman's perineum. However, there were two passive techniques in which the midwives demonstrated using both hands to provide support the perineum. The first was described by Alex (Appendix 5.1, illustration 11) and the second was observed during births that were facilitated by Olivia and Abigail (Appendix 5.1, illustration 12), however Abigail also included a warm compress held against the posterior perineum. In the interview with Olivia, it was interesting that she was surprised by the sketch of her hand positions I had made at the time, and did not recall using a two-handed perineal technique:

> *With both hands? So it was like this with the lower…like my right hand?…Did I? Did I really? Did I have this hand up here? I thought I just went like that?* [demonstrated right hand in position] *…Yeah – well if you saw my hands then* [sounds very surprised] *…I didn't think I had my upper hand anywhere, but, that's so interesting, 'cos I don't, I didn't think, hmm…*(Olivia)

There was a similar situation with Ashley where there was a discrepancy between what I had recorded in my observation notes, and the approach Ashley considered she had used. I had noted that a 'hands on' technique had been recorded, but that this was not observed. The birth was quick, and Ashley thought that she had used her hands to control the speed of the baby's head, although she had difficulty remembering the detail, and was unable to recall how she had recorded her actions.

> *'I did have my hands on – well, ah no…I think…erm…*[long pause]*…the head was coming very quickly, so I did slow the head…that baby shot out quite quickly so I did definitely put my hands on…something.'* (Ashley)

In my observation notes for the birth, in the section to record 'Strategies for prevention of trauma' I had written *'None, MW putting gloves on as head crowning'*. I had also noted that whilst completing the woman's record after the birth, Ashley had remarked that her hand position had been 'getting gloves on' and that she was not sure which box to tick as a result (Observation O, October 2016).

During the interviews, when asked to define 'hands on' Ashley, Liz and Mia agreed with Sara's definition that this term would be used to describe the midwife's hands being 'on anything', either the woman's perineum or the baby's head. The term 'hands on' was therefore applied by these midwives when any physical contact was made, rather than when referring to an active manoeuvre.

> *'It's physical contact with the perineum…well and the head I suppose – because it is all to protect isn't it, regardless of whether it's the baby or the perineum…it's hands on anything.'* (Ashley)

> *'So, I guess 'hands on' for me is anything where I touch either the baby's head before the head is completely out, or touch the area around the perineum…yes, it's hands on anything'.* (Liz)

> *'Hands on'? To me that would've meant that during the birth of the baby's head, predominantly, I would've had my hands touching a part of the baby and/or the woman. That would be 'hands-on'.* (Mia)

Midwives in the study demonstrated and described a variety of 'hands on' approaches that went beyond the simple descriptors in the guidelines and other literature. The 'hands on' techniques had been learned and developed in practice, informed by textbooks and research articles and could be broadly categorised into active and passive approaches to using the hands. There were discrepancies in how some of the midwives described their practice and the manoeuvres that I observed them performing during a birth. This finding is similar to that reported by Akın *et al*. (2020) and suggests that 'work as imagined' and 'work as reported' is not the same as 'work as done' (Shorrock 2016).

5.4.3 'Hands on' for birth of the shoulders

Eight midwives said that they tried to continue to support the perineum as the baby's shoulders were born, although none of these practices were actually witnessed during the observations two techniques were described and demonstrated (S1 and S2 in Appendix 5.1). This practice is not part of the standard 'hands on' definitions (NICE, 2014, WHO, 2018) however, the literature does refer to the occurrence of perineal damage with the birth of the shoulders (Aabakke, Willer and Krebs, 2016, Bulchandani *et al.,* 2015).

If a midwife is using a 'hands on' approach to birth the baby's shoulders, this is usually facilitated with the application of gentle downward traction (by placing one hand each side of the baby's head over the ears) to release the anterior shoulder below the symphysis pubis, followed by lateral flexion to release the posterior shoulder (Downe, 2017, Downe and Marshall, 2020).

This practice of manipulating the baby may have become an embedded aspect of midwifery practice due to the high proportion of recumbent positions used for birth in medicalised settings. It has been recognised that this intervention is not required when women birth in an upright position (Downe, 2017, Downe and Marshall, 2020). The more recent recognition that this manoeuvre has the potential to cause brachial plexus injuries (in addition to perineal trauma), has led to the recommendation to use axial traction in line with the baby's spine and that *'downward traction on the*

fetal head should be avoided in the management of all births' (RCOG, 2012 p.6). Using both hands on the baby's head also does not allow for perineal support if required unless this is performed by another midwife.

Midwives in the study discussed the application of either downward or axial traction to facilitate the birth of the baby's shoulders and also spoke of their experiences of assessing perineal trauma, which they felt was caused as the shoulders birthed. Erin spoke of observing midwives apply downward traction to facilitate the birth of the anterior shoulder and considered that this may be the cause of perineal damage, rather than the birth of the baby's head.

> *'…they would go from here and they would also feel for the cord and then they would very often feel and go under the baby's arm and then pull* [demonstrated downward traction to free the anterior shoulder from the symphysis pubis prior to following the curve of Carus] *the anterior arm, yes. I think that can cause quite a lot of trauma.'* (Erin)

Grace noticed that student midwives were applying axial rather than downward traction but instructed students to practice using downward traction in the way that she had been taught.

> *'I was always taught to have two hands on the baby's head and, sort of follow the curve of the pelvis. Whereas now, I think, students I've observed…sort of dragging the babies out completely straight. The anatomy doesn't go that way. But I assume that's what they're now being taught, in university, which is a bit confusing. Whereas I do get my students, generally, to follow the curve still… So I do say to my students, guide the baby towards the bottom first so that you get that front shoulder before going back under or coming up, depending on what position you're in.'* (Grace)

Alex also considered that the action of applying downward traction might cause perineal trauma and had changed technique to avoid this:

> *'…because I think that maybe the head sometimes comes out with a little bit of injury, but I believe that the…when the perineum…after that extension, then retraction…just there…for the shoulders…damage to the perineum…but that's what I think – it's that movement* [the downward traction on the posterior shoulder]*…the shoulders are the ones…unfortunately – because you see, you know, a perineum nicely stretch and then you say 'oh the perineum is intact' and then suddenly you check and it's not intact.'* (Alex)

Charlie referred to continuing perineal support for the birth of the shoulders which included pressure being applied to the posterior shoulder, through the perineum, to

release the anterior shoulder whilst applying gentle traction to the side of the baby's head (Appendix 5.1, illustration S2). Jordan also referred to using this technique:

> *'I keep my hand on the perineum for the shoulders, always. I put pressure on the posterior shoulder like this* [demonstrated pressure from palm onto posterior shoulder through the perineum]. *With my other hand I apply some pressure for a bit of gentle downward and forward traction. The anterior shoulder always just slips under the pubic arch, then I move my hand to the shoulder and bring the baby though the curve.'* (Jordan)

This technique had been taught to Sam as a student, who had taught Alex, who had then taught this to Charlie. Alex demonstrated the hand manoeuvre on the baby's head differently during the interview, explaining how he had developed his practice to support the baby's neck between the forefinger and middle finger of the other hand (Appendix 5.1, illustration S1):

> *'Then once…you come round here with the hand – and I leave it, then I change my position* [demonstrated moving left hand to support perineum – flat open hand]*…now the shoulder…I don't have enough hands, so it took me a while to learn that …I come here – you leave that, and I say to the woman, 'no, no not yet' …I change my hands, grab the neck and then following the curve of Carus…once I see the anterior shoulder is delivered, now I know that the baby*

> *is out, now is when I focus on the perineum…it's something that it took me a while to figure out…'* (Alex)

The hand position for perineal support during the birth of the shoulders described by these midwives is one which was also documented by Zhang *et al.* (2016), although these authors do not describe or advocate any active manoeuvres.

Reflecting on her current practice and the recommended change from applying downward traction to axial traction, Liz considered that she had adopted this, but did not use perineal support or pressure for the birth of the shoulders.

> *'Relooking at evidence in my own practice I certainly try not to do any downward traction, which is something that I was routinely taught. So I guess my practice has changed slightly with management of the shoulders, but I don't do any protection.'* (Liz)

Although the majority of midwives in the study had not been taught to support the perineum for the birth of the shoulders, Erin and Grace recognised that it might be something that could make a difference to perineal outcomes.

> *'I certainly haven't* [been taught]*. No, I think it's usually once the head is out, that's it, right? …actually, damage can still happen at this point, right?'* (Erin)

> *'I suppose, because I wasn't taught to continue to support the perineum for the shoulders…I just accepted that that was something that could happen. But then, you can't always anticipate if the shoulders are going to cause that problem. You always say, the head is the hardest part. It's not necessarily the case'.* (Grace)

Although Grace recognised that support for the perineum during the birth of the shoulders might be beneficial, she had difficulty imagining how she would do it.

> *'Yes, the shoulders, I think it would be interesting to read more research about doing perineal support for shoulders, if it's out there. But then I don't know quite how I'd manage it. I'm so used to doing what I do to deliver babies that I don't know where my extra hand would come from.'* (Grace)

Sophie also demonstrated an awareness that perineal support for the shoulders may have potential benefits in reducing perineal injury but also could not envisage how she could apply it without an extra pair of hands. During our discussion she tried to work out the process of continuing perineal support for the shoulders noting that during this part of the birth the perineum was left 'unguarded'.

> *'…it's really difficult because if you've got one hand there then you cannot manage the baby's head so by that point you have to let go and you've got the head because you're thinking, 'right, okay, most of it's here,' but then by the time the shoulders come out, they could be, you know, because the shoulder part's even wider isn't it and could cause the perineum to stretch and to tear. So it is like, I think we need to be born with like an extra pair of hands almost just so that… just midwives, just midwives…we need to have something, and we need an extra pair of something but, yes, it is interesting…the perineum's often left unguarded once the head's out and then the shoulders are being delivered.'* (Sophie)

Some of the midwives in the study used techniques to prevent perineal trauma during the birth of the shoulders. The majority of midwives, however, did not use any manual support to the perineum following the birth of the head. Not all of the midwives were aware of the change in the guidance to use axial traction to assist the birth of the anterior shoulder, rather than downward traction which may be a contributing factor for perineal lacerations. It is interesting to note that perineal practices to reduce perineal injury during the birth of the baby's shoulders during physiological birth are not mentioned in either the NICE (2014) or WHO (2018) guidelines. Zhang *et al.* (2016) reported a high rate of intact perinea following a physiological approach to the birth of the shoulders without manual intervention or manoeuvres and noted that in 71.73% of cases (n = 66/92) the posterior shoulder

emerged first. Perineal 'protection' was reported to be managed through a 'hands off' approach and women asked to slowly breathe/exhale as the baby's head and shoulders birthed. A photograph within the paper, however, shows a 'hands on' the perineum position similar to that described by Alex (Appendix 5.1, illustration S1,).

5.5 Hands poised

For some midwives, the terms 'hands poised' and 'hands off' were not distinctly different, however there were those for whom 'hands poised' was a meaningful activity which was more than just not touching. There were some midwives who reflected on what the terms meant as they spoke, changing their minds about terms or contradicting themselves, illustrating how either the application of language or the explanation of the process was troublesome. The lack of clarity between these two terms may have led to them becoming interchangeable, leading to assumptions that 'hands poised' is the same as 'hands off', a phenomenon that is reflected in the literature (Trochez, Waterfield and Freeman, 2011, RCM, 2014, Ampt, de Vroome and Ford, 2015, Begley *et al.,* 2019). The NICE guidelines indicate that in the 'hands poised' technique, the midwife's hands are *'off the perineum and baby's head but in readiness'* (NICE, 2014 p.61). The definition in the HOOP study protocol is that *'the midwife keeps her hands poised, prepared to put light pressure on the baby's head in case of rapid expulsion, but not to touch the head or perineum otherwise and to allow spontaneous delivery of the shoulders'* (McCandlish *et al.,* 1998 p.1263).

When asked how they defined the different terms, the lack of consensus among the midwives was evident. Sara initially considered that she used a 'hands off' technique, referring to herself as a 'hands off' midwife but as she was speaking, began to wonder whether what she was describing was actually 'hands poised', recognising the difficulty of applying the terms. Sara used the descriptor of her hand position to describe herself as a 'hands off midwife', suggesting embodiment, a concept which will be explored further in the context of 'ways of knowing' in the following chapter.

> *'I've been a, technically speaking, hands-off midwife for quite a long time - based on the woman who is in front of me, I guess hands-off would be just like I guess you would in a pool birth, you're not hands-poised because you're not hands in the water waiting to catch the baby. You're poised, are you poised? You're poised above the surface so that would be hands-poised. Oh this is so hard!'* (Sara)

Erin found it difficult to decide whether she had used a 'hands poised' approach but used terms consistent with the definition such as being 'ready'. Erin, Grace and Mia admitted that they were not sure what the term 'hands poised' meant. Liz felt that 'hands off' and 'hands poised' belonged in the same category, although she referred to her hands being on the baby to birth the shoulders.

'I think I've probably never really done hands-poised, although, probably I have but I didn't do it consciously. If you think something might, the woman's perineum might actually need some support, you are ready, but what does that actually mean? That you are close?' (Erin)

'I've sort of explained that, in the pool, we're completely hands off and hands poised, I still don't really, necessarily, understand what that means myself, I suppose. It's like, having your hands there but not necessarily doing anything with them'. (Grace)

'I don't know if there is a difference between off and poised? I don't know…no. I think you'd probably get 50,000 different answers, wouldn't you?' (Mia)

'Hands off is when I would be just doing my axial traction for the birth for the shoulders if needed. I would put poised in the same group as hands off because if I haven't had to touch - for me that's hands off.' (Liz)

Sophie, Louise, Hannah and Sara considered that they had employed a 'hands poised' technique when their hands were in the proximity of the perineum in readiness to touch the head and/or the perineum if necessary. They considered that intervention might be required if the baby's head seemed to be advancing or extending too quickly.

'Hands-poised means probably… mmm…so, to me hands-poised means…hmmm…..Yes, so hands-poised to me means like I'd say to her, 'Right,

> *just to let you know my hands are just…' I wouldn't be touching her, 'My hands are just going to be resting on your leg or just on the bed, just in case I need to guard the perineum.' So I'm ready to do something with either, you know, a warm sanitary towel or a towel. I've just got it ready just in case I need to help the perineum a little bit and to guard it.'* (Sophie)

Although Louise considered that her hands were always poised, she referred to a hand position similar to that described by Alex. The thumbs of both hands were placed together and would be used to apply pressure to the perineum whilst the fingertips of one hand would be placed on the advancing head to slow the birth if necessary.

> *'Well, I don't do either* ['hands on' or 'hands off'] *as I'm always poised, like this – my hands make a window* [demonstrates making a window out of both hands with thumbs together] *To slow the head if it came really quickly – I'd just apply counter-pressure to prevent the 'champagne cork effect'…you know – the 'pop' I wouldn't want that to happen, so if I can and I need to, I would do that. I'd just put the fingertips of this hand* [left hand] *if the woman was in this position* [semi-recumbent], *and if she was on all-fours I would do the same but the other way round to prevent sudden expulsion at the perineum.'* (Louise)

Hannah and Sara also spoke of the need to have their hands ready to slow the birth, with both only referring to using pressure on the baby's head.

> *'Hands poised? Umm… depending on the position, I mean if you have a woman who is semi-recumbent then you're going to be gloves on…a few inches away from the head…If the woman suddenly goes and gives a whacking great big push, I'm going to go onto the head and slow things down… I'm poised and would touch if I felt there was a bit of counter pressure that was needed...'* (Hannah)

> *'I'm definitely hands-poised when a woman is standing up because I have had a baby fly out at a rapid rate…that's just from that isolated incident, I am always hands-poised, that would mean ready to catch that baby, but that does not mean going up towards anywhere near her bottom or her perineum and I don't use a sanitary pad or a swab on someone's bottom.'* (Sara)

Midwives in the study who considered that they used a 'hands poised' technique spoke of being ready and having their hands close to the woman's perineum and emerging baby. The literature suggests that the 'hands poised' technique may be misinterpreted or misrepresented as one in which '*midwives' hands may be 'nowhere near' and certainly not 'poised''* (RCM, 2014 p.6). However, in contrast to this, the midwives in this study who described using a 'hands poised' approach consistently

referred to being observant, close to the woman and being ready to intervene if necessary. This position is also reflected in the findings of the MEPPI study (Begley *et al.,* 2019) in which the 'expert' midwives who preferred a 'hands poised' technique, were closely poised, and almost always used 'hands on' when crowning was imminent. Similarly, the results from the studies by Ampt, de Vroome and Ford (2015), East, Lau and Biro (2015), Trochez *et al.* (2011) and Zhou *et al.* (2019) indicated that midwives who preferred a 'hands poised' approach would change to 'hands on' if they considered that the clinical situation required them to do so.

When observing a midwife using a 'hands poised' approach, it is easy to see how 'hands poised' could be misinterpreted as 'doing nothing' if the observer is unaware of the non-physical and more subtle skills the midwife employs to assess the status of the perineum and advancing head. Ashley's interpretation of 'hands poised' was that the midwife was *'ready and waiting*' and suggested that this approach was more prevalent among the more experienced midwives which might indicate that this is a highly skilled approach:

> *'Yeah, yeah so that's interesting… I definitely see that the more experienced midwives are more hands off, and the more newly qualified midwives are more hands on.'* Ashley

The ‘hands poised’ approach discussed by midwives in this study can be considered part of the midwifery strategy termed ‘watchful attendance’ (de Jonge, Dahlen and Downe 2021). Watchful attendance requires the midwife to be in close proximity and to ‘be with’ rather than ‘do to’ women in labour. The problem with watchful attendance is that it is often not noticed or recognised, and skilled midwives who are observing labour and birth with a high level of alertness to any subtle changes, may be considered outwardly to be doing very little (de Jonge, Dahlen and Downe, 2021).

As part of the watchful attendance employed in the ‘hands poised’ approach, midwives in this study spoke of the importance of a slow and controlled birth, where good communication with the woman was of paramount importance. Effective communication with the woman to stop pushing and to breathe or pant, enabled the baby’s head to emerge slowly, gently stretching the perineal tissues and preventing what midwives described as the ‘champagne cork’ effect.

Abigail and Sophie both spoke of their experiences observing births as student midwives, when the midwife did not use a ‘hands on’ technique, illustrating the polarised perception between this being an approach that is either highly skilled or almost negligent. Abigail was able to identify that the experienced midwife she observed as a student was skilful in facilitating birth without being ‘hands on’ and recognised that the technique was more complex than simply not touching. However, in Sophie’s experience, if a midwife did not have her hands on the perineum, this equated to ‘doing nothing’ which left the ‘patient’ unprotected. These

opposing views may represent the positionality of the midwife in relation to the threshold concept and their experience of navigating the liminal space created by it.

> *'…my first mentor on delivery suite was 'hands off' and I'd never seen that before, and I literally…remember thinking, I've never seen that before and I don't know if I can do that because, I just…that is a degree of control between the two of you…that I just…I mean…the first time I saw it, it was a multip, and it was beautiful…she was really in control…and my midwife mentor was really in control and it was so lovely, but I remember thinking, I don't…gosh, that's amazing but I don't know if I could ever get to that point.'* (Abigail)

> *'I find it really interesting that some don't* [support the perineum] *and their rationale behind that, like, 'Don't, hands-off, absolutely hands-off.' But when you can see the perineum stretch and it almost goes translucent and you're like, you almost have that like, 'Ouch.' Like you want to put your hand there yourself but as a student you can't always do it because you might be with a midwife that's like, 'No, totally hands-off.' You have to almost respect her decision to do that yet you're aware that you're not protecting the patient as well. It's so difficult because you can't jump in and put your hand there and say you want to do it, when your midwife believes in absolutely doing nothing.'* (Sophie)

A key feature of troublesomeness within threshold concept theory is the affective element or emotional discomfort it creates, illustrated by the comments made by Abigail, Sophie and also by Grace. As a newly qualified midwife, Grace recalled how observing a 'hands off' technique demonstrated by a student midwife made her feel uncomfortable as it wasn't something that she had seen before, and she had encouraged a 'hands poised' approach instead. In the same way that Sophie felt that a lack of 'hands on' was 'doing nothing', Grace questioned what the student was 'not doing'.

> *'When I was doing my preceptorship, I had a third-year student come in and she just put two - well, she was completely hands off and I, all of a sudden, went ooh! I felt, like, really uncomfortable about it because that's the first time I'd ever, other than a pool delivery, seen anyone be completely hands off and I was, like, aah, what's she doing? What's she not doing? But she'd worked with a lot more hands poised and hands off midwives than I ever had, so it was normal for her. I think, I maybe got her to just - I think she put two fingers, in the end, on the baby's head, just because I was paranoid it was going to pop up.'* (Grace)

Most of the midwives considered that the 'hands poised' technique was an expectant, or active form of 'hands off' in which they were not touching the head or perineum but closely observing and intervening if necessary. Alex, however thought that 'hands poised' was a passive form of 'hands off', whilst describing a technique

in which the perineum was touched with one hand (which others would consider a passive form of 'hands on'). Alex did not consider the 'hands poised' approach to be a skilled activity that required the midwife to be alert and in close proximity, suggesting that the midwife's hands would be better used writing the notes than being poised.

> *'Yes, it's touching I believe…because it is poised…well that's 'hands off' it's the same…because then you touch it…you leave it…I pause my hand there because I don't do anything, no pressure or anything, just paused…you are touching… but I don't know! Then I was thinking…what does it do to the perineum? Nothing… I mean…why do that? You could use your hand to write in the notes instead, that would save time!'* (Alex)

Mia was observed using a warm compress on the perineum. Afterwards I asked her how she would describe this, and whether there was a difference between 'hands poised' or 'hands off'. Her response was similar to Alex as she also considered that using a warm compress was a passive activity and she would therefore consider that her hands were poised.

> *'I would say poised, because for me hands-on is that pressure, is that pushing back. For me, hands-on also is the flexion as well. Actually the warm compress, I'm literally just holding it with no sort of pressure…'* (Mia)

As with the term 'hands on', 'hands poised' was also not consistently interpreted or defined by the midwives in the study. Midwives described a variety of different practices that were consistent with either a passive 'hands on' approach, a highly skilled watchful attendance activity and the consideration that 'hands poised' meant 'hands off' or 'doing nothing' at all.

5.6 Hands off

It has been suggested in the literature that the change in UK midwifery practice from a largely 'hands on' to a 'hands off' approach was influenced by the HOOP trial undertaken by McClandish *et al.* (1998) (Trochez, Waterfield and Freeman, 2011, RCM, 2014, Wang, Jayasekara and Warland, 2015). During this study, Jan identified this as the seminal point for her in a shift from 'hands on' to 'hands off' perineal care:

> *'Well, when I was training, which was between 1996 and 1998, it was all very 'hands-on' – you know, really 'guarding' the perineum…but then along came HOOPS, and we were all, right now, its 'hands off' then is it?'* (Jan)

It was noteworthy that Jan used the term 'hands off' when referring to the impact of the HOOP (McClandish *et al.,* 1998) study, as the term used for the non-touch perineal care group in the study was 'hands poised'. It has been suggested that the term 'hands off' is simpler to use than 'hands poised' and has been adopted as this is what is actually happening until the midwife decides to intervene, at which point

the process can be described as ‘hands on’ (Trochez, Waterfield and Freeman, 2011). Lauren’s view of ‘hands poised’ supports the concept that ‘hands off’ may be the outcome following the ‘hands poised’ approach, in the same way that ‘hands on’ could also be the outcome:

> *‘I guess I mean that I’m not touching anything, but I’m poised to catch the baby. I’m poised from when the vertex is visible to when the head and body have birthed completely…so ‘hands off’ for me is not touching anything and ‘hands on’ is touching anything. I’m poised, but usually ‘hands off’. If I touch, then its ‘hands on’.* (Lauren)

When I asked Lauren about the birth I observed her facilitating, and how she would have described and recorded what she did, she considered that she had been ‘hands off’, although her hands had been poised ready to intervene if necessary.

> *‘…ultimately I was 'hands off' - I may have been 'hands on' if I needed to be, but I wasn't. Does that make sense? I would say that I was 'hands poised' as I usually am… I recorded 'hands off' as I didn't touch anything during the birth, just afterwards.’* (Lauren)

Although Lauren was quite clear that the term 'hands poised' referred to her approach, and 'hands on' or 'hands off' were the terms she recorded as the outcome, Mia was unsure when the term 'hands off' could be accurately applied:

> *'Hands-off…maybe you can only truly be hands-off in the water…no, that's not true. I had a shoulder dystocia in the pool, so that was very - yes, but then maybe you're always poised, maybe poised is the only thing you could ever really write, unless you're really hands-on.'* (Mia)

Sara suggested that 'hands off' included being next to or behind the woman, in contrast to 'hands poised' being 'very, very close to the perineum', and communicating with the woman throughout, with an intention to intervene if she felt that it was necessary. The differences between 'hands poised' and 'hands off' were very subtle:

> *'I guess hands-off completely would be saying to the woman, 'I'm here. I'm next to you or I'm behind you.' If she's on all fours, 'I'm going to be just talking you through. I will catch your baby, if you don't want to catch your baby yourself but I'm not going to touch you throughout this process unless I feel something's not quite going right.' That to me would be hands-off. So actually not touching at all, hands-poised would be very, very close to the perineum, kind of, you see midwives just doing this* [demonstrated outstretched hands].

> *I'm kind of, you know, I'm doing that, but I don't actually know what my… the baby's not going to fly out necessarily but it's…it's just waiting to catch I suppose.'* (Sara)

When midwives were asked to describe the 'hands off' technique, most midwives referred to having their hands close and poised as part of their practice, further supporting the concept that 'hands off' is not an approach or outcome in which the midwife does nothing at all. The concept of watchful attendance (de Jonge, Dahlen and Downe, 2021) has also been described as 'doing nothing well' and 'masterly inactivity', identified as traits of exemplary and expert midwifery practice (Kennedy, 2000, Leap, 2010, Kennedy, Leap and Anderson, 2010). The subtleties of expert practice in minimising perineal injury through a 'hands off' approach may be invisible to the inexperienced observer, as has been previously noted:

> *'…often invisible to the unschooled eye that does not notice or value the quiet midwife…watching and listening, but letting the woman 'get on with it' in her own way'* (Kennedy, Leap and Anderson, 2010 p.106).

5.6.1 'Hands off' during birth in water

It is widely accepted that when a birth occurs under water, the midwife's hands should not touch the emerging baby or the woman's perineum. The rationale for this

appears to be to reduce the risk of invoking a breathing response, although there is a lack of evidence to support that this presents a true risk in a term, well baby due to a protective mechanism known as the dive reflex (Charles, 2018, Garland, 2017). The research into comparing perineal outcomes between birth in water or on land suggest that there are no differences in rates of severe perineal trauma, with the 'hands off' approach recommended for waterbirth (Cluett, Burns and Cuthbert, 2018).

When birth occurs in water, it is usually not physically possible for the midwife to touch and often the woman will often instinctively reach down to touch the baby's head or to support her own perineum (Garland, 2017). The NICE (2014) guideline for intrapartum care for healthy women and babies does not refer to adopting a different approach when women are birthing in water. However, almost all the midwives in the study referred to the importance of not touching the perineum or emerging head in such circumstances. As the widely accepted approach to birth in water is 'hands off', the definition of terms referring to what is touched and how, may seem inconsequential, however it is interesting that the risk of stimulation seems to be regarded as occurring through touch to either the perineum or the baby. Therefore, there appeared to be consensus among the midwives in the study, that the 'hands off' approach in the context of birth under water means hands off both the perineum and head, in contrast to the multiple definitions of 'hands off' when birth occurs on land. This interchangeable use of the term presents troublesome

language as an element of troublesome knowledge creating additional complexity. The concept of troublesome knowledge is explored further in Chapter 6.

Midwives spoke of their practice during waterbirth, with all of them referring to a non-touch approach. Alex reflected on what had been taught about being 'hands off' during a birth in water, and contested the rationale for this, recognising that women reach to touch their babies.

> *'…we were always taught that the baby cannot be touched in the pool, which I don't believe because the baby is passing through everywhere, it is being touched…how is it that you're going to stimulate breathing? They say you are going to stimulate the reflex, but the baby cannot breathe – how is it going to expand the lungs? So I don't…that's what I think…anyway I will try not to interfere in that…but the mother can touch the baby… this is the pool and I don't guard the perineum…you are not going to do anything because you can't.'* (Alex)

Alex referred to women reaching into the water to touch their baby, and Erin also spoke of how she had seen women supporting their perineum when they were in the water. Abigail also spoke of being 'completely hands off' during waterbirth and introduced the concept of the water providing perineal support through counter pressure. Sophie also considered that the water offered the perineum some support:

> *'…if it's a water birth, then obviously I don't do anything at all…I do know that in the water we should be completely hands-off and that the water acts as counter-pressure…the woman is relaxed in the water, the skin is obviously nice and warm, it's soft, it's supported.'* (Sophie)

During a conversation with Grace, she described how her practice changed depending on the context of the birth, but also stated that she was *'always hands on, apart from pool deliveries which, obviously, are completely hands off'.* As we talked, Grace tried to think about how she facilitated birth where woman might be using the shower or bath for hydrotherapy. Although the woman and her baby may then subsequently be in water during the birth, they may not fully submerged in it, which presented an aspect of how troublesome the language to describe this situation was for Grace:

> *'…should I have my hands on, hands off? There's water but the baby's not going to be under water. A real conflict…It's really difficult because they're not actually - they're physically in a bath, but they're not having a bath…I think I am still hands on, to some extent.'* (Grace)

When asked how they would use the term 'hands off' to describe their practice, Mia, Ashley, and Emily considered that they could only use the term if the birth occurred in water.

'Hands-off?…maybe in truth…maybe, you can only truly be hands-off in the water.' (Mia)

'…for me the only time I would probably write 'hands off' would be if it was a water birth. Obviously in the pool…not at all.' [touching]. *(*Ashley)

'I'm always 'hands off' when the woman is in water.' (Emily)

Comments from Erin, Sophie, Abigail and Grace reflected the general consensus that midwives should not touch at all in the context of water birth and the word 'obviously' was used frequently, indicating that this was an element of practice that was not contested.

'Obviously, when the women were in there, in the pool, no one would touch them.' (Erin)

'You don't touch it, don't touch it [the perineum] *I've never touched it in the pool. I haven't seen any midwives touch it in the pool.'* (Sophie)

'If it's a waterbirth, then obviously I don't do anything at all.' (Abigail)

'Obviously, pool deliveries are different, in that I don't do anything, apart from the breathing'. (Grace)

The term 'hands off' was most consistently applied in the context of waterbirth with all of the midwives in the study agreeing that they would take this approach, and that

the term meant no touching of the perineum or baby's head at all. Some midwives considered that the water provided support to the perineum and softened the perineal tissues, reducing the likelihood of perineal injury.

5.7 Conclusion

This chapter has presented the findings from analysis of the observations, interviews, conversations and documentation recorded during the fieldwork, presenting the first theme of *Troublesome language*. These findings suggest that midwives' practices to minimise perineal injury are multi-faceted and complex, compounded by terminology that is not consistently applied or understood and thus troublesome. The approaches that midwives adopted to reduce perineal injury did not fit neatly into the three categories currently used to discuss and document perineal care ('hands on', 'hands poised' and 'hands off'), due to the wide variation in the interpretation of the terms. Illustrations of the various 'hands on' approaches that were identified during the study have also been presented to demonstrate the differences in the techniques that may be applied.

The issue of inconsistent use of terms to describe perineal care practices during birth has been reported by other authors (Begley *et al.*, 2019), and has been noted as a factor affecting evaluation and meta-analysis of studies (Aasheim *et al.*, 2017). The systematic approach to defining and classifying the various approaches, as presented in this chapter, may help to refine the current reporting system and inform future research. The following chapters present the themes of *Troublesome knowledge and*

Troublesome environments, building on the notion that preventing perineal injury during physiological birth has multiple elements of troublesomeness, creating a threshold concept for midwives.

Chapter 6 Troublesome knowledge

6.1 Introduction

This chapter presents the findings within the theme *Troublesome knowledge*. This aspect of troublesomeness is inherently linked to *Troublesome language*, presented in the previous chapter, and aspects of *Troublesome environments* presented in the following chapter. The overarching theme of *Troublesome knowledge* contains the sub-themes of *Counter-instinctive knowledge*, *Contested knowledge* and *Incoherent knowledge* which were identified as sources of troublesomeness for the midwives in the study, as they navigated their understanding of the concept of minimising perineal injury during childbirth. The chapter starts with a brief introduction to troublesome knowledge within the context of threshold concept theory.

6.1.1 Three kinds of troublesome knowledge

Troublesome knowledge as identified by Perkins (1999, 2006) is a central feature of threshold concept theory and can be defined as knowledge which appears counter-intuitive, alien or incoherent to the learner (Meyer and Land, 2003). Felten (2016) and Rattray (2016) also identified that troublesome knowledge may also have an affective dimension, as learners reported an emotional response to difficult learning and the cognitive discomfort this creates. In the context of this study the term 'counter-instinctive' is used as an alternative to the term 'counter-intuitive', to differentiate between an instinctive, reflex type of response and one which is based on skilled intuition as an expert or a craft form of knowledge. Alien knowledge within

the threshold concept framework is described as that which emanates from another culture or discourse and comes from a perspective that conflicts with one's own. In the context of this study, the term 'contested knowledge' is used to reflect these elements, reflective of the way midwives experienced learning about perineal care. The final type of troublesome knowledge, identified within threshold concept theory is incoherent knowledge. Incoherency in this context refers to a position in which the learner may consider that discrete elements within a concept may be unproblematic in themselves, but they do not appear to adhere to an organising principle (Perkins, 1999). A number of midwives in this study spoke of the emotional responses they experienced in relation to each of these kinds of troublesome knowledge, using language to describe an affective dimension to learning similar to that also described by Felten (2016).

During the fieldwork, midwives shared with me their experiences of being taught to provide perineal care as student midwives, and how they had continued to learn and develop their practice after they had qualified. Midwives spoke of how they had experienced inconsistent teaching as students, which had left them confused about the 'right' approach, and unsure of the validity of the knowledge that was being shared, or that they then shared with the students they were supervising. The types of troublesome knowledge as identified by Perkins (1999) were used to shape the analysis and are described in the following sections.

6.2 Counter-instinctive knowledge: *'I want to do something!'*

Counter-instinctive knowledge is knowledge that when presented, does not make sense to the learner and is in conflict with what may be an instinctive, reflex response. Midwives in the study spoke of the need to do something with their hands to prevent perineal injury during the birth in an instinctive way, and that a 'hands poised' approach was counter instinctive.

'…when you can see the perineum stretch and it almost goes translucent and you're like, you almost have that like, 'Ouch.' Like you want to put your hand there.' (Sophie)

Some of the midwives in the study spoke of how doing something physical during birth (hands on) rather than doing nothing (hands poised) made them feel better and might mitigate against guilt if the woman did experience perineal injury.

> *'I feel that I'm hands on. Because I feel that if I'm not doing anything, I can't say that I've done anything to prevent that. Whereas, if I'm doing something, I can, I don't know, feel better in myself?'* (Grace)

> *'I think for myself it's about doing something too. I do feel that I've got to do something, do you know what I mean? I think it is quite a rare and confident*

> *person who feels that they can just stand at the end of the bed and talk them through it…I don't know.'* (Abigail)

Abigail's needed to 'do something' during a birth and suggested that the 'hands poised' approach may be a technique that required confidence. Sara also recognised that resisting the urge to do something may be related to the confidence and philosophy of the midwife, and that for some midwives, doing 'something' was the only option.

> *'I think it depends on the confidence of the practitioner and where they feel they sit in maybe the power of dynamics of birth, whether they believe it's the woman birthing the baby and they are catchers and observers and there to keep things safe when things are going off the pathway or whether they feel that they have to do something, that old kind of adage of, 'I can't just sit on my hands. I've got to be doing something and touching all of the time.'* (Sara)

Abigail's interpretation of not being 'hands on', standing *'at the end of the bed'* is suggestive of the midwife being nowhere near, rather than the close proximity and skilled attentiveness required for a 'hands poised' approach described by midwives in the previous chapter. Other midwives spoke of how doing something with their hands felt like an instinctive urge, and that doing 'nothing' was difficult. Alex, Hannah

and Sophie spoke of how they felt they needed to do something physical to minimise perineal injury:

> *'But when you can see the perineum stretch and it almost goes translucent and you're like, you almost have that like, 'Ouch.' Like you want to put your hand there*.' (Sophie)

Walsh (2012) considers that there is an ingrained midwifery preoccupation with controlling the birth of the baby's head through various manual manoeuvres, suggesting that this is an unnecessary form of labour intervention. When practice becomes ingrained, adapting to a different approach can be problematic, even when it is recognised that a change may lead to improved outcomes. Grace considered that the 'hands on' approach had become 'ingrained' into her midwifery practice:

> *'I did my first hands on hands, and that was with a hands-on midwife, that's where it got ingrained I think…I feel that I'm hands on.* (Grace)

Most midwives spoke of an overwhelming need to do something practical or physical to hold the woman's perineum together if it looked like trauma was either about to occur or there were signs that this was already happening. Midwives who had transitioned from using a 'hands on' technique to a 'hands poised' approach often described the need to revert to being 'hands on' in situations where they considered

that perineal trauma might be imminent, even though they were not convinced that physically *'holding it together'* made a difference to the outcome. The midwives spoke of using their hands on the perineum rather than to slow the extension of the baby's head. Remaining 'hands poised' and not touching the woman's perineum seemed to be counter-instinctive whilst doing something physical fulfilled the instinctive need to help.

> *'I was 'hands on' because I was concerned that it was all going to go, I'm not quite sure what I thought I was saving, but it just felt as though I was at least trying to do something, and then…and I know that in this circumstance I was really 'hands on' with that woman, but I don't really think that it makes the slightest bit of difference, it was just doing something…'* (Abigail)

> *'I went away and reflected on my practice…even if I was hands-on it didn't seem to make any difference, but it feels like you have done something rather than done nothing.'* (Emily)

Hannah, Ashley and Abigail reflected on using a 'hands on' technique when they considered that the posterior perineum was 'buttonholing'. Midwives described buttonholing as a situation in which the skin in the middle of the posterior perineum changed appearance suggesting that the underlying tissues were tearing.

> *'I'd go for support on the perineum, in that instance, I don't know if that's right? I want to do something…if my hand is going onto the perineum…where that buttonhole is appearing,….that's not really going to do anything in terms of slowing things down, it's the hand on the head that going to slow things down, and your communication with the woman…umm…so, I don't know!'* (Hannah)

> *I think if I saw it buttonholing…I would probably consider it…*(Ashley)

Sara also said that the need to do something was instinctive if she felt that a buttonhole tear or severe perineal trauma was imminent, and although she would usually adopt a 'hands poised' approach, she would use a 'hands on' technique in this situation. Although Sara suggested that she would change to a 'hands on' approach, which would be instinctive, she also said that she would not do very much with her hands.

> *'I think my instinct would - I don't know what I'm doing, why I'm doing it - but would just, to support…it feels I need to do something. That would be my instinct. I don't think I could be completely hands-off if I saw that on a perineum, and trying to explain to you why I would do that is really difficult. I'm seeing, I'm observing perineal breakdown towards the bottom in some way that may not extend to anything more than that. It could still just be a third-degree tear and a laceration but my instinct as a midwife is not to sit on*

> *my hands anymore, put my gloves on and put my hands on, to do not very much but put my hands on.'* (Sara)

Grace spoke about the need to do something physical in case severe trauma occurred. She considered that if she did not adopt a 'hands on' approach and a tear occurred, it would be her fault, suggesting that other techniques amounted to doing 'nothing'. The themes of responsibility for perineal outcomes, and the subsequent feelings of guilt and fear experienced by midwives, are explored further in the following chapter in the context of *Troublesome environments*.

> *…if I do nothing and she has a third-degree tear, I'd feel completely it was my fault, because I did nothing. Whereas, doing perineal support makes me feel like I'm doing something that could prevent something…* (Grace)

It was notable that none of the midwives who spoke about changing from a 'hands poised' to a 'hands on' technique when perineal injury looked imminent, were convinced that physically holding the tissues of the perineum together would reduce injury, yet they were unable to stop themselves from intervening. Previous studies have also indicated that midwives often adjust their technique from 'hands poised' to 'hands on' if they have concerns about impending severe perineal trauma or buttonholing, although the reasoning for this change in practice was not explored (Ampt, de Vroome and Ford, 2015, Begley *et al.,* 2019, East, Lau and Biro,

2015). It was significant that none of the midwives in this study spoke of how they would utilise other strategies if they considered that perineal injury was imminent, such as changing the woman's position, adjusting their coaching to ensure a slow and controlled birth or using their hands to slow the advancement or extension of the baby's head. The instinctive urge to hold the perineal tissues together appeared to override other possible interventions.

6.3 Contested knowledge: 'they sort of taught it as gospel, like it was obvious'

Within the context of threshold concept theory, the term alien knowledge is used to identify knowledge that originates from another culture or discourse and comes from a perspective that conflicts with one's own. In the context of this study, the term contested knowledge is used to describe the knowledge midwives encountered that was inconsistent and conflicting. Midwives all spoke about how they learned from the mentors who taught them about perineal care in the practice environment. Many of the midwives spoke of the frustration they felt in both experiencing different practices and being expected to emulate the practice of each midwife they worked with. Some midwives spoke of how their mentors dictated their practice without any explanation or dialogue regarding the technique, whilst others spoke of the experience of being mentored by an empowering midwife who challenged their thinking and allowed them to develop their skills. The existence of these conflicting ways of knowing, within the concept of minimising perineal trauma, was demonstrated through the way that individual midwives spoke about their own approach to minimising perineal injury and how they referred to the ways that they had been taught.

> *'The midwives that sort of, I feel like influenced the way I practice in general, are the ones that either they were really experienced or that were scary enough or - I don't mean scary enough, but I mean like firm enough and assured enough for me to take them seriously as a technique. The vast*

> *majority of midwives, it was just that's how they did it and that's how they expected you to do it as their student*' (Mia)

Midwives also spoke of the technique they used as embodied, referring to themselves and others as either 'hands on', 'hands poised', or 'hands off' midwives. This suggests that for these midwives, the type of perineal technique they used is based on personal preference rather than the clinical situation or the woman's choice. The experiences of learning about perineal care during birth, recounted by both Mia and Grace, suggested that there was no questioning, discussion, explanation or sharing of the evidence for the practices they were taught:

> *'I think I was taught it all, I was taught every one, so that hands-on was the best, that hands-off was the best, that hands poised was the best, that flexing the head was the best...'* (Mia)

> *'I was never really taught what I was supposed to be doing with my hands. They were just placed in places and that's what I just accepted was how you delivered a baby.'* (Grace)

Other midwives also spoke of how their practice was influenced when they were students, and how this created a source of troublesomeness when they were taught by a midwife who did not share the same view.

> *'I remember it more prominently in my third year of training and watching very experienced midwives either protect or not protect the perineum…you want to put your hand there yourself, but as a student you can't always do it because you might be with a midwife that's like, 'No, totally hands-off.'…* (Sophie)

> *'The thing we used to talk about quite a lot amongst us girls on the course was that there was no hard and fast rule about it. That when you started working with the new mentor you kind of had to figure out on those first few shifts if you were doing labour care, whether they were a 'hands-off', a 'hands-on' or a 'hands poised' midwife…and they sort of taught it as gospel, like it was obvious.'* (Mia)

Mia's comment that the techniques were taught as *'gospel'* and *'obvious'* suggests that for some midwives this element of midwifery knowledge was totally incontestable. The word 'obviously' was used multiple times during conversations with the midwives in the study (twelve midwives used the word 43 times), indicating that their perspective was based on widely accepted and unchallenged knowledge.

As I was putting up the study posters in the different areas of the maternity unit, midwives came to ask what they were for and what I would be doing. In the Day Assessment Unit staff room, a midwife spoke of the conversation she had recently

had with a student about being 'hands on' or 'hands poised'. The student had shared how anxious and confused she had felt by experiencing an inconsistent approach to clinical teaching. Rather than advocate for one approach or another, the midwife encouraged the student to review the evidence and supported her to make her own decisions. This resulted in the student writing an article about the difficulty the inconsistent approach created for her, which was subsequently published (Ryan, 2013). The views expressed by Ryan (2013) were similar to those voiced by the student midwives I spoke to:

> *'I am so confused, it is really hard to know what to do, and why midwives do what they do. There is so much variation, everyone does it differently.'*
>
> (Student midwife 1)

During the semi-structured interviews and informal conversations, I asked midwives how they learned the skill of perineal care during birth. The frustration some of the midwives had felt as students was evident by their recall of the unpredictability of this aspect of intrapartum care. The feelings of Ryan (2013) and her colleagues was widespread and shared by midwives who had studied and trained at institutions across the UK and in other European countries. Ella, Hannah and Ashley spoke of how mentors had physically grabbed their hands and pushed them onto the woman's perineum or pushed their hands away without any explanation making it difficult to pre-empt the best approach to take, creating contradictory experiences.

> *'When I was a student, I remember mentors being so forceful with you, telling you 'hands off', or 'get your hands on'. Grabbing your hands physically or pushing you away with little explanation of why.'* (Ella)

> *'…some midwives use a dry swab, you know, the sterile one out of the pack, I've used that sometimes, but other midwives have said to me 'Why are you doing that? You don't need to do that!' I think it is so interesting – but frustrating - that there isn't an agreed way, or a best way.'* (Amy)

Other midwives who had been taught consistently, emulated the practice they had seen as students and had not questioned this or tried other approaches. Within a threshold concept framework, it could be considered that these midwives had not experienced the troublesomeness of contested knowledge and had therefore also not experienced liminality and a transformed view of the concept of reducing perineal injury.

> *'I learned through observation of my mentors who taught me what to do when I was learning. All of my mentors were 'hands on' and taught me what to do. I still use 'hands on'*. (Emily)

The comments from some of the midwives suggested that they experienced an element of fear as they were directed to perform a 'hands on' technique as students

by mentors who considered that their knowledge was authoritative and should not be questioned:

> *'It was just down to individual mentors and quite a lot of the delivery suite mentors were 'hands on', and I was with a mentor that used to be very like, stern with me about getting my hand on and like pinching…it was like, my mentor wants me to do this – like basically shouted at me to do it.'* (Olivia)

> *I think the 'hands on', guard the perineum techniques that were actually taught, they would just show you, this is what you do…basically, there was no way you were not going to do it. They were all doing it…you had to do it. If you didn't do it, you could not, not do it. You had to do it. They would say, 'guard the perineum, guard the perineum!'* (Erin)

Midwives recalled their experiences of being third year students and trying to manage the differing expectations and approaches of their mentors. These midwives recalled how they were beginning to be confident in leading care, only to then feel compromised or anxious when their practice was questioned. The mentors they were working with managed this conflict in different ways, reflecting their own philosophy and positionality.

'My mentor said, 'Would you like to lead the care of this woman?' I said, 'Yes, absolutely.' I can just remember this as clear as day…I put my gloves on and I went in to the perineum and she slapped my hand down and she said, 'Take your gloves off, you don't need your gloves on. Get your hands away from the perineum.' I was early in my third year, as a student midwife, and I just remember thinking, 'My goodness I'm so embarrassed.' At first, I remember she kind of smacked my hands down, she was quite abrupt and kept my hands down. I remember thinking, 'Well what do I do now? What do I do now? The head's coming, the head's coming. What do I do?' I just kind of kept going up like this thinking, 'Is this okay?' And I'd look at it, 'Is it…? Shall I? Can I?' (Sara)

'I suppose I just learned to be 'hands on' because all of my mentors were [at the first placement site]*…but here…my first mentor on delivery suite was 'hands off' and I'd never seen that before, and I literally…remember thinking, I've never seen that before and I don't know if I can do that… just thinking about it now when I came here in my third year and saw my first 'hands off' delivery, and realised that that was actually an option…* (Abigail)

'When I went to the next placement they were much more 'hands poised' than 'hands on'…I think as a third year student they expected you to kind of take your own lead…at first I would put my hands on and a few of them said 'have you always been taught to do that?' and I was like 'yeah', and they were like 'well you don't have to do that here.' (Ashley)

Grace recognised that when she was supervising a third-year student, she felt uncomfortable that the student was using a different approach to minimising perineal injury than she would have done herself. Although Grace was uncertain about the student's method (hands poised), it was a situation that led her to reflect on her practice and the cause of her discomfort, suggesting that she was beginning to experience the troublesomeness of contested knowledge.

> *'…I felt, like, really uncomfortable about it …and I was, like, aargh, what's she doing? What's she not doing? …I think she was completely confident in her practice, it was me that was unsure…'* (Grace)

The midwives in the study shared how they had learned the skills of minimising perineal trauma at birth, through either the ritualised application of a learned procedure (Emily and Grace) or from being taught different approaches and developing their own technique (Abigail and Ashley). Most of the midwives spoke of the conflict they experienced when learning the skills of perineal care from mentors who held different but definitive views, illustrating how contested knowledge creates troublesomeness.

It has been suggested that the dichotomous biomedical and social models of maternity care, discussed in the early chapters of this thesis, are no longer completely separate philosophical paradigms in the UK due to the large degree of

overlap in terms of care provision (van Teijlingen, 2005, Walsh, 2012). However, through conversations with the midwives in the study, it became apparent that there were dominant discourses in the different birth settings, and it was exposure to these that influenced the approach midwives took to minimising perineal injury. The attributes of the 'way of knowing' that align closely with the biomedical model are those of reductionism, control and management, an anticipation of pathology, homogenisation and safety, whilst those which align with the social model are those of holism, respect and empowerment, anticipation of normality, intuition and meaning making (adapted from Walsh, 2012). The way that *Contested knowledge* is shaped by the extent of the influence of the biomedical or social model on a midwife's practice is further explored in Chapter 7, *Troublesome environments* in the context of *Ways of Birthing.*

6.4 Incoherent knowledge: 'I am just so confused'

Incoherent knowledge is described in the context of threshold concept theory as knowledge which is troublesome because the discrete elements within the concept, although unproblematic in themselves, do not appear to adhere to an organising principle and therefore as a whole, do not make sense (Perkins, 1999, Meyer and Land, 2003). The incoherence experienced by midwives in the study appeared to be compounded by the counter-instinctive and contested nature of this aspect of knowledge, in addition to the troublesome language used to discuss it. It was significant to note that very few of the midwives remembered learning any

theoretical principles for minimising perineal injury in the university setting, or even discussing this aspect of intrapartum care with academic staff.

Some of the difficulty midwives experienced in the process of integrating elements of knowledge was due to the lack of consistency in outcomes. Many midwives spoke of this in relation to not being able to recognise whether a particular technique or procedure consistently led to an outcome, and therefore were unable to make a judgement about whether to continue to use the same technique for each birth, or whether to take a different approach.

> *'I did everything I normally do, she was in left lateral, I used hot compresses, was 'hands on' and that baby came out slowly and beautifully. It wasn't even a big baby…she had a gush, so I pulled the bell – she was ok – but when we looked at her perineum, it was really odd as the skin was all intact but the Reg said it was a third and we had to go to theatre…I don't think I could have done anything else – I did everything I could…it was strange, and I didn't get to see it properly either so can't quite work out what happened…it's strange as it was so different from a woman I looked after in water the other week where it was a big baby with a compound presentation, but she was intact – I wasn't expecting her to be – it was amazing. I don't know why the other one happened, I keep thinking about it, but I really don't think I could have done anything differently.'* (Kit)

> *'…actually I haven't seen loads of third degree tears, but those I have seen, you know, it just happened* [sigh], *do you know, I don't do anything differently…at all…to the woman who had an entirely intact perineum.'* (Abigail)

Alex spoke of the thought processes following each birth, and the need to try to make sense of it all:

> *'I have to think about it…I do…after every delivery you try to think through everything, why…sometimes you see something that's strange…and then you think a about it, a lot…'*(Alex)

Midwives shared their experiences and difficulty in trying to work out the best approach to take, as they had not observed any pattern or consistency between using a particular approach to perineal care and perineal outcomes. Grace had observed a birth in which two expert midwives had tried to minimise perineal trauma as the woman had experienced a severe tear during her previous birth. Grace considered that all attempts had been made to control the spend of the birth using a 'hands on' approach, but the woman unfortunately sustained another severe tear.

> *'She had an experienced midwife and a band seven midwife, and they were both guarding the perineum. I don't know how they were both doing it but it was like…that head came so slowly, they did absolutely everything that they could have done…she had another third-degree tear, yes.'* (Grace)

These midwives all engaged in reflective practice, trying to reflect on how their actions may have led to the outcomes the saw, but were struggling to make connections. Alex, Grace and Ashley had been qualified for over two years and would be considered 'proficient' within the novice to expert framework (Benner, 1982) yet did not meet the definition of competence in terms of sense-making. Grace spoke about her confusion when trying to identify patterns as a novice midwife and when perineal trauma occurred when she was mentoring a student.

> *'When I first qualified - well, not when I first qualified - when I first went onto delivery suite, as a qualified midwife…I had a spate of really weird labial tears. Intact perineums but I'd have - it would be, almost, tears between the labia majora and the labia minora…I was really thrown by it. After a couple of times of it happening, I was like, what's happening? You do feel a bit defeated…I kind of felt like it wasn't really anything that I could have changed, even though I was the mentor there, in that situation. Yes, I felt a bit confused by that one, I think.* (Grace)

During one of my observation days on the delivery suite, one of the obstetricians invited me to observe their practice as they would demonstrate *'the right way'* to me. This was not within the remit of the study, but I was interested to know what their approach would be and asked whether consistent outcomes were observed as a result of their approach. Our dialogue was interesting, particularly as it

demonstrated a belief that there was a 'right' way ('hands on') to prevent perineal injury, even though the application of a consistent approach did not contribute to a trend in reduced perineal injury.

Similarly, Sophie, a novice midwife, also reported that she would always use a 'hands on' approach, as she felt there were benefits to this, even though they were variable. She shared a similar view that this was the 'right' way, but also referred to a 'belief' in the technique.

> *'It doesn't always work, and I understand that. I believe that guarding is definitely a benefit, personally, I think so. Obviously, it's not 100 per cent but I think there's… if you believe in it, then you believe in it and if you don't, then you don't. I do.'* (Sophie)

As the conversation with Sophie continued, it became clearer that she was beginning to question her position and reflect on her understanding as we discussed the issue more. The conversation suggested that she was entering the recursive phase of liminality, or 'liquid space', a recognised state within the threshold concept framework where the potential for learning is maximised (Meyer and Land, 2005 p.380).

> *'So in my head it makes sense for either, any compress to be warm, to allow the skin to sort of relax, to soften and to allow for that extra space but I haven't read on that. …it would be interesting to see research on that and guard or not guard, warm water?.. I think that would be a really interesting thing to actually look into, which I'll probably look into now because I'm questioning myself…I believe that guarding is definitely a benefit, personally, I think so. I think there is, but I definitely need to do more research now, you've opened my mind to an array of questions that I want answered and what's the research behind it? I'm going to do some research about this now!* (Sophie)

Although Sara was considered an expert midwife, she also shared her experience of being in a new post as a senior member of staff where she experienced a number of cases of severe perineal trauma. She had tried to reflect on why these outcomes may have occurred but was unable to identify any cause for the outcomes.

> *'I hadn't been there for very long and I had three third degree tears on the run, in the pool and I thought, 'What am I doing wrong?' …so I reflected on that and did follow the research that was available at the time, and just thought, 'Well, am I doing anything wrong?' …facilitating these perfectly, normal, straightforward physiological births, what else can I do? I'm not encouraging the woman to push; she's doing it under her body's own steam. I*

need to be reflective…if I'm doing something wrong and need to pull back on something, I don't know what that was.' (Sara)

Midwives also shared their experiences of examining a woman's perineum following birth and being surprised by the outcome, further illustrating the incoherent nature of this concept. There were occasions when midwives had been expecting substantial perineal injury to occur and it did not, and those in which they thought the woman's perineum would be intact, but it was injured. Sophie referred to the birth I had observed with her. Alex, Olivia and Sophie recounted similar experiences.

'Sometimes as well you think, gosh you must have really torn in half and then when you look, there might be nothing at all or just a slight labial graze…I knew as soon as the baby was born, it was obvious that she had a tear, but I don't remember thinking that I was anticipating it to be like it was. I just find…and that has happened a lot…you look at it externally and you think fabulous, and then you look inside and think, oh no, not quite so fabulous!' (Sophie)

'So, I was thinking there might be a deep tear in the perineal muscle, and then…she was like…intact, which was crazy.' (Olivia)

Helen, an experienced midwife, told me about a case in which she thought a woman had sustained severe perineal trauma. She spoke of how she had tried, but failed, to do an episiotomy as she considered that a buttonhole tear was appearing. After the birth, she was amazed to see that the perineum was intact.

> *'Once, I really felt the need to do an episiotomy, I thought that the perineum was buttonholing. I couldn't infiltrate though – I really tried as I thought she was going to tear really badly. She delivered, and I thought that she must have torn really badly so I asked a more senior midwife to come in and check it for me as I was sure that she would need to go to theatre for repair. Do you know what – she was intact, totally intact, it was amazing.'* (Helen)

The recognised models of skill acquisition suggest that in order to develop and refine clinical reasoning and decision-making skills, it is necessary for practitioners to reflect on the outcomes of their practice (Benner, 1999, Dreyfus and Dreyfus, 1980, Ericsson, 2006). As these midwives demonstrated, the inconsistent nature of their experiences in relation to perineal care practices, type of birth and subsequent perineal outcome make this aspect of knowledge incoherent.

It has been suggested that good clinical reasoning skills are based on the ability to use both non-analytical (fast) and analytical (slow) ways of thinking. The faster non-analytical processes are thought to be based on pattern matching from associative

memories and the slower analytical processes based on reflection and reasoning based on formal knowledge or evidence (Cutrer, Sullivan and Fleming, 2013, Jefford and Fahy, 2015). The faster non-analytical mode of processing information is a passive process of recognition, considered to be that of intuition. The dual processing theory of fast and slow thinking proposed by Kahneman suggests that in situations where there is incoherence, fast thinking generates coherency to supress ambiguity which may in turn lead to faulty intuition. The development of intuition that can be trusted as a form of intuitive expertise or mastery takes time to develop but requires exposure to an environment in which there are regular patterns and immediate feedback (Kahneman, 2011). The midwives in this study identified that assimilating experiences in which there were regular patterns was problematic and created a sense of ambiguity and incoherence in relation to using either the 'hands on', 'hands off', or 'hands poised' approach and consistent perineal outcomes. As Grace recognised:

> *'You're never going to know and you're never going to have the exact same conditions, to be able to give it a try. I don't know, it's tricky.' (Grace)*

6.5 Conclusion

This chapter presented the second main theme of *Troublesome knowledge*. The findings illustrate how the midwives in the study experienced difficulty in making sense of the knowledge that was presented to them as authoritative, in relation to minimising perineal injury during birth. The subthemes of *Counter-instinctive*

knowledge, Contested knowledge, and *Incoherent knowledge* present evidence that this aspect of midwifery practice is particularly challenging and that consequently these themes are linked by an affective dimension that caused midwives to experience fear, frustration, stress and anxiety. Chapter 7 presents the final theme of *Troublesome environments*, which is intrinsically linked to both this and the previous chapter, as within the concept of minimising perineal injury during birth, both language and knowledge hold contextual and cultural significance.

Chapter 7 Troublesome environments

7.1 Introduction

This chapter is the final of the four findings chapters and presents data that demonstrates how the birthing environment had an impact on the way the midwives

in the study practised in relation to minimising perineal injury. The notion of the environment as a source of troublesomeness was identified during the participant-observation phase of the study as I spent time with midwives in both the birth centre and the delivery suite (see Chapter 4, section 4.2 for descriptions and schematic diagrams). It became evident that the environment of the birth setting, and the culture within it, affected midwives' approaches to perineal care. I observed that the two birth settings were managed differently, as were the ways in which the women and their families were welcomed and encouraged to participate in the labour and birth experience.

It has been recognised that the place in which a women give birth plays an important role in both outcomes and satisfaction (Hatem *et al.,* 2008, Brocklehurst *et al.,* 2011, NHS England, 2016). Birth settings have also been shown to have an affect those providing care, due to the differing approaches to birth held within the biomedical and social models of birth and subsequent relationships that evolve between the care provider and the woman and her family (Fahy, 2008, Hodnett, Downe and Walsh, 2012). Midwives often work in environments where their autonomy is eroded and there is a personal dissonance between promoting physiological birth and working within the constraints of an overarching biomedical framework of pathology and risk (Anderson *et al.,* 2017). The main theme presented in this chapter is *Troublesome environments,* however there are direct links between this theme and those of the proceeding chapters. Further themes within the concept of troublesome environments were identified as *The birth environment* with sub-themes of *Physical*

spaces and *Isolation and story-telling,* and *The cultural environment*, including sub-themes of *Ways of birthing* and *A climate of fear and blame*.

7.2 The birth environment

7.2.1 Physical spaces

The birth centre environment had a noticeably more relaxed atmosphere than the delivery suite, and the relationship between the women and midwives seemed to be more equitable. The way in which the midwives and families shared the space and facilities on the birth centre seemed to create a sense of community and partnership, in contrast to the formality of the delivery suite. An extract from my fieldnotes taken on the first day on the birth centre illustrates this:

> *Whilst sitting in the staff office, I notice that it has a completely different atmosphere to the midwives' station on the delivery suite. It has a feeling of informality, perhaps due to the 'home from home' environment that the staff seek to create. There are four birthing rooms on the birth centre. One of the smaller rooms is used for triage purposes and is occasionally used for birthing women; two have birthing pools and birth couches and seem very spacious in comparison to the rooms on the delivery suite. The third room is smaller, with a birth couch and feels cosy and homely. The birthing rooms and staff office are arranged in an 'L' shape around a seating area with two large leather*

> *sofas and armchairs and a small kitchen. Families and staff share these facilities, which adds to the informality and 'home from home' atmosphere.*
>
> (Fieldnotes February 2016)

I also noted how comfortable the families felt using the birth centre space, and at times felt that I was intruding on this.

> *As I wait, a couple with their baby come and sit down in the sitting area. I'm not sure why they are there, and they don't seem to be looking for anyone or needing assistance. The mother feeds the baby, and the partner goes to make a cup of coffee; they both seem at home in the environment, and I feel as though I am invading their space.*

In contrast, the delivery suite environment had a more formal atmosphere with an air of busyness. The hub of activity appeared to be the midwives' station, which was situated in front of the manager's office and the whiteboard displaying the details of the women who were in each of the birthing rooms. A noticeable difference was that there was no shared social space, and the kitchen had a prominent 'staff only' sign on the door. During my observation period on the delivery suite, I felt welcomed and included by the midwives, but the physical environment was much less conducive to the 'hanging about' (Woodward, 2008) I had been able to achieve on the birth centre.

I found it difficult to find somewhere to sit so that I could observe, talk to the midwives and be in a position to recruit women to the study.

Initially the delivery suite manager had suggested that I should base myself in the staff sitting room, opposite the triage rooms, so that the triage midwife could let me know if a woman was admitted who met the study inclusion criteria. I tried to do this on several occasions, but found it to be an isolating experience, and I was unable to observe the activities and conversations that were taking place in the area. I therefore tried to locate myself at the midwives' station, but the space was limited, and the midwives often needed to access the computers or printer and I needed to move. An extract from my fieldnotes illustrates how difficult it was to fit into the physical environment, and I wondered if the women were affected by this too.

> *I discussed the study and inclusion criteria with Maya who is working in triage today. She suggested that I either sit in the staff room or at the midwives' station and she will find me if anyone suitable is admitted. I found sitting in the sitting room so isolating before and worry that I might be missing something important by not being in the place where most of the activity is taking place. I decided to sit at the midwives' station, but it is really busy as the unit is quiet, and the midwives are sitting at the station chatting or using the computers. There aren't any chairs available, so I perch in the corner furthest away from the whiteboard but have to lean on the top of the bin to write my notes. The shelves with forms and notes are behind me and I keep*

> *having to get up every time someone wants something. I decide to move to the sitting room after all to finish writing up my observation notes and tell Maya where I am as I pass the triage room. Rebekah is in the sitting room sleeping after her night shift before she drives home, so the room is in total darkness and I can't see to write anything so creep back out and try to find somewhere else to sit at the midwives' station, but the area is so busy, just finding somewhere to hang out seems impossible today. I wonder if the lack of social space affects the way women and their families feel too.* (Fieldnotes, October 2016)

Following this I sat with Maya in the triage room, and we chatted about the study. Maya spoke of her experience of working in both birthing areas and considered that the physical environment, and the way that the birth rooms were set up, influenced the way that midwives practised, ultimately affecting perineal outcomes.

> *'The birth centre is very different from here [delivery suite]. I think it* [the differences in rates of perineal trauma] *is all about positions. Here, the bed is right in the middle of the room, which encourages women to use it. Then add to that the use of CTG* [cardiotocography] *and epidurals, you have poor birth positions. It's about women's choices, but position is important and the environment affects that.'* (Maya)

There had been attempts to create a more homely environment in one of the birth rooms of the delivery suite during the observation period, and it was interesting watching the power dynamics of this unfold. The birth bed was made into a chair and placed in the corner of the room in an attempt to remove the bed as the focus of the room. A birthing ball and mat were also placed in the room to encourage the woman and midwife using the room to consider adopting an active approach to birth. My fieldnotes record my initial response to the changes:

> *I went into the room next to the midwives' station to try to find a chair, as again there was nowhere for me to sit. The bed has been made into a chair and is in the right-hand corner of the room, it seems really light and airy. There is a ball and mat also in the room – I feel really excited that the changing birth environments group* [see below for explanation] *is having an impact.* (Fieldnotes October 2016)

The Director of Midwifery and the delivery suite matron had set up a 'changing birth environments' group to consider how the delivery suite environment could be altered to become more welcoming and conducive for birth. Varying the set-up of the room was one example of how the team were trying to make changes within the confines of the limited physical space. The next time I was observing on the delivery suite, I asked the midwives whether it had been a successful initiative. I was told that the room set-up was continually being changed between shifts with the bed being placed back in the centre of the room and the birthing ball and mat removed.

Midwives who were keen to promote the concept of an active birth environment would then re-arrange the bed into a chair and move it to the corner of the room, only to find that on their next shift, it had reverted back with the bed placed centrally in the room. The room became a contested space, demonstrating some of the power dynamics of birth places; I noted in the margin of my notebook *'the battle of the chair'*.

During a discussion about the incidence of perineal trauma, Sophie spoke of the woman's position as a key factor, and how the predominant position for women while in labour on the delivery suite, was semi-recumbent on a bed. Although Sophie tried to change this when she cared for women on the delivery suite, she recognised that many midwives may not be comfortable to take the same approach.

> *'When you're in labour ward* [delivery suite]*, where are you? You're on a bed, that's where women are, but how many labour ward midwives feel confident having their ladies on mats, on the floor or on a birthing stool or, you know? I tend to raise the beds…raise the beds so that they can actually just lean over the beds…but labour ward, especially, no one's like standing up. Everyone's lying on a bed, everyone.'* (Sophie)

Abigail discussed her practice for minimising perineal trauma in the context of the two different birth settings, and although she generally used a 'hands on' approach,

she considered that this was more likely when she was caring for women on the delivery suite, due to their position, which was usually semi-recumbent.

> *'Now, especially being in the birth centre environment, we see a lot more normal deliveries so you don't…you're not guiding women through it quite as much as you are when you are on delivery suite, you know with epidurals…well having said that, women are in so many different positions on the birth centre, it is so much more difficult to be as 'hands on' than when you are on delivery suite, because no matter how hard you try, they generally end up in the semi-recumbent position, erm and on the birth centre, it is just however you end up…however they end up.'* (Abigail)

Extracts from my fieldnotes and observation data also revealed that the only birth positions I observed on the delivery suite were semi-recumbent or lithotomy. The birth centre rooms did not have a birth bed, however there was a bed in the triage room, which was used for initial assessment and perineal suturing after birth. I observed one birth in the triage room (Observation M), in which the woman adopted a semi-recumbent position, the other births I observed all occurred with women in other positions such as lying on their side, on all fours, standing, upright kneeling or squatting.

Ashley, Abigail, Hannah and Lauren talked about the woman's position in relation to perineal trauma and identified that the semi-recumbent or lithotomy positions may be sub-optimal for maintaining perineal integrity:

> *'I have noticed though that women who are in semi recumbent* [position] *on delivery suite often tear, the bad ones* [tears] *I've had have always been in the same place – straight down, yeah…and…it was literally just straight down'.* (Abigail)

> *'I tend to put my hands on more and protect the perineum more…more so when they're in the semi-recumbent position – maybe it is just the position they're in I'm not sure... I don't think I've had…well I have, but very rarely…had a woman in the semi-recumbent position that has not torn at least slightly…'* (Ashley)

> *'…in semi-recumbent* [position] *they are more…there's more tears…when the legs are out to the side…I kind of worry a little bit about when I see lithotomy, or pushing the legs…if a woman is semi-recumbent, pushing the legs up and out, because to me, that's got to cause more pressure, just anatomically on the perineum…'* (Hannah)

Ashley identified that when caring for women who were in a semi-recumbent position, she was more likely to adopt a 'hands on' approach, in order to '*protect the perineum more*'. Emily also spoke of the need to provide manual support when women were in a semi-recumbent position as the visualisation of the extending perineum was not as easy as it might be in other positions, such as all-fours.

> '*…in the all-fours position I'm much less 'hands on' as I can easily see the perineum – you get a 360 degree view. When women are in the semi-recumbent position I feel the need to be hands–on as I can't see so easily.'* (Emily)

During an interview with Grace, she spoke of how the physical environment affected the care she could give, and the differences between the delivery suite and birth centre in a similar way to Maya. I had observed Grace whilst she was working on the birth centre and we discussed the rotation to the different clinical areas. I asked how she felt about her next move from the birth centre to the delivery suite.

> *'I hate it! I don't hate delivery suite, but I hate this delivery suite. There's just not the room, there's nowhere to sit…you stand awkwardly over them in bed and it's just unpleasant for everybody involved. You feel like so uncomfortable you end up coming out of the room …If the rooms were bigger and the facilities nicer then I'd enjoy it a lot more and I'd probably be down there more than*

> *what I am…* [the birth centre] *is a lot more enjoyable. I feel like I give better care on* [the birth centre]*. I feel so cramped, in myself, on delivery suite, I don't feel I can give good care down there.'* (Grace)

I asked Grace whether it was the physical environment of the delivery suite which prevented her from providing the kind of care she would have liked to give. Although the physical environment played a large part in this, Grace considered that the physical space created a cultural difference to the perception of care provision, with the focus shifted from the woman to the central monitoring at the midwives' station.

> *'I think most of it is the environment. But then I think the culture, down there, is different, because of the environment. So, midwives do sit at the desk and watch the central monitoring rather than giving care to their women. So, I think it's difficult not to get swept up in that, as well. But yes, I don't enjoy it. I don't feel like I build a relationship with my patient. You're stood over her, like a patient in a bed and it shouldn't be that way.'* (Grace)

It was clear that the midwives in the study considered that the physical environment of the birthing space had an impact on the way they were able to practice, and the expectation that women labouring in these areas would birth in a certain way. This is discussed further in section 7.3.1 *Ways of birthing*.

7.2.2 Isolation and storytelling

Physiological birth usually takes place with few people present, often this is just the woman and her partner and the attending midwife. This nature of practising in isolation can be seen as another element, which contributes to the troublesome environments that novice midwives need to navigate as they develop their knowledge and craft of midwifery. Midwives spoke of how they may have experienced multiple approaches to managing the second stage of labour as student midwives, but once they were qualified, the opportunity to observe and learn from others or to be observed, was limited. Grace spoke of how she had learned a different approach from observing other midwives during her rotation as a newly qualified midwife, in contrast to Ava, who always used a 'hands on' approach and had never observed anything else.

> *'…maybe it's because I've never seen anything else, and now we…I don't see other midwives…how other midwives practice…I've had good results with my technique…so I just…hmm'.* (Ava)

Olivia and Erin highlighted that once they had qualified as midwives, the opportunity to observe another midwife's practice became very limited. It was clear that they valued the opportunity to observe births in which they were not the lead care provider in order to continue to learn from others. Ashley and Olivia also spoke of the joy of observing physiological '*proper*' birth on the birth centre.

> *'You never really get to watch or learn from anyone else once you are qualified…Just watching that birth the other day, it makes me go all goose-bumpy just remembering it – I cried at the time. It's amazing when women birth like that. It is so important to remember that they can.'* (Olivia)

> *'Once you're qualified, you're busy doing…You do learn a lot about decision-making but other than that, your brain is constantly engaged because you have to always tick all the boxes in your head and you need to document and you're…it's a lot to do really, so you don't, you never have the time to just be there and see others - you never really have the time to just watch what others are doing. Sometimes at births, sometimes you do, because obviously, it's two midwives usually at a water birth, a pool birth, so then you can actually observe how others are doing, when you're not leading.'* (Erin)

On the birth centre, I noticed that the midwives were willing to support each other readily and share their knowledge and expertise. Olivia had been qualified for almost a year and had been working on the birth centre for two months when I first observed her caring for a woman. I asked her about her experience of working independently in a midwife-led setting.

> *'Yeah, I love it, I really love it. The first month was quite wobbly for me though just confidence-wise because here you're really an*

> *autonomous practitioner…*S*ometimes when others come in…I guess there is that feeling of 'good she's here, she can help me now!' [laughs] …why would it be any different…there's so much stuff we do independently in your normal day, why would you not just be like 'can you just look at this with me?'* (Olivia)

During an observation on the birth centre (Observation K), Olivia had asked me to call another midwife as she wanted advice regarding the progress of the birth of the baby's head. I observed the interaction between Olivia and Ava during the birth but could not fully hear their conversation. I asked Olivia and Ava about it in the interviews. It was interesting to hear how both midwives had learned something from each other during the interaction, which would not have occurred unless Olivia had asked for support.

> *'the bottom looked really stretched but at the sides you could see that there was space in there…and I've seen midwives…just putting their fingers inside between the labia and to the head to give like, room…but I thought there was just so much space from the outside to stretch a little bit, and the head just came.'* (Ava)

> *'…Ava was just like, 'with the height of the contraction, just push around here', so like where the ears are basically, just push it and see*

> *if you can actually move the skin a little bit, and as soon as – I barely did it – and it came…it really did – it came.'* (Olivia)

During the interview Ava mentioned that she had not seen warm compresses used before but having observed Olivia do this during the same birth, it was something that she might incorporate into her own practice.

> *'…that [warm compress] worked so well for her, so I think maybe from now on its something that I'll do more often…especially on delivery suite. I've never actually seen that, I've never used it.'* (Ava)

Prior to Ava coming into the room, Olivia had been considering performing an episiotomy to expedite the birth, but the reassurance she was given led to a different approach, resulting in the woman maintaining an intact perineum.

> *'I was kind of like, I just want this baby to deliver…and I was thinking, the perineum looks tight, and maybe I need to do the episiotomy, you know what I mean…but when Ava came in, she was like…'that's fine…it's fine…we're fine'…that really calmed me down…'cos I was having some anxieties.'* (Olivia)

Olivia also shared that she had been concerned that there may have also been difficulty with the birth of the shoulders but was reassured by Ava to wait rather than intervene.

> *'The head came beautifully…it actually came beautifully and I could see chin and, but so I was kind of thinking is there going to be shoulders* [shoulder dystocia]*…and that was when Ava said, 'look the colour's great' and then I found it so hard to not just deliver the body, but I thought, no just wait for the next contraction….I did find it quite anxiety provoking. Yeah, that anxiety to have maybe done an episiotomy…I know! …back in the day women would have just had them wouldn't they, and it really shows …she didn't need anything in the end.' (Olivia)*

Whilst talking to Sara, she spoke of the unique and private world of birth, particularly in midwifery-led settings such as the birth centre. It was interesting how she referred to the exception to this happening within what she termed the 'industrial' model of birth.

> *'…it's such a private world birth, and unless you're privileged to be called in, or from the industrial model you'll go in as a second, you never witness the practice of a midwife or a doctor…we often don't see the work, the clinical*

> *work of other practitioners, particularly actually in a midwife-led setting.'* (Sara)

Liz talked about some of the issues of isolation when judgements were being made about midwifery practice, and Sara discussed how observing another midwife's practice could be informative, either because the midwife was exceptional or because their practice was questionable.

> *'I think it's really difficult to know the contributing factors when you're not in there seeing what other people are doing…actually women could maybe sustain say a second-degree tear that would have only sustained a first-degree tear or an intact perineum because of things that we were doing…nobody gets to see what anybody else does.'* (Liz)

During my observation it became apparent that although physiological birth was usually a private event, midwives were very keen to talk about their stories of birth, particularly in relation to perineal outcomes. Midwives often sought me out to tell me about births they had facilitated, observed, or been told about by other midwives. I documented in my fieldnotes that I was not sure whether this was because they simply thought I would be interested, or as a way of validating the story or seeking a response to what had occurred. An example of this was during a period of

observation on the birth centre when I met a midwife for the first time, and she immediately told me of a recent case she had experienced.

> *A midwife who I haven't yet met, Helen, asks me about the study:*
>
> *'How is your study going? I'm really interested in what you are doing, what have you found so far?' I say that it is going ok and that it is too early to come to any conclusions yet, as I am not sure what else to say. 'Well, I had a case last week that you might be interested in…'* (Fieldnotes June 2016)

Helen went on to tell me in detail about a case in which she had performed an episiotomy to expedite birth as the '*clock was ticking'.* Whilst she was telling me her story, Helen asked lots of rhetorical questions. As we were talking, Sara joined us and also shared some of her own experiences.

> *Sara had joined us in the office and also seems keen to discuss some recent cases with me. It seems that midwives are really interested in perineal issues and value the opportunity to talk through their experiences with someone and consider that I am interested in all things perineal – which of course I am!* (Fieldnotes June 2016)

Benner, Tanner and Chesla (1997) identified the importance of storytelling in the context of developing nursing knowledge. The concept of a pool of expertise, built from sharing experiences would appear to be particularly relevant in birthing environments, where midwives often practise and develop their skill in isolation from others. It has also been suggested that storytelling is a vital component for creating an occupational culture in which the physiology and art of birth is respected (Gilkison, Giddings and Smythe, 2016).

Gould (2017) also suggested that the generation of midwifery craft occurs through storytelling and the sharing of intuitive, embodied and experiential knowledge; and recommended that the oral tradition of midwifery should continue be an accepted source of authoritative knowledge. The midwives in this study demonstrated a willingness to engage in storytelling, often asking other midwives to join the story or to share their experiences with me. Williams (2003, cited in Brodie and Leap 2008 p. 164) suggested that, in the context of storytelling, the midwifery equivalent of 'Once upon a time…' is 'I had a lady who...' In my experience, this was also augmented with 'Have you heard about…' as the stories became more widely shared.

7.3 The cultural environment

7.3.1 Ways of birthing

Within the context of this study, the definition of culture proposed by Davies, Nutley and Mannion as *'the way things are done around here'* (2000 p.112), has been adopted. 'The battle of the chair' discussed in section 7.2.1 was an example of how the cultural environment affected the physical environment of birth and illustrated how those who work in the birth settings can exert power and control over it. Grace had mentioned how the physical space on the delivery suite led to a different culture of care provision during labour, with midwives tending to be 'with technology' rather than 'with-woman'. Sara also spoke of how the physical and cultural environments of birth spaces are often closely related and considered that the model of care is affected by the culture of the environment. She had experienced this as a practitioner in relation to the facilitation of birth, perineal care and hand positions which she talked about during the interview.

> *'I've seen so much variety from different practitioners and quite a polarisation of opinion as well. If you go to, generally, a delivery suite and you have a 'hands-off' approach you get completely ostracised and criticised like, 'that crazy midwife'. Whereas if you go to a birth centre with a very strong physiological birth ethos and you start putting your hands on, that is also potentially pulled to pieces.'* (Sara)

In relation to adopting a 'hands on' or 'hands poised' approach, Sara spoke about how the power dynamics of birth may affect the midwife's actions and considered how the midwife viewed her role as either a baby catcher or a manager of the birth process.

> *'I think it depends on the confidence of the practitioner and where they feel they sit in maybe the power of dynamics of birth, whether they believe it's the woman birthing the baby and they are catchers and observers and there to keep things safe when things are going off the pathway or whether they feel that they have to do something.'* (Sara)

The cultural expectations of the different birth environments had also been experienced by Liz. When discussing the 'hands on' or 'hands poised' approaches, she suggested that the environment, rather than the clinical situation, could influence the midwife's approach. Her reference to the '*unwritten understanding*' within the different areas echoes Sara's experience of being called '*crazy*' or being '*pulled to pieces*' if her approach did not fit the dominant culture.

> *'I think culturally it's like, if you're a birth centre midwife you're meant to be a 'hands off' midwife. If you're on labour ward, you're a 'hands on' midwife. I think that's the unwritten understanding.'* (Liz)

During the study I observed Erin on the birth centre, however during the interview she spoke of the differences she had noticed between different birth settings when she was a student midwife at another hospital site. Her experience of the environmental culture affecting practice was similar to that of Liz and Sara.

> *'They had the delivery suite where pretty much they were all 'hands-on'…women were just told, 'This is how we do it.' They often weren't asked and there wasn't much of concern to information sharing going on…hands on the perineum, a lot of counter-pressure... The birth centre was different, because they had a lot of water births, you see. Obviously, when the women were in there, in the pool, no one would touch them, and we would actually have a lot of intact perineums with that, yes.'* (Erin)

The midwives who rotated between the birth centre and the delivery suite spoke of the differences in the culture of the two areas, which appeared to be as a direct result of the differing philosophies and approaches to birth. The delivery suite was a shared working space with obstetricians and midwives working alongside each other but not always having a shared perspective about birth. A key featured seemed to be the recognition of the individual rhythms of labour on the birth centre, which moved the focus away from 'clock watching' to observing the woman's behaviour and progress. Abigail referred to the differences in perineal outcomes on the birth centre being due to recognising that women progress in labour at different rates, and that it was this rather than hand position that made the difference.

> [on the birth centre] *'…you know you're not thinking, this baby has got to be delivered within the hour or otherwise the registrar* [doctor] *is going to come in…of course you can't push a baby out in an hour, do you know what I mean? …if you don't, the registrar is going to come in and do an episiotomy and expedite the delivery…so…I think we do make a difference, but not necessarily because we are 'hands on' or 'hands off', I don't think that makes a difference…on the birth centre…however long it takes is however long it takes…so you know, if two and a half hours later the head is coming, no one is going to tell you that the time is up. It is a completely different philosophy and just makes a much nicer working environment because you are not constantly clock watching.'* (Abigail)

Abigail's perspective was that it was the philosophy of labour and birth held by the midwives on the birth centre that created a conducive environment for birth. She considered that mobilising during labour and avoiding epidural analgesia, in addition to recognising the woman's individual labour rhythms, may lead to a decrease in perineal injury.

> *'…all of that makes a difference to the birth that they have, which maybe, subsequently makes a difference to the kind of perineal trauma they suffer as a result… sitting on your bottom for 18 hours is not going to be conducive to creating an environment where you are not going to sustain any trauma. We are so proactive here about walking around and whatever... I don't know if it*

makes an actual difference, but it does seem to…it's not unusual, it's really not unusual to have an intact perineum…' (Abigail)

Sara referred to her experience on the delivery suite and considered that epidural analgesia and strict timelines increased the risk of perineal trauma, in contrast to adopting an approach that recognised the woman's physiology.

'I think when you look at guidelines in relation to pushing in the second stage…having really strict guidelines on you can and you can't push for beyond an hour and an hour and a half…it's really arbitrary timeframes, it's not really working with physiology but it's working with the industrialised system and medical model rather than the woman's physiology...' (Sara)

Grace also talked about how restrictive timelines, epidural analgesia and birth position encountered when working on the delivery suite affected her practice. Grace considered that working in the birth centre had enabled her to develop her midwifery skills in a way that she had not been able to when working on the delivery suite, and that this enabled her to provide better care.

'If I'm on [the birth centre], *I normally encourage them to go with their urges…Then, on delivery suite, if they've got an epidural, it's just completely different…and I think they're strict on the timeline. Whereas I think on* [the

> birth centre]*, we've got a bit of leeway, and we've got a bit more time to play with, as long as everything is going right… I think I've learnt more about midwifery and everything, on* [the birth centre]… (Grace)

Grace's experiences suggest that in the absence of a troublesome environment with adherence to strict timeframes and surveillance, she was able to assimilate information and refine her midwifery practice. Similarly, Erin spoke of her experience in different environments as a student, and how she learned to work with women's physiology since she had qualified and practised in a midwifery-led environment. She had noticed a reduction in perineal trauma when women were relaxed, and she was able to just let birth '*happen*'.

> *'…they were basically doing 'hands on' the perineum, guard the perineum and Valsalva* [breath holding] *manoeuvre pushing* [on the delivery suite]*. It was just the standard thing to do and, obviously, there were much more tears, and what I've learned, basically since the moment I changed over* [to a midwifery led environment] *…giving things time really, and women who are very calm and relaxed most of the time. If you just let it happen, they might not even, they sometimes don't tear at all. I think it's got a lot to do with that, if you let physiology just happen…I've seen it.'* (Erin)

During an observation period on the birth centre when Erin was working, there was an example in which she navigated the expectations of the 'timeline' many of the midwives referred to, to give *'more time'* for progress. The notion of imposing 'clock time' or 'pace' during labour with arbitrary time limits being imposed is not a new concept.

> *Erin comes out of the room to write on the board – 7cms. She tells me that this is the first VE [vaginal examination] for J (which is unusual), and that: 'To be honest, she is probably more like 8, but I just want to give her more time!'*
> (Fieldnotes, April 2016)

Mia had experienced working in both the birth centre and delivery suite, and was aware that she had different perspectives, both physically and instinctively depending on the environment. She referred to how managing an active birth on the birth centre gave her a physically different perspective as the woman was unlikely to be on the bed, and this created a different '*feel*' although her approach to perineal care would be '*similar*'.

> *'If I think about it, they're two pretty different environments. That's not to say you can't create birth centre-like environments on delivery suite. In talking specifically about perineal trauma, you're talking about different equipment as well, so you're talking about positions, like not even lithotomy…just your*

> *view on it is different, like physically and then maybe in terms of your instinct, what your instinct's going to become that moment. Your view is also different so - I don't know. If you're on the birth centre you're going to be on your knees, you're going to be looking around a corner, your angle is going to be different, and so your perspective of how much you do or do not need to protect that perineum will put a different perspective on it, it is different…I guess technically what I do would be similar…Just the perspective is different and the feel is different. The conversation* [with the woman] *would probably be the same, but it's just a bit of a... it's a different perspective, isn't it?'* (Mia)

In her critique of the obstetric bed, Jowitt (2012) highlights how the furniture of the medicalised birth space in particular, the bed and the clock, can become the focus of attention, rather than a focus on the behaviour and preference of the woman. I was also aware of the focus on these two artefacts of medicalised birth. The focus of attention seemed to change the atmosphere and 'feel' of the birth space. An extract from my fieldnotes written whilst on the birth centre (Observation J), illustrates how I had also noticed a different 'feel' between the two environments, and noted how this may be the 'gamechanger' in terms of midwifery approach and outcomes.

> *The atmosphere feels very positive and J tells me that she is happy for me to be there during her labour and birth. Her birth plan states that she would like to be surrounded by birth companions, which includes her partner, sister, mother and father as well as being open to having student midwives – she has*

> *documented 'student midwives welcome!'… J is very much in control of the situation – she has used hypnobirthing birth preparation and is clear about the way she wants things to be. Her mother is present in the room, but sitting in the corner and reading the paper, her partner is sitting beside her but is mostly silent. I compare this to my experience of the labour ward rooms in which it seems that the woman is the guest, not the host – I think this is the gamechanger!* (Fieldnotes April 2016)

On another occasion I had recorded a conversation with Ashley regarding the atmosphere of the environment on the birth centre, and my observation that women seemed to progress more quickly in this space in comparison to my experience on the delivery suite.

> *I have noticed how women seem to labour differently on the birth centre, and that the expectation is not the same as on the labour ward in terms of the linear progress of labour. On the birth centre, the atmosphere is generally very relaxed and women are encouraged to sleep or rest as best they can and are left undisturbed by the midwives during early labour. If women are in the early stages of labour but want to stay and there is room, they are encouraged to do whatever feels right for them, and they, rather than the midwives, make the decisions about this. It also seems that the women progress more quickly in labour, and I ask Ashley if she has noticed this too.*

> *'Yes, I think that women progress better and more quickly on the birth centre because we aren't constantly watching them with an eye on the clock. If everything is ok, we generally leave them to labour in private until they need us. It's very different to delivery suite.'* (Fieldnotes April 2016)

Although midwives on the birth centre generally spoke of the importance of recognising the different rhythms of labour for women, a story shared by Helen illustrated how the dominant medical discourse was still deeply embedded. Her practice was still influenced by the *'clock ticking'*; an example of how this has become what Gould has termed a 'prevailing, powerful and reductive' influence in midwifery practice (Gould, 2017 p.42).

> *'I asked her if I could feel to see how tight the perineum was, and it was really stretchy with loads of room, so it wasn't as if it was tight or anything. I was wondering what to do as she had been in second stage for about three hours, and anything over four triggers an adverse event report… I think I was worried because of the time thing, the clock ticking, anyway I eventually did an epis* [episiotomy]. *I gave the local [anaesthetic], and I wondered if that might be enough on its own, but the head still didn't move much so I did a tiny epis and the head just came then, really slowly and beautifully. When I was suturing it I realised just how tiny it was, it was really superficial and was just the skin really…there was very little to repair. I kept wondering if she would have been intact if I'd just waited…but how long could I have waited?'* (Helen)

After Helen had shared her story with me, I reflected on the content and context of it and recorded this in my fieldnotes.

> *Although there is less of an expectation that women will follow a linear pattern of progress in labour on the birth centre, it is still clear that there is an expectation that midwives will expedite birth if the 'allowed' time is close. Helen's reflection on her practice as to whether the woman would have been intact if she hadn't intervened is interesting and I wonder how much perineal trauma is iatrogenic as midwives and obstetricians may rush women in labour due to the artificial time constraints placed on them by policy and expectation. Helen was clearly monitoring fetal and maternal wellbeing and was not concerned about either, yet felt that she had to do something, which ultimately resulted in perineal trauma.* (Fieldnotes June 2016)

In addition to experiencing different philosophies of care in the two birth environments, midwives also noticed how this created a difference in the perception of the causation of perineal trauma, particularly if it was severe. Liz and Abigail both spoke of their experiences of the cultural differences between the birth centre and the delivery suite, and the attitudes they had encountered.

> *'I don't think it helps that there is a bit of a culture still around if your woman sustains a third degree tear, that there's something that you have done. I have*

> *been on delivery suite before where I've had medical staff question midwives about what they have done during a birth that might have caused this woman to have trauma.'* (Liz)

> *'I have heard of the odd comment. Not here, but downstairs* [delivery suite]. *Because we have to go downstairs from the birth centre, it becomes quite public, and I heard two comments actually. One was when we transferred a woman and the general comment was like 'you make this mess and then we fix it!' and I thought no, come on, really, aren't we just supposed to all be one team?'* (Abigail)

The birth centre can be seen as a space in which there are less contested elements due to the predominance of the social midwifery-led model of care and a workforce of a single professional group. The delivery suite is an area in which midwives and doctors work alongside each other providing care for women with medical or obstetric complexity as well as women experiencing physiological pregnancy, labour and birth. It has been recognised that in areas where midwives and obstetricians work together, the different perspectives held by the professions may be a source of conflict as knowledge and ideas about the best management or course of action may be contested (Hodnett, Downe and Walsh, 2012, Kirkup 2015, NHS England 2016). Mander and Melender (2009) previously identified that the organisation, culture and environment that midwives worked within influenced how they practised, often changing practice to fit the expected norms. In settings where there were strong

power structures, some midwives responded by demonstrating an alignment 'with institution' rather than 'with woman'. Cooper (2011) and Hammond *et al.* (2014) also identified that birth environments influence the way midwives practise, recognising that the culture of an environment may result in midwives changing their actions to meet the expectations of those around them. This aspect of conforming behaviour and practice within the dominant discourse of the different birth environments has been explored in Chapter 6 in the context of *Troublesome knowledge*.

This paradigm conflict therefore has the potential to create birthing spaces that are troublesome for both the women using them and the practitioners who work within them. An extract from my fieldnotes at the beginning of the study, in which Lauren was telling me about a recent case on the birth centre, illustrates how the cultural conflicts which may arise in practice can be managed, to ensure that women have satisfying birth experiences.

> *Lauren asks if I have heard about the birth the previous evening:*
>
> *'…it was her first baby and she was progressing really slowly – she was here all day - but didn't want to go down to delivery suite. The doctors came up and really wanted her to be transferred but she didn't want to go, so we really tried to support her and do everything we could to keep her here because she was making progress, and everything was ok. She was in the water and didn't want to get out – she really was 'in the zone' – it was lovely, really calm and*

she was so in control. I stayed late just to be with her as I didn't want to leave her before she delivered. She had a 3a tear, which was a shame and she had to go to theatre downstairs for suturing, but she came straight back up here. She said afterwards that the tear was just 'one of those things' – the most important thing for her was being able to birth up here with midwives and that she didn't mind being transferred for suturing she was just so grateful and thankful for her birth experience. I was so glad that I stayed and made sure that she had that.'

This story correlates with what I've experienced and read about women's positive experiences of being in control of the birth process, and to be able (allowed?) to exercise personal agency and autonomy. It also highlights the professional tensions that sometimes arise between obstetricians and midwives over the 'management' or 'facilitation' of physiological birth. The call bell rings, and Lauren leaves the office to answer it, leaving me thinking about this situation, and the tension between facilitating normal birth safely and the perception of risk. There are the concepts of either 'managing' or 'facilitating' birth, and this also relates to perineal 'management' and whether manoeuvres are required or not. (Fieldnotes February 2016)

The concept of birth places being contested spaces is not a new one, illustrated by the historical perspective to perineal care during labour presented earlier in this thesis (Chapter 1, section 1.6). Recent reports continue to highlight the tensions and

issues often created by the contested spaces in maternity care, and the necessity for a changed culture in which there is respect and understanding of the roles and responsibilities that each professional group contributes to a woman's childbearing journey (House of Commons Health and Social Care Committee, 2021).

7.3.2 A climate of fear and blame

The management of the second stage of labour, and the use of hands to support the perineum or control the baby's head, was a contested perspective that created an aspect of troublesome knowledge, particularly for novice midwives (previously discussed in Chapter 6). Within the threshold concept framework, it is considered that troublesomeness can create a state of liminality in which the learner can experience stuckness, frustration or confusion (see Chapter 4, Table 4.2). For midwives in the study, having to accommodate the competing culture and philosophies in the different birthing environments, created an extra dimension to the troublesomeness already encountered as language and knowledge. Some midwives had experienced a culture of blame when perineal trauma occurred, particularly when this was severe and required assessment and suturing by another practitioner, illustrated previously by the comments from Abigail and Liz. Sara also felt that there was a greater degree of scrutiny when severe trauma occurred in midwifery-led settings such as the birth centre. This culture created a sense of fear of reprisal and guilt that something should, or could, have been done differently. Sara

spoke of trying to manage situations in which conflicts created by this contested knowledge occurred.

> *'I think midwives are very scared, they're very scared when they have a run of third-degree tears and they say, 'Oh no, I've had another one. I've had another one, what am I doing wrong?' …it's really difficult…when someone has had a third-degree tear, even if it's just a small one, you still get practitioners saying, 'Why didn't you do an episiotomy?' 'Well, because there was no reason for an episiotomy.' Then we go back to the… 'How long has this research been around that we don't'…you just go full-circle sometimes. 'Well if you know that the perineum wasn't stretching why didn't you do one?' 'Because that's not a prevention of a third-degree tear', we know that, but I think that is still common thought and practice. …I still do think there's definitely, there's an over-scrutinisation. There's an over-magnifying of third-degree tears if it's in a midwifery-led setting.'* (Sara)

Erin also highlighted how the conflicting philosophies that were predominant in the different birthing areas created a contradiction in the perception of causation and blame, when severe perineal trauma occurred following an assisted [*instrumental*] birth.

> *'But no one questions episiotomies and terrible tears after instrumentals. That's when you have the worst tears but that seems to be generally accepted as something that's totally acceptable because you have to have, you had to have this - you had to expedite the delivery of this baby. Then you just have to deal with the damage that's been caused, and you just repair it but it's really interesting, because I've never seen that being questioned. It just gets sutured, quite rapidly, and then that's that.'* (Erin)

Abigail spoke of being fearful of judgement if a woman she was caring for experienced severe perineal trauma, which was reflective of the environmental culture of blame.

> *'You just get fearful. Fearful that you are going to have a third-degree tear, or that someone is going to pass a comment, and it's completely…you know…what purpose does it serve? I just don't know. I don't think it's productive at all, but yes, I do hear it.'* (Abigail)

Although Emily and Erin had not directly experienced scrutiny of their practice following severe perineal trauma, they were aware of other midwives who had been subjected to this.

> *'I know midwives who have been questioned about what they have or haven't done. It doesn't help if other midwives say to you that they have never had anyone who has had a third or fourth degree tear. I don't what it is that they do differently, but it really doesn't help when they say that'.* (Emily)

Erin also discussed the power dynamics of the delivery suite [*labour ward*] and the fear of judgement that she had witnessed from an agency midwife, who had asked her to review a tear.

> *'I remember an agency midwife very quietly, nearly secretly asking, 'Can you have a look, please? I'm not quite sure about this tear.' I have then said, 'Well, I haven't been qualified that long. Maybe you should ask someone else.' But she said 'No, no. Can you?' Okay, but that's interesting because actually if they're not sure what type of tear it is, they should ideally ask the obstetrician, wouldn't they, or the senior midwife? But they didn't, they were looking for an ally in the smaller ranks. Is that making sense? That's because of that fear to be blamed, I guess.'* (Erin)

Sara explored the reasons that midwives may feel fearful or guilty following a case of severe perineal trauma, citing reporting as a factor that leads to scrutiny of practice, which in some cases maybe unnecessary.

> *'I feel there's a blame, I think. I mean you'll always get the odd practitioner who that doesn't apply to either way, but I think when we look at the autocratic system of NHS management and governance, and whilst it's good to look at how we can learn and improve care, when you've got parameters of care that you have to report on, such as third-degree tears, it starts to get scrutinised. It's actually been scrutinised, very recently…even though the hospital, as such, has got a lower than average national third-degree tear rate.'* (Sara)

For some midwives, these feelings of fear and the notion that something could have been done differently to prevent or minimise perineal trauma may have led them to change their practice to fit the culture of the environment. Sara had spoken of how she had experienced negative attitudes to her approach to managing the second stage in the different environments, similar to the accounts midwives gave of their experiences of the techniques being taught as 'gospel' or belief that their way is the 'right way'.

The notion of perineal trauma being caused by what the midwife did or did not do seems to be a belief held by many practitioners, even though the literature would suggest that perineal trauma occurs in a high proportion of women following vaginal birth, with inconclusive evidence regarding prevention with any particular hand technique (Aasheim *et al*., 2017). Sara considered how media reporting may

influence the way in which women spoke about their experiences using language that implies blame.

> *'…I always get the sense that the media as well reports on it. It always seems to be the midwife. It's always the 'midwives don't know how to deliver babies anymore'…sometimes women will use the language of, 'The midwife let me tear and I tore from top to bottom.' The midwife 'let me', 'she let me tear' and that's very often really difficult to hear as a midwife… we wouldn't… we're not going to be cruel and do anything that would…that is definitely something that I think in common culture it's always the midwife's fault.'* (Sara)

Abigail spoke of a situation in which blame was apportioned to the midwife for not preventing a case of severe perineal trauma. Abigail refuted that perineal outcomes were solely due to the actions of the midwife, suggesting that although midwives did what they could do to maintain an intact perineum, sometimes trauma occurred regardless.

> *'…and then…it happened. The midwife who was looking after her went on her break, somebody else took over and all of a sudden, the baby came and she got a third degree tear. Then there was this, you know…and it was like oh my goodness…she should have prevented it, slowed it down, something. I thought, no hang on, that's not fair, as far as I'm concerned, this woman has*

been in labour for 20 hours on the birth centre, so let's give her a bit of a break, do you know what I mean? I just thought, not again, this is really unnecessary. I know people sometimes say things they don't mean, maybe because they are tired or whatever. But you can't take responsibility for an intact perineum and you can't take responsibility for a third-degree tear. You can't, you just can't. We can't take responsibility for an intact perineum and therefore we can't take responsibility for a third-degree tear, do you know what I mean? It does happen, it sometimes just does, and that's what I think anyway. We don't want it to happen, we really don't, and we do what we can, but you know…'
(Abigail)

Even though midwives recognised that in some cases women sustained perineal trauma regardless of what they had done to try to prevent it, there was still a prevailing sense that they were in some way at fault. Many midwives reported feelings of disappointment if a woman they had cared for sustained perineal trauma, particularly if it was severe. The less experienced midwives seemed to be particularly affected by this and were concerned over scrutiny of their practice and that they may be doing something wrong. Sara recalled how midwives had sought her support following cases where severe perineal trauma had occurred.

'All practitioners are very different in their reflection and how they deal with things, but I think many midwives are very compassionate and very reflective people and they will often say, 'I'm really scared. I've had a water birth and

> *this lady had a third-degree tear and… So my notes are being scrutinised. So I'm frightened, can you come in and just help me? Am I doing anything wrong? Can you come observe my practice?'* (Sara)

Abigail reflected on how she had initially felt this way but recognised that her perspective had changed as she gained more experience. She clearly remembered the first case of severe perineal trauma which affected her deeply, as she felt that she was responsible for not preventing it.

> *'…well when I was a student, the first third-degree tear I saw, I actually went home weeping and felt that the entire responsibility was mine…I can remember clearly thinking, hugely, that it was all my responsibility…I don't think like that anymore because actually I haven't seen loads of third degree tears, but those I have seen, you know, it just happened [sigh], do you know, I don't do anything differently…at all…to the woman who had an entirely intact perineum. To me, I think…it's not that there's no responsibility because clearly, I have a responsibility to the woman for her care and safety, but I don't know that inexperience is a factor. Part of me thinks, is it just…you know…it just happens.'* (Abigail)

Kit, Erin and Emily were novice midwives who also spoke of how cases of severe perineal trauma had affected them. They expressed emotions of sadness recalling

how upset they felt. The environment in which this happened, and the support they got made a difference to how they were able to manage this. Abigail, Erin and Olivia reflected on experiences in which they had been supported and encouraged, in contrast to Kit's experience where she left the shift feeling '*terrible*'. Olivia spoke of needing to find someone to talk through the events and found that discussing her experience with the practice development midwife helped her to process her feelings.

> *'I remember I had one* [a third-degree tear] *and I was really sad, I was so upset…I felt really bad…I felt really, really bad... It was actually all right, because the matron who was on that day was a fabulous person and very supportive.'* (Erin)

> *'The lady I was looking after had a third [degree tear], it was so upsetting. It was right at the end of my night shift and we had to go to theatre. The Reg* [doctor] *wasn't very nice about it – I ended up leaving in tears… He didn't really talk to me about it, just seemed really off about the whole thing. I was tired and felt terrible about it, I felt so bad and was crying when I left. I don't think I could have done anything else – I did everything I could.'* (Kit)

In an exploration of the culture of midwifery in the NHS over twenty years ago, Kirkham (1999) similarly identified that midwives experienced guilt and blame, even

when incidents occurred that were beyond the control of the midwives. Sara suggested that the media were partly responsible for the blame culture that she experienced, a view also presented by Coxon, Scamell and Alaszewski (2012), who considered that the increased level of surveillance and intervention in pregnancy and childbirth led to a situation in which it could no longer be considered a 'natural' process. In natural processes, adverse events can occur by chance and are determined to be unpreventable accidents. By contrast, when adverse events occur during processes managed by professional 'experts', these are considered to be failures, of either the system or an individual, and therefore blame can be apportioned.

I had observed the conversations between midwives following birth and assessment of the woman's perineum and had noted the sense of failure when perineal injury had occurred and the change in atmosphere to one of relief and celebration when the perineum was intact, or the injury was not severe. I had recorded an episode such as this in my fieldnotes and questioned the reasons for the reactions I observed.

> *Of the two women who have given birth today, both have sustained perineal trauma. The first birth of the day is to a woman who had two previous spontaneous vaginal births, who sustained a small second-degree tear that was sutured by the midwife… The second birth was to a first-time mother who…sustained a 'potential' third degree tear… Beth expressed her disappointment at the perceived severity of the trauma…as we are chatting in*

> *the office, a third midwife joins us…and announces that another baby has been born. It seems like a celebratory occasion and everyone in the office, including the clerical assistant cheer! The second midwife enquires whether the woman needs suturing…it feels as though there is a sense of triumph as the midwife reports that she doesn't…it seems as though the mood lifts immediately with this news…the obstetric registrar has arrived to assess the extent of the trauma that the second woman has sustained…the registrar and Beth return to the office, Beth is beaming and clearly pleased with the outcome of the perineal assessment…Again, I notice how the mood changes in the office with relief expressed by the other midwives too. I want to explore whether this is because the woman doesn't need to be transferred, whether she doesn't have to experience the effects of a severe tear or whether the midwife is relieved because she doesn't have to record that severe trauma occurred.* (Fieldnotes February 2016)

7.4 Conclusion

This chapter has presented the theme of the environment as troublesome for many midwives, as they seek to refine the craft of birth against a backdrop of contested environments and conflicting organisational cultural issues. Troublesomeness which affected midwives in the context of the physical environment included the physical space and layout of the birth room and the predominant practice of working in isolation. There was evidence that midwives sought to mitigate these troublesome aspects to some extent, for example by modifying the clinical space on the delivery

suite to create a more homely atmosphere, and by engaging readily in storytelling as a mechanism for sharing experiences.

The troublesomeness of the very different cultural environment of the two birth settings included areas of convergence with the previously identified themes of *Troublesome language* and *Troublesome knowledge*. In situations where midwives experienced a lack of professional respect, a climate of fear and blame was generated. Navigating troublesome birth environments can be particularly difficult for novice midwives, as they consolidated their knowledge and skills whilst developing their own philosophy and professional identity, seeking to fit into the cultural norms and expectations of the workplace. The next and final chapter presents the conclusions and implications for practice, education and future research.

Chapter 8 Conclusion

8.1 Introduction

This final chapter summarises the study findings and contribution to knowledge regarding midwives' approach to minimising perineal injury during physiological birth. The findings in relation to the research questions are reviewed, the strengths and limitations of the study considered and the implications and recommendations for practice, education, service improvement and future research are presented.

8.2 Summary of findings

This ethnographic study was designed to explore which technique midwives used to minimise perineal injury during birth and the factors that influenced their decisions. The context for the study was based on the NICE (2014) guidance that either the 'hands on' or 'hands poised' techniques can be used to facilitate spontaneous birth. Following a review of the relevant literature, a two-part research question was defined as:

> *'What do midwives do during birth to minimise perineal injury and what influences their decision?'*

For the purposes of analysis, each part of the research question was considered separately to firstly describe practice and secondly analyse the factors that influenced the midwife's approach:

1. *'What do midwives do to minimise perineal injury during birth?'*

and

2. *'What factors influence midwives' approach to minimising perineal injury during birth?'*

Chapters 4 to 7 presented the findings in detail and draw on the wider literature and other studies to facilitate interpretation. The following discussion provides a summary and synthesis to address the research questions.

8.2.1 What do midwives do to minimise perineal injury during birth?

During the study, a wide variety of approaches to managing the integrity of the perineum during physiological birth were identified. It became apparent that there was a lack of universal understanding and consistent use of the terms 'hands on' and 'hands poised', with the term 'hands off' also used. Midwives applied the term 'hands on' to a broad range of techniques, beyond that of '*guarding the perineum and flexing the baby's head'* as stated in the current UK guidelines (NICE, 2014 p.60).

The term 'hands on' was the most widely interpreted term and was applied to practices that included: hands on the baby's head only, hands on the woman's perineum only or hands on both the baby's head and woman's perineum. The ways that midwives demonstrated and described how they used their hands to minimise perineal injury were sketched and discussed with the participants prior to being

formally illustrated. A number of techniques were identified from both the midwives in the study and from documentary sources; the detail of what the midwives described or were observed doing is explored in Chapter 5 and presented as an inventory of elements in Appendix 5.1.

The techniques that midwives demonstrated in practice, during interviews or informal conversations were categorised into passive and active activities. Passive activities included support through means of gentle pressure to provide support to the anterior and /or posterior perineal tissues and/or a hand, part of the hand of fingers to assess the speed of descent and extension of the baby's head (see illustrations 2, 4, 7, 10, 11, 12 and 13 in Appendix 5.1). The term 'hands on' was also considered by some midwives to include the passive activity of the application of a warm compress to the perineum, whilst others considered that the term 'hands on' could be used if there had been any physical contact with the woman's perineum or baby's head during the birth.

Active perineal care elements included squeezing the posterior tissues to redirect the pressure from the midline of the perineal body by creating 'slack' (see illustrations 5 and 9, Appendix 5.1), increasing the flexion of the baby's head with pressure on the occiput or sagittal suture line (see illustrations A, C, E, J and K in Appendix 5.1), and manual extension using the bony parts of the baby's head (bi-parietal eminences) (see illustration M in Appendix 5.1), or by pressure on the baby's chin (mandible) through the perineum (see illustration 8 in Appendix 5.1). Few midwives considered

perineal support or manoeuvres during the birth of the shoulders, although two active techniques were described (S1 and S2 in Appendix 5.1).

Midwives generally considered that the term 'hands poised' could only be appropriately applied when they had used techniques that did not involve any physical contact with either the woman or the baby. The activities that midwives described in this category were also varied. The activities ranged from being a conscious decision not to touch either the woman's perineum or the fetal head, such as during a waterbirth, to being in very close proximity to facilitate intense scrutiny of the advancing head and distending perineum in readiness to apply the hands to any part of the baby or woman if required. The differences identified for the 'hands poised' or 'hands off' technique was complex and nuanced and therefore much more difficult to articulate and impossible to illustrate.

The term 'hands off' was also used by midwives and was an option in the electronic records system in use during the study, although the midwives were generally not clear how this differed from a 'hands poised' approach. The term 'hands off' was considered by some midwives to only be applicable in water birth where a conscious decision not to touch was made. Other midwives considered 'hands off' to be 'hands not ready'. The first part of the research question was addressed in Chapter 5 with the theme of *Troublesome language* identified from the data. As previously reported by Aasheim *et al.*, (2017) the language and understanding of what the terms 'hands on', 'hands poised' or 'hands off' mean were not consistent and thus has the

potential to lead to misunderstandings and the creation and sharing of *Troublesome knowledge* (see Chapter 6).

8.2.2 What factors influence midwives' approach to minimising perineal injury during birth?

It became apparent from the beginning of the study that for midwives, the concept of preventing perineal injury was a complex issue with a degree of uncertainty regarding the best approach to take. Midwives reported that their practice was influenced by a number of factors which included: the way they had been taught as student midwives, reflection on and refinement of their own practice as they gained experience, learning from observation or discussion with others, and the techniques that were documented as recommended or expected within a particular birth setting. Many midwives spoke of wanting to improve their practice, to know the 'right way' to prevent perineal injury and of the frustration and guilt they felt when perineal injury occurred despite their best efforts to prevent it.

During the study it became apparent that the factors determining midwives' choices were sources of troublesomeness. The two main themes identified were those of *Troublesome knowledge* and *Troublesome environments*. As discussed in the previous section, there is a lack of standardised terminology and understanding regarding the different approaches. This had often led to conflict when the midwives had been students and were learning the skills of maintaining perineal integrity

during birth, where knowledge was presented as authoritative without basis, leading to confusion. Midwives spoke of being taught what had been considered the 'right way' by their mentors without any discussion or appraisal of the evidence.

As students, midwives had experienced knowledge being presented as authoritative by one midwife, only to be told that the opposite was true on another occasion by a different midwife mentor. Some midwives talked about the expectations for practice that were held in the different birth settings, with a 'hands on' approach expected as the norm in the delivery suite and a 'hands off' approach being seen as more appropriate in the birth centre. The way that knowledge was considered to be authoritative was therefore influenced by the dominant discourse and culture within the different birth settings and an example of where the troublesomeness of knowledge and environments intersected.

Midwives in the study were conscious of the requirement to work within the framework of evidence-based practice and were keen to discuss the research evidence to support either the 'hands on' or 'hands poised' approaches. Some of the participants had experience of working in units where the RCOG and RCM obstetric anal sphincter injury (OASI) care bundle project was taking place (Bidwell *et al.*, 2018). Whilst a few midwives had adopted this as their standard practice, others rejected it outright as unnecessary intervention that was not based on sufficient evidence. The other elements of evidence-based practice, those of practitioner expertise and the woman's preferences (Haynes *et al*., 1996) were also discussed.

Gaining expertise was considered problematic by some of the novice midwives who identified the unpredictability of perineal injury, and the lack of observing the techniques utilised by more experienced midwives, as factors that affected their ability to develop this aspect of their practice. These midwives also frequently rotated to the different parts of the maternity service during the first few years after they had qualified to gain experience, and therefore prolonged exposure to facilitating physiological birth did not occur. It was also significant that the woman's preferences were often not sought by midwives and in these situations an assumption was made that handling the perineum was a required and accepted element of facilitating birth. The elements of troublesomeness identified from the data, considered in the context of evidence-based practice, illustrate the complexity that the concept and practice of minimising perineal injury during physiological birth presents to midwives. I offer a novel model of the intersection of the three types of troublesomeness identified in the study and the elements of evidence-based clinical decisions as first presented by Haynes *et al.* (1996) in Figure 8.1. This model illustrates how the elements of troublesomeness experienced by many of the midwives in the study impacted on their ability to make evidence-based clinical decisions using the framework of the best available evidence, their own expertise and consideration of the woman's preferences.

A new model of personalised care and support planning (PCSP) has been designed to support the implementation of more individualised care and shared informed decision making in maternity (NHS England and NHS Improvement, 2021 p.4). This

framework needs to be considered in the context of enhanced continuity of care alongside the model presented in Figure 8.1 in future testing and evaluation.

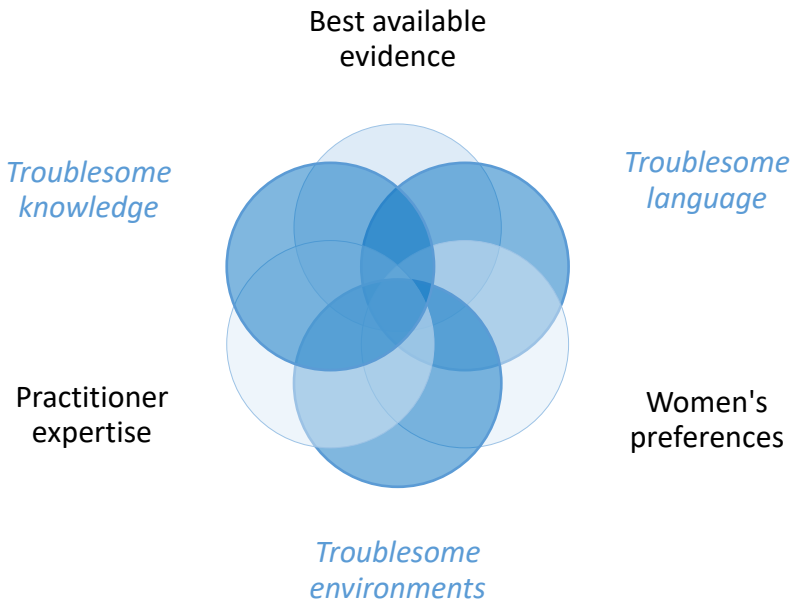


Figure 8.1 The intersection of the elements of evidence-based clinical decision making and the concepts of troublesomeness

8.3 Strengths and limitations of the study

Voyer and Trondman (2017) consider that a strength of the ethnographic method is the ability to explore the 'interstitial space between theory and social reality'. By undertaking an ethnography, I was able to explore the culture and context of perineal care practices during physiological birth and to question how the midwives in the study interpreted the theory into the social context of their practice. The study design allowed me to develop a relationship with the participants, and the long-term commitment to the study meant that I could have ongoing conversations to seek

further information and confirm the findings as the themes were developed. During the study, a level of trust was built with the midwives who often sought me out to relay information and share their stories. The data collected and insights gained would not have been possible using any other methods.

Engaging in participant observation allowed me to observe midwifery practice within the context of the birth and facilitated detailed discussion during the subsequent interviews and refinement of the interview questions. Spending time in two birth settings enabled me to contrast observations and conversations in the context of the different environments. A limitation, however, was that I was unable to observe senior midwives in the delivery suite setting as these midwives were usually undertaking management roles rather than providing direct care to birthing women.

Although I approached the study as an experienced midwife, the role as a novice researcher gave me new insights into this element of midwifery practice. The element of discomfort I experienced enabled deeper reflection to occur, allowing one of the key concepts of ethnography to occur, that is, the familiar became strange allowing a level of objectivity to be achieved. As an experienced midwife, I recognise that I was unable to bracket my previous knowledge and epistemological positioning, and a theoretical approach to data analysis using threshold concept theory may have limited the scope of theme development. My interpretation of the data and the development of themes was, however, regularly interrogated and challenged my supervisory team.

There are limitations when considering the application of findings from ethnographic research as there is a narrow focus on understanding the experiences of a small group of participants within a single community. This was mitigated by using theoretical perspectives to generate explanatory frameworks which require further investigation and have the potential to be generalisable. Although all of the characteristics of a threshold concept theory were identified in the data, the focus on troublesomeness rather than other characteristics may limit the extent to which threshold concept theory may be fully applicable to this aspect of the midwifery curriculum.

This study was undertaken at a single site during a twelve-month period, with approximately one research visit taking place each week. There were more limited opportunities for observation than had been initially considered and the strict inclusion criteria excluded many possible observation episodes, particularly as there were high numbers of student midwives, student paramedics and medical students on placement in the unit. While the amount of time spent in clinical observations was less than planned for, the range of types of births observed and the engagement of the midwives with me ensured these times were productive and valuable to the research.

8.4 Statement of original contribution

The findings from the study make an original contribution to the current body of knowledge by providing new insights to the 'hands on/hands off/hands poised'

debate. A novel model is presented that illustrates the intersection between the elements of evidence-based clinical decision making, and the types of troublesomeness that make this a complicated process for midwives to successfully navigate (Figure 8.1). A unique and detailed inventory of the practices used by midwives to minimise perineal injury has been developed, which demonstrates how 'hands on' techniques are more complex than the current definition implies. This inventory (Appendix 5.1) and accompanying definition of terms (Table 8.1) will enable more accurate reporting of the 'hands on' approaches used to facilitate physiological birth. Minimising perineal injury during birth has been identified as a midwifery threshold concept influenced by three main areas of troublesomeness. This has pedagogical implications for the design of initial midwifery education and ongoing practice development.

8.5 Recommendations

The inconsistent use of terms applied to the perineal techniques during birth is problematic when perineal interventions and outcomes are reported, particularly when the data is used to explore correlation. As witnessed during the study and reported in Chapter 5, midwives recorded the perineal technique used during birth in the electronic records system inconsistently, and often were unsure which option to select to describe their practice. This variability in recording has far reaching implications for any analysis and reporting of such data, as the inference that certain elements of midwifery practice have a positive or negative impact on perineal outcomes are likely to be inaccurate.

The language used to report and discuss perineal care practices therefore needs to be systematic and consistent. As noted by Aasheim *et al.* (2017) the meaning of the terms 'hands on', 'hands off', 'perineal support' and 'standard care' varied widely and meant different things in the studies included in their review. These terms were also rarely sufficiently defined. The findings from this study illustrate the extent of the variety and the need to define the terms clearly, particularly with regard to the multitude of possible 'hands on' techniques.

The findings from this study concur with other authors (Begley *et al*., 2019, Lindgren, Brink and Klingberg-Allvin, 2011, Zhou *et al.*, 2019) that for the midwives who utilise a 'hands poised' approach, this does not mean 'hands off or nowhere near', observing birth from the foot of the bed or writing the notes. Rather, it is the skilled facilitation of physiological birth through attentiveness to the birth process and observation of the descent and extension of the baby's head and the stretching and thinning of the perineal tissues.

It is, therefore, important that all of the approaches to minimise perineal injury during birth are recognised and understood by those who provide intrapartum care and support. The joint RCOG and RCM care bundle that advocates a 'hands on' approach for all women is currently being implemented in many maternity units in the UK on the basis of low-level evidence, which is of concern (Gurol-Urganci *et al.*, 2021, Scammel *et al.,* 2021). The implementation of this care bundle fails to recognise the multiplicity of other perineal care interventions, including the application of

warm compresses and the 'hands poised' approach both of which may be more appropriate in a particular clinical situation, more effective in reducing perineal injury and be more acceptable to birthing women. It is important that midwifery practice is not based on pseudoscience or knowledge presented as authoritative without basis, or that women's choices and preferences are ignored. Sound midwifery clinical decision making, as suggested by Jefford and Fahy (2015) is based on cue acquisition (what to look and listen for and be alert to), cue clustering and cue interpretation alongside intuition, not the implementation of ritualistic practices for all women, all of the time.

Midwives, therefore, need to understand the rationale for the approach they take to minimise perineal injury and the purpose of their actions to ensure a slow and controlled birth, in accordance with the best available evidence and the birthing woman's needs and preferences. The perineal care elements utilised during birth should be clearly documented in the woman's record using a systematic universal approach. These recommendations for midwifery practice and education are presented in the following sections, recognising the context and the limitations of the study.

8.5.1 Recording of perineal care practices: a standardised approach

Whilst rates of severe perineal trauma continue to be used as an indicator of quality in maternity services, accurate reporting of preventative interventions must be used in order to avoid assumptions being made about midwifery practice and poor

perineal outcomes. Standardised reporting also facilitates future research to evaluate the different approaches and enables 'standard care' to be documented in detail for comparison.

The recommendation based on the findings of this study are that the terms and definitions presented in Table 8.1 are used to discuss and document perineal care practices used during birth, in addition to the pictorial system of classification for 'hands on' approaches presented in Appendix 5.1. It is recommended that this approach is supported by the RCM and RCOG as part of the joint initiatives designed to address issues of birth related perineal injury.

Term	Definition
hands off	the intention not to touch the perineal tissues or baby's head, due to either the woman's preferences or the clinical situation, for example during waterbirth
hands poised	the careful observation of the distention of the perineum and advancing head, with hands in readiness to intervene to slow the descent or extension of the baby's head and/or to support the perineal tissues
hands on	any part of the hand on the baby's head and /or any part of the hand on the perineum in a passive or active action 'hands on' approaches should be recorded according to the position and action of the hands (see Appendix 5.1)

Table 8.1 Recommended definition of perineal care terms

8.5.2 Preventing perineal trauma during physiological birth: a threshold concept

Midwives in the study acknowledged that mastering the skills required to minimise perineal injury during birth was troublesome. This was due to the language used, the contested nature of the knowledge informing practice, and the culture of the different birth settings they had been taught in and now worked in. The defining features of an educational threshold concept as defined by Meyer and Land (2005), were identified to be in alignment with the experiences shared by the midwife participants. Consequently this study identified that preventing perineal injury was a midwifery threshold concept (see Chapter 4). Threshold concepts are considered to

act as gatekeepers to disciplinary knowledge, require mastery, and are distinctly troublesome (Stopford, 2021). Threshold concepts are troublesome, not simply because they are theoretically complex, but because they generate a level of cognitive activity that often causes the learner to feel a level of anxiety or emotional discomfort as their certainty is challenged, leading to a state of liminality and stuckness (Cousin, 2016a, Stopford, 2021).

8.5.2.1 Initial midwifery education and development

Recognising the prevention of perineal injury as a threshold concept is significant, as this knowledge can inform midwifery curriculum development and approaches to teaching and learning that support students to navigate the metaphorical threshold of the subject. The threshold concept framework has previously been explored within midwifery education and key aspects of disciplinary knowledge have been identified as threshold concepts due to the distinct troublesomeness they cause (Angell and Taylor, 2013; Hartney, Dooley and Nagle, 2021; Killingley, 2015; Meddings and Nesbit, 2017). The aim of recognising elements of core disciplinary knowledge as threshold concepts and shaping the curriculum appropriately, is to purposefully facilitate students to engage with and debate the subjects whilst acknowledging that these concepts are difficult and may invoke anxiety (Cousin, 2006b).

Curriculum design principles associated with threshold concept mastery aim to focus on core aspects of teaching and learning to avoid an 'overstuffed curriculum' and

enable students to engage with challenging content and ideas, whilst being supported to navigate the stuckness and liminality these concepts may create (Cousin, 2006a). Stuckness has also been likened to hitting a brick wall in understanding a concept, and in order to support students to move through this state and gain mastery of a concept, it is important that educators understand how students may respond to this state. Savin-Baden (2006) considers that the response to managing stuckness may be through conscious or unconscious decision making unique to the individual and is likely to be categorised into one of four responses: those of retreat, temporising/postponement, avoidance or engagement with the concept.

It has also been suggested that individuals engage in states of mimicry to manage stuckness, with two different types of mimicry reflecting the position of the individual. Compensatory mimicry is the position in which attempts are being made to understand but understanding remains limited, the concept is not fully understood, and the threshold remains uncrossed. Conscious mimicry is a response in which the individual is aware that they do not understand the concept and consider that it is too difficult to even try, consequently managing the stuckness through pretence (Meyer and Land, 2006b).

The elements of troublesome language, knowledge and environments identified in this study are important to acknowledge and explore within the midwifery curriculum, particularly the intersection of elements and the alignment with

evidence-based practice. It is recommended that the concept of preventing perineal injury during birth is recognised as a midwifery threshold concept. In order for students to be able to contextualise the concept, teaching should be integrated with other core content, for example: anatomy of the perineum and physiology of birth, midwifery guardianship and birth environments, ethical and legal issues such as autonomy and consent, ways of knowing and authoritative knowledge, interprofessional learning and working, and skills of critical appraisal of the evidence for practice.

The key curriculum design principles to support threshold concept mastery should be applied to teaching the aspects of perineal care during birth. Four important design principles are: identifying the core integrative disciplinary threshold concepts, intentional listening for understanding, misunderstanding and uncertainties, holding an environment for the tolerance of confusion and stuckness, and facilitating recursiveness and excursiveness rather than a linear approach to learning (Land *et al.,* 2006).

8.5.2.2 Midwifery practice development

Midwives in the study identified that developing expertise in minimising perineal injury after they had qualified was problematic, as they rarely observed the practice of the more experienced midwives due to working in isolation and had limited opportunities to discuss their practice. When midwives had the opportunity to be

supported during the birth by another midwife, this was viewed as a positive experience for ongoing learning and development of expertise, and this would therefore be considered as a recommendation for practice. However, across England there is a significant issue with safe staffing levels in maternity units (House of Commons Health and Social Care Committee, 2021) which suggests that this is unlikely to be achievable currently. The future plans to increase provision of continuity of care for women, with midwives working within smaller teams may provide an opportunity to reconsider this recommendation in the future.

The significance of developing midwifery knowledge through sharing stories was demonstrated during the study, contributing to what has been termed 'pooled expertise'. Pooling expertise maximises the clinical knowledge within a group, recognising that knowledge is socially constructed in dialogue with others (Benner, Tanner and Chesla, 1997). It is, therefore, a recommendation that whilst midwives have limited opportunities to observe and be observed facilitating physiological birth, time for reflection and storytelling should be embedded into ongoing training and development. It is, however, important to ensure that this takes place in an environment that respects and responds to the elements of troublesomeness such discussions may generate.

8.6 Recommendations for future research

Further research is recommended to explore the feasibility of the standardised reporting system presented in Appendix 5.1 and Table 8.1 to accurately identify the techniques utilised by midwives to minimise perineal injury during birth. Using a standardised system developed from these findings, further research to systematically evaluate the effectiveness of the different techniques to minimise perineal injury, including during the birth of the shoulders, should be undertaken. The findings from this study conclude that the 'hands poised' approach is a complex and highly skilled approach to minimising perineal injury and warrants further investigation to evaluate when, and if, certain interventions have any benefit when indications of impending perineal injury are observed.

Women's preferences should be central to the method of perineal care implemented during birth, however in this study, midwives rarely mentioned this as one of the factors that influenced their decision making. As noted by Aasheim *et al.* (2017), women's views on the various perineal techniques used are notably absent, with the exception of warm compresses, and research is required into this aspect of perineal care during birth to ascertain which techniques are acceptable to women, and how and when midwives seek their preferences. Evaluation of methods to develop midwifery knowledge and expertise such as reflection and storytelling is warranted. Finally, the implementation of a threshold concept approach to minimising perineal injury into the midwifery pre-registration curriculum requires longitudinal evaluation.

8.7 Conclusion

This ethnographic study aimed to explore how midwives determined whether to use a 'hands on' or 'hands poised' approach to facilitating physiological birth, and how they implemented either approach. This chapter has presented the conclusion that this aspect of midwifery practice is a complex skill, compounded by elements of troublesomeness that include the language used to define practices, the contested nature of knowledge and the effect of the culture of different birth settings on midwives' decision-making. Three recommendations for practice have been presented; that of using a standardised set of definitions and diagrams to accurately record perineal care practices, recognising perineal care as a threshold concept to inform midwifery curriculum design and utilising storytelling and reflection to enhance midwifery knowledge and practice. Further research is required to evaluate a standardised reporting system, explore women's views on the acceptability of perineal care techniques and assess the impact of a threshold concept approach to this aspect of the midwifery pre-registration education curriculum. The novel model of intersection of the elements of clinical decision making and the troublesome elements identified in this study also requires testing. The findings of the study will be disseminated through presentation and publication commencing with a presentation to the Maternity and Newborn Forum of the Royal Society of Medicine in November 2021, by invitation.

References

Aabakke, A. J. M., Willer, H., Krebs, L. (2016) 'The effect of maneuvers for shoulder delivery on perineal trauma: a randomized controlled trial'. *Acta Obstetricia et Gynecologica Scandinavica,* 95 pp.1070–1077 DOI: 10.1111/aogs.12914

Aasheim, V,. Nilsen, A.B.V., Lukasse, M., Reinar, L.M. (2011) 'Perineal techniques during the second stage of labour for reducing perineal trauma'. *Cochrane Database of Systematic Reviews*, Issue 12. Art. No.: CD006672. DOI: 10.1002/14651858.CD006672.pub2.

Aasheim, V., Nilsen, A.B.V., Reinar, L.M., Lukasse, M. (2017) 'Perineal techniques during the second stage of labour for reducing perineal trauma'. *Cochrane Database of Systematic Reviews*, Issue 6. Art. No.: CD006672. DOI: 10.1002/14651858.CD006672.pub3.

Abu-Lughod, L. (1990) *Can There Be A Feminist Ethnography?* (Modified lecture text) New York Academy of Sciences Anthropology Section February 29th, 1988

Acker, J., Barry, K., and Esseveld, J. (1983) 'Objectivity and Truth: Problems in doing feminist research' *Women's Studies International Forum,* 6 (4) pp. 423-435

Ackerly, B. and True, J. (2010) 'Back to the future: Feminist theory, activism, and doing feminist research in an age of globalization'. *Women's Studies International Forum,* 33 pp. 464-472

Aguiar, M., Farley, A., Hope, L., Shah, P., Manaseki-Holland, S. (2019) 'Birth-Related Perineal Trauma in Low- and Middle-Income Countries: A Systematic Review and Meta-analysis'. *Maternal and Child Health Journal,* (2019) 23 pp. 1048–1070 https://doi.org/10.1007/s10995-019-02732-5

Åhlund, S., Rådestad, I., Zwedberg, S., Lindgren, H. (2019) 'Perineal pain the first year after childbirth and uptake of post-partum check-up -- a Swedish cohort study'. *Midwifery,* 78 pp. 85-90

Akın, B., Çolak, M. B., H. O. Can., Küni, F. (2020) 'Practices of midwives working in delivery rooms for protection of perineum during intrapartum period and their feedback on these applications'. *The Journal of Maternal-Fetal & Neonatal Medicine* https://doi.org/10.1080/14767058.2020.1812573

Allen, J., Small, K., Lee, N. (2021)' How a perineal care bundle impacts midwifery practice in Australian maternity hospitals: A critical, reflexive thematic analysis' *Women and Birth* https://doi.org/10.1016/j.wombi.2021.01.012

Albers, L.L., Garcia, J., Renfrew, M., McCandlish, R., Elbourne, D. (1999) 'Distribution of Genital Tract Trauma in Childbirth and Related Postnatal Pain'. *Birth,* 26:1 pp. 11-15

Albers, L.L., Sedler, K.D., Bedrick, E.J., Teaf, D., Peralta, P. (2005) Midwifery care measures in the second stage of labour and reduction of genital tract trauma at birth: A randomized trial. *J Midwifery Women's Health* 50 (5) pp. 365-372 DOI 10.1016/j.jmwh.2005.05.012

Altaweli, Roa (2015) *Interventions during the second stage of labour: an exploration of what may affect their use in Jeddah, Saudi Arabia.* (Unpublished Doctoral thesis, City University London) Available at: http://openaccess.city.ac.uk/14167/ (Accessed 21.08.2021)

American Heritage® Dictionary of the English Language, Fifth Edition. 'troublesomeness' Available at: https://www.thefreedictionary.com/troublesomeness (Accessed 21.08.2021]

Ampt, A., Ford, J., Roberts, C., Morris, J. (2013) 'Trends in obstetric anal sphincter injuries and associated risk factors for vaginal singleton term births in New South Wales 2001–2009'. *Aust N Z J Obstet Gynaecol,* 53 (1) pp. 9-16 doi:10.1111/ajo.12038

Ampt, A.J., de Vroome, M., Ford, J. B., (2015) 'Perineal management techniques among midwives at five hospitals in New South Wales – A cross sectional survey'. *Australian and New Zealand Journal of Obstetrics and Gynaecology,* 55 pp. 251-256 DOI: 10.1111/ajo.12330

Angell, C. and Taylor, A.M. (2013) Alien knowledge: Preparing student midwives for learning about infant feeding—Education practice at a UK university. *Nurse Education Today*, 33 pp. 1411-1415 http://dx.doi.org/10.1016/j.nedt.2012.10.013

Angrosino, M. (2007) *Doing Ethnographic and Observational Research.* London: SAGE

Atkinson, P. (2015) *For Ethnography*. London: SAGE

Atkinson, P. (2017) *Thinking Ethnographically*. London: SAGE

Atkinson, P., Coffey, A., Delamont, S., Loftland, J. and Loftland, L. (2007) *Handbook of Ethnography.* London: SAGE pp. 11-15

Aveyard, H., Payne, S., Preston, N. (2016) *A Post-graduate's Guide to Doing a Literature Review in Health and Social Care.* Maidenhead: Open University Press, McGraw-Hill Education

Baghestan, E., Irgens, L. M., Bordahl, P.E., Rasmussen, S. (2010) 'Trends in risk factors for obstetric anal sphincter injuries in Norway'. *Obstet Gynecol,* 116 pp. 25–34

Baghurst, P.A. and Antoniou, G. (2012) 'Risk models for benchmarking severe perineal tears during vaginal childbirth: a cross-sectional study of public hospitals in South Australia, 2002–2008'. *Paediatric Perinatal Epidemiology*, 26 pp. 430–437

Baghurst, P.A., (2013) 'The case for retaining severe perineal tears as an indicator of the quality of obstetric care'. *Australian and New Zealand Journal of Obstetrics and Gynaecology,* 53 pp. 3-8

Barasinski, C., Debost-Legrand, A., Lemery, D., Vendittelli, F. (2018) 'Practices during the active second stage of labor: A survey of French Midwives' *Midwifery*, 60 pp. 48–55 https://doi.org/10.1016/j.midw.2018.02.001

Barnes, M. (1999) 'Research in midwifery – the relevance of a feminist theoretical framework'. *Australian College of Midwives Incorporated Journal* 12 (2) pp. 6-10

Beauchamp, T. L. and Childress, J.F. (2013) *Principles of biomedical ethics*. Oxford: Oxford University Press

Begley, C., Guilliland, K., Dixon, L., Reilly, M., Keegan, C., McCann, C., Smith, V. (2019) 'A qualitative exploration of techniques used by expert midwives to preserve the perineum intact'. *Women and Birth* 32 (1) pp. 87-97 https://doi.org/10.1016/j.wombi.2018.04.015

Benner, P. (1982) 'From Novice to Expert' *American Journal of Nursing,* March pp. 402-407

Benner, P., Tanner, C.A., Chesla, C.A. (1997) 'The Social Fabric of Nursing Knowledge'. *American Journal of Nursing,* 97 (7) pp. 16BBB-16DDD

Berger, R. (2015) 'Now I see it, now I don't: researcher's position and reflexivity in qualitative research' *Qualitative Research,* 15(2) pp. 219–234
DOI: 10.1177/1468794112468475

Berger, P. and Luckman, T. (1996) *The Social Construction of Reality: A Treatise in the Sociology of Knowledge.* London: Penguin Books Ltd.

Bettany-Saltikov, J. (2012) *How to do a systematic literature review in nursing: a step-by-step guide*. Maidenhead: Open University Press, McGraw-Hill

Bick, D. (2012) 'How good are w at implementing evidence to support the management of birth related perineal trauma? A UK wide survey of midwifery practice'. *BMC Pregnancy and Childbirth,* 12 (57) http://www.biomedcentral.com/1471-2393/12/57

Bidwell, P., Thakar, R., Sevdalis, N., Silverton, L., Novis, V., Hellyer, A., Kelsey, M., van der Meulen, J., Gurol-Urganci**,** I. (2018) 'A multi-centre quality improvement project to reduce the incidence of obstetric anal sphincter injury (OASI): study protocol'. *BMC Pregnancy and Childbirth,* 18 (331) https://doi.org/10.1186/s12884-018-1965-0

Blondel,B., Alexander, S., Bjarnadóttir,R.I., Gissler, M., Langhoff-Roos, J., Novak-Antolič, Ž., Prunet, C., Zhang, W.H., Hindori-Mohangoo, A.D., Zeitlin, J. (2016) 'Variations in rates of severe perineal tears and episiotomies in 20 European countries: a study based on routine national data in Euro-Peristat Project'. *Acta Obstetricia et Gynecologica Scandanavia,* 95 (7) pp. 746-754 https://doi.org/10.1111/aogs.12894

Bou Malham, P., Saucier, G. (2016) 'The conceptual link between social desirability and cultural normativity'. *International Journal of Psychology,* 51 (6) pp. 474–480
DOI: 10.1002/ijop.12261

Bowling, A. (2009) *Research methods in health: investigating health and health services.* Maidenhead: McGraw-Hill Open University Press

Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology'. *Qualitative Research in Psychology,* 3 pp. 77–101

Braun, V. and Clarke, V. (2016) '(Mis)conceptualising themes, thematic analysis, and other problems with Fugard and Potts' (2015) sample-size tool for thematic analysis'. *International Journal of Social Research Methodology,* 19 (6) pp. 739–743
http://dx.doi.org/10.1080/13645579.2016.1195588

Brocklehurst, P. (2011) 'Birthplace in England Collaborative Group. Perinatal and maternal outcomes by planned place of birth for healthy women with low risk pregnancies: the Birthplace in England national prospective cohort study'. *BMJ,* 343: d7400

Brodie, P., Leap, N. (2008) 'From ideal to real: The interface between birth territory and the maternity service organization' in Fahy, K., Fourer, M., Hastie, C. (eds.) *Birth Territory and Midwifery Guardianship Theory for practice, education and research.* Edinburgh: Elsevier pp. 149-164

Brown, J., Kapurubandara, S., Gibbs, G., King, J. (2018) 'The Great Divide: Country of birth as a risk factor for obstetric anal sphincter injuries'. *Aust N Z J Obstet Gynaecol,* 58 pp. 79–85 DOI: 10.1111/ajo.12672

Buckley, S. (2015) 'Executive Summary of Hormonal Physiology of Childbearing: Evidence and Implications for Women, Babies, and Maternity Care'. *The Journal of Perinatal Education,* 24 (3) pp. 145–153 http:/dx.doi.org/10.1891/1058-1243.24.3.145

Bulchandani, S., Watts, E., Sucharitha, A., Yates, D., Ismail, KM. (2015) 'Manual perineal support at the time of childbirth: a systematic review and meta-analysis'. *BJOG,* 122 pp. 1157–1165 DOI: 10.1111/1471-0528.13431

Caelli, K. (2000) 'The Changing Face of Phenomenological Research: Traditional and American Phenomenology in Nursing'. *Qualitative Health Research,* 10 (3) pp. 366-377

Carlson, N.S. and Lowe, N.K. (2013) 'A concept analysis of watchful waiting among providers caring for women in labour'. *Journal of Advanced Nursing,* 70 (3) pp. 511–522 DOI: 10.1111/jan.12209

Čechová, H., Havelková, L., Zítka, T., Rušavý, Z., Kališ, V., Ismail, K. (2020) 'Injury prevention during childbirth: A model of pelvic floor'. *Int. Sci. J. Math. Model.* IV (4) pp. 128-130

Charles, C. (2018) 'Water for labour and birth', in Chapman, V., Charles, C., (eds.) *The Midwife's labour and Birth handbook*. 4th edn. Oxford: Wiley Blackwell pp. 139-154

Charmaz, K and Mitchell, R. G. (2007) 'Grounded Theory in Ethnography' in Atkinson, P., Coffey, A., Delamont, S., Lofland, J. and Loftland, L. (2007) *Handbook of Ethnography.* London: SAGE Publications Ltd. pp. 160 - 176

Cluett, E.R. and Bluff, R. (2006) 'From practice to research' in Cluett, E.R., Bluff, R. (eds.) *Principles and Practice of Research in Midwifery* 2nd edn. Edinburgh: Churchill Livingstone Elsevier

Cluett, E.R., Burns, E., Cuthbert, A. (2018) 'Immersion in water in labour and birth (Review)'. *Cochrane Database of Systematic Reviews*, 2018, Issue 5. DOI: 10.1002/14651858.CD000111.pub4

Coffey, A. (1999) *The Ethnographic Self: Fieldwork and the Representation of Identity*. London: SAGE

Cooper, T. (2011) *Perceptions of the Midwife's Role: A Feminist Technoscience Perspective*. PhD thesis. University of Central Lancashire Available at: http://clok.uclan.ac.uk/2404/2/CooperTthesis-hardbound_final_collated.pdf (Accessed 22.08.2021)

Cousin, G. (2006a) 'An introduction to threshold concepts'. *Planet,* 17 pp. 4-5

Cousin, G. (2006b) 'Threshold concepts, troublesome knowledge and emotional capital' in Meyer, J. H. F., Land, R. (eds.) *Overcoming Barriers to Student Understanding: threshold concepts and troublesome knowledge* Abingdon: Routledge pp. 3-18

Coxon, K., Scamell, M., Alaszewski, A. (2012) 'Risk, Pregnancy and Childbirth: What Do We Currently Know and What Do We Need to Know? An Editorial' *Health Risk and Society,* 14 (6) pp. 503-510 DOI:10.1080/13698575.2012.709486

Cunningham, F., Leveno, K.J, Bloom, S.L., Dashe, J.S., Hoffman, B.L., Casey, B.M., Spong, C.Y. (2018) 'Vaginal Delivery' in: Cunningham, G *et al.* (eds) *Williams Obstetrics*, 25th edn. McGraw Hill Education Available at: https://accessmedicine.mhmedical.com/content.aspx?bookid=1918&sectionid=138822591 (Accessed 27.08.2021)

Cutrer, W. B., Sullivan, W. M. and Fleming, A. E. (2013) 'Educational strategies for improving clinical reasoning'. *Curr Probl Paediatr Adolesc Health Care*, 43 pp. 248-257 http://dx.doi.org/10.1016/j.cppeds.2013.07.005

Dahlen, H., Homer, C.S.E., Cooke, M., Upton, A., Nunn, R.A., Brodrick, B.S. (2007) 'Perineal outcomes and maternal comfort related to the application of perineal warm packs in the second stage of labour. A randomized controlled trial'. *Birth,* 34 pp. 282-290

Dahlen, H.G., Homer, C. S. E., Leap, N., Tracy, S. K. (2011) 'From social to surgical. Historical perspectives on perineal care during labour and birth'. *Women and Birth,* 24 pp.105-111 DOI: 10.1016/j.wombi.2010.09.002

Dahlen, H., Priddis, H., Schmied, Sneddon, A., Kettle, C., Brown, C., Thornton, C. (2013) 'Trends and risk factors for severe perineal trauma during childbirth in New South Wales between 2000 and2008: a population-based data study'. *BMJ Open,* 3: e002824. doi:10.1136/bmjopen-2013-002824

Dahlen, H.G., Priddis, H. and Thornton, C. (2015) 'Severe perineal trauma is rising, but let us not overreact'. *Midwifery,* 31 (1) pp. 1-8 https://doi.org/10.1016/j.midw.2014.09.004

Darmody, E., Bradshaw, C. and Atkinson, S. (2020) 'Women's experience of obstetric anal sphincter injury following childbirth: An integrated review' *Midwifery,* 91:102820 https://doi.org/10.1016/j.midw.2020.102820

Davies, C. A. (2008*) Reflexive Ethnography: a guide to researching selves and others.* Oxon: Routledge

Davies, H.T.O., Nutley, S.M. and Mannion, R. (2000) 'Organisational culture and quality of health care'. *Quality in Health Care,* (9) pp. 111–119

de Jonge, A., Dahlen, H. and Downe, S. (2021) ''Watchful attendance' during labour and birth'. *Sexual and Reproductive Healthcare,* 28 https://doi.org/10.1016/j.srhc.2021.100617

Denzin, N.K., Lincoln, Y.S. (2013) *Strategies of qualitative enquiry.* 4th edn. Los Angeles: SAGE

DeWees, W. B., (1889) *Relaxation and management of the Perineum During Parturition*, Read before the Golden Belt District Medical Society of Kansas, July 4, 1889. *JAMA* XIII (24) pp. 841-848

Donnison, J. (1977) *Midwives and medical men. A History of Inter-Professional Rivalries and Women's Rights.* London: Heinemann Educational Books

Dove, S. (2013) 'Enhancing choice and improving outcomes through the mediation of childbirth risk discourses within a midwifery model of care: Findings from a critical ethnography'. *Women and Birth,* 26 Supplement 1, pp. S5.

Downe, S. (2010) 'Debates about Knowledge and Intrapartum Care' in Walsh, D. and Downe, S. (eds.) *Essential Midwifery Practice: Intrapartum Care.* Oxford: Wiley-Blackwell pp. 13-29

Downe, S. (2017) 'Care in the second stage of labour', in Macdonald, S and Johnson, G. (eds.) *Mayes' Midwifery*, 15th edn. Edinburgh: Elsevier pp. 614-627

Downe, S., and Marshall, J. (2020) 'Physiology and Care During Transition and Second Stage Phases of Labour', in Marshall, J and Raynor, M (eds.) *Myles' Textbook for Midwives* 17th edn. Edinburgh: Elsevier pp. 500-534

Dreyfus, S. E. and Dreyfus, H. L. (1980). *A five-stage model of the mental activities involved in directed skill acquisition*. University of California, Berkeley. Available at: https://apps.dtic.mil/sti/pdfs/ADA084551.pdf (Accessed 21.08.2021)

D'Souza, J.C., Monga, A. and Tincello, D.G. (2020) 'Risk factors for perineal trauma in the primiparous population during non-operative vaginal delivery'. *International Urogynecology Journal,* 31 pp. 621–625 https://doi.org/10.1007/s00192-019-03944-7

Dundes, L. (1987) 'The Evolution of Maternal Birthing Position'. *American Journal of Public Health,* 77 (5) pp. 636-641 available at: https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.77.5.636

Eason, E. and Feldman, P. (2000) 'Much ado about a little cut: is episiotomy worthwhile?' *Obstetrics & Gynecology,* 95 (4) pp. 616-618

East, C.E., Lau, R. and Biro, M.A. (2015) 'Midwives' and doctors' perceptions of their preparation for and practice in managing the perineum in the second stage of labour: A cross-sectional survey'. *Midwifery,* 31 pp. 122–131 ttp://dx.doi.org/10.1016/j.midw.2014.07.002

Edqvist, M., Lindgren, H and Lindgren, I. (2014) 'Midwives' lived experience of a birth where a woman suffers an obstetric anal sphincter injury – a phenomenological study'. *BMC Pregnancy and Birth,* 14 pp. 258

Ekeus, C., Nilsson, E. and Gottvall, K. (2008) 'Increasing incidence of anal sphincter tears among primiparas in Sweden: a population-based register study'. *Acta Obstet Gynecol Scand,* 87 pp. 564–73

Elmir, R., Pangas, J., Dahlen, H. and Schmied, V. (2017) 'A meta-ethnographic synthesis of midwives' and nurses' experiences of adverse labour and birth events'. *Journal of Clinical Nursing*, 26 pp. 4184–4200 DOI: 10.1111/jocn.13965

Elvander, C., Ahlberg, M., Thies-Lagergren, L., Cnattingius, S., Stephansson, O. (2015) 'Birth position and obstetric anal sphincter injury: a population-based study of 113,000 spontaneous births'. *BMC Pregnancy and Childbirth,* 15:252 DOI 10.1186/s12884-015-0689-7

Emerson, R. M., Fretz, R., and Shaw, L. L. (2007) 'Participant Observation and Fieldnotes' in Atkinson, P., Coffey, A., Delamont, S., Lofland, J. and Loftland, L. (2007) *Handbook of Ethnography* London: SAGE Publications Ltd. pp. 352-368

Emerson, R.M., Fretz, R.I., Shaw, L.L. (2011) *Writing Ethnographic Fieldnotes* 2nd edn. Chicago: University of Chicago Press

Ericsson, K. A. (2006) 'The Influence of Experience and Deliberate Practice on the Development of Superior Expert Performance', in Ericsson, K. A., Charness, N., Feltovich, P. J., and Hoffman, R. R. (eds.) *The Cambridge Handbook of Expertise and Expert Performance*. Cambridge: Cambridge University Press pp. 683–704 DOI: 10.1017/CBO9780511816796.038.

Fahy, K (2008) 'Power and the social construction of birth territory' in Fahy, K., Foureur, M., Hastie, C (eds.) *Birth Territory and Midwifery Guardianship*. Edinburgh: Elsevier

Felten, P. (2016) 'On the Threshold with Students' in Land, R., Meyer, J. H. F., and Flanagan, M. T. (eds.) *Threshold Concepts in Practice*. Rotterdam: Sense Publishers pp. 3-10

Flick, U. (2007) *Designing Qualitative Research.* London: SAGE

Floud, E. (1994) 'Protecting the perineum in childbirth 3: perineal care today' *British Journal of Midwifery* 2 (8) pp. 356-361

Fores, S. W. (1793) *Man-midwifery dissected; or, the obstetric family-instructor ... In fourteen letters. Addressed to A. Hamilton ... Occasioned by certain doctrines contained in his letters to Dr. W. Osborn. By John Blunt [i.e. Samuel William Fores]* London: Fores available at: https://www.bl.uk/collection-items/man-midwifery-dissected-by-samuel-w-fores# (Accessed 24.03.21)

Freeman, R.M. (2013) 'Can we prevent childbirth-related pelvic floor dysfunction?' *BJOG,* 120, pp. 137-140 DOI: 10.1111/1471-0528.12092

Friedman, A. M., MD, Ananth, C. V., Prendergast, E., D'Alton, M.E., Wright, J.D. (2015) 'Evaluation of Third-Degree and Fourth-Degree Laceration Rates as Quality Indicators' *Obstetrics & Gynecology,* 125 (4) pp. 927-937 DOI: 10.1097/AOG.0000000000000720

Frith, L., Sinclair, M., Vehviläinen-Julkunen, K., Beeckman, K., Loytved, C., Luyben, A. (2014) 'Organisational culture in maternity care: a scoping review'. *Evidence Based Midwifery,* 12 (1) pp. 16-22

Fugard, A.J.B. and Potts, H.W.W. (2015) 'Supporting thinking on sample sizes for thematic analyses: a quantitative tool'. *International Journal of Social Research Methodology*, 18 (6) pp. 669-684 DOI: 10.1080/13645579.2015.1005453

Gabrysch, S., Nesbitt, R. C., Schoeps, A., Hurt, L., Soremekun, S., Edmond, K., Manu, A., Lohela, T. J., Danso, S., Tomlin, K., Kirkwood, B., Campbell, O. M. R. (2019) 'Does facility birth reduce maternal and perinatal mortality in Brong Ahafo, Ghana? A secondary analysis using data on 119 244 pregnancies from two cluster-randomised controlled trials'. *Lancet Glob Health,* 7: e1074-87

Garland, D. (2017) *Revisiting Waterbirth: An Attitude to Care* 2nd edn. London: Palgrave

Gearing, R. E. (2004) 'Bracketing in Research: A Typology'. *Qualitative Health Research,* 14 (10) pp. 1429-1452 DOI:10.1177/1049732304270394

Geertz, C. (1973) *The interpretation of cultures*. New York: Basic Books

Gelb, B. (1955) *The ABC of natural Childbirth*. London: Heinemann Ltd

Gilbert, N. (2008) *Researching Social Life*. 2nd edn. Thousand Oaks: Sage

Gilkison, A., Giddings, L. and Smythe, L. (2016) 'Real life narratives enhance learning about the 'art and science' of midwifery practice'. *Adv in Health Sci Educ.,* 21 pp. 19-32 https://doi.org/10.1007/s10459-015-9607-z

Gold, R. L. (1958) 'Roles in Sociological Field Observations'. *Social Forces,* 36 (3) pp. 217-223

Goldenberg, R. L., McClure, E.M. and Saleem, S. (2018) 'Improving pregnancy outcomes in low- and middle-income countries'. *Reprod Health,* 15 (Suppl 1) **(**88) pp. 7-14 https://doi.org/10.1186/s12978-018-0524-5

Goodell, W. (1871) *A Critical Inquiry into the management of the Perineum during Labour* ART.II Read before the Philadelphia County Medical Society, January 26th and September 14th, 1870

Gould, J. (2017) 'Storytelling in midwifery: Is it time to value our oral tradition?' *British Journal of Midwifery* 25 (1) https://doi.org/10.12968/bjom.2017.25.1.41

Graham, I. D. (1997) *Episiotomy Challenging Obstetric Interventions*. Oxford: Blackwell Science

Green, J., Willis, K., Hughes, E. *et al* (2007) 'Generating best evidence from qualitative research: the role of data analysis'. *Australian and New Zealand Journal of Public Health* 31 (6) pp. 545-550

Gupta, J.K. and Nikodem, V.C., (2000) 'Maternal posture in labour'. *European Journal of Obstetrics & Gynecology and Reproductive Biology,* 92 pp. 273–277

Gupta, J.K. and Nikodem, V.C., (2003) 'Position for women during second stage of labour'. *Cochrane Database of Systematic Reviews,* Issue 4. Art. No.: CD002006. DOI: 10.1002/14651858.CD002006

Gupta, J.K., Sood, A., Hofmeyr, G.J., Vogel, J.P. (2017) 'Position in the second stage of labour for women without epidural anaesthesia'. *Cochrane Database of Systematic Reviews,* Issue 5. Art. No: CD002006. DOI: 10.1002/14651858.CD002006.pub4.

Gurol-Urganci. I., Cromwell, D., Edozien, L., Mahmood, T., Adams, E., Richmond, D., Templeton, A., van der Meulen, J. (2013) 'Third- and fourth-degree perineal tears among primiparous women in England between 2000 and 2012: time trends and risk factors'. *BJOG,* 120 pp. 1516–1525

Gurol-Urganci, I., Bidwell, P., Sevdalis, N., Silverton, L., Novis, V., Freeman, R., Hellyer, A., van der Meulen, J., Thakar, R. (2021) 'Impact of a quality improvement project to reduce the rate of obstetric anal sphincter injury: a multicentre study with a stepped-wedge design' *BJOG,* 128 pp. 584-592 DOI: 10.1111/1471-0528.16396

Hammersley, M. (2015) 'Sampling and thematic analysis: a response to Fugard and Potts' *International Journal of Social Research Methodology*, 18 (6) pp. 687-688, DOI:10.1080/13645579.2015.1005456

Hammersley, M. and Atkinson, P. (2007) *Ethnography: principles in practice* 3rd edn. Oxon: Routledge

Hammond, A., Foureur, M. and Homer, C.S.E. (2014) 'The hardware and software implications of hospital birth room design: A midwifery perspective'. *Midwifery,* 30 pp. 825–830 http://dx.doi.org/10.1016/j.midw.2013.07.013

Hart, C. (2018) *Doing a Literature Review Releasing the Research Imagination.* 2nd edn. London: SAGE

Hartney, N., Dooley, D., Nagle, C. (2021) Using animation to teach breastfeeding physiology: a proof of concept study. *International Breastfeeding Journal* 16 (21) https://doi.org/10.1186/s13006-021-00368-2

Hastie, C. and Fahy, K. (2011) 'Inter-professional collaboration in delivery suite: A qualitative study'. *Women and Birth,* 24 (2) pp. 72-79. DOI: 10.1016/j.wombi.2010.10.001

Hatem, M., Sandall, J., Devane, D., Soltani, H., Gates, S. (2008) 'Midwife-led versus other models of care for childbearing women'. *Cochrane Database of Systematic Reviews,* Issue 4. Art. No.: CD004667. DOI: 10.1002/14651858.CD004667.pub2.

Hauck Y.L., Lewis L., Nathan E.A., White C., Doherty D.A. (2015) 'Risk factors for severe perineal trauma during vaginal childbirth: A Western Australian retrospective cohort study'. *Women and Birth,* 28 pp. 16–20 http://dx.doi.org/10.1016/j.wombi.2014.10.007

Haynes, R.B., Sackett, D.L., Muir, J., Gray, A., Cook, D.J., Guyatt, G.H. (1997) 'Transferring evidence from research into practice: 1. The role of clinical care research evidence in clinical decisions'. *Evidence-based medicine,* 1 (7) pp. 196-198

Helman, C., (2007) *Culture, Health and Illness.* Oxford: Oxford University Press

Hirayama, F., Koyanagi, A., Mori, R., Zhang, J., Souza, J., Gülmezoglu, A. (2012) 'Prevalence and risk factors for third- and fourth-degree perineal lacerations during vaginal delivery: a multi-country study'. *BJOG,* 119 pp. 340–347 https://doi-org.ezproxy.kingston.ac.uk/10.1111/j.1471-0528.2011.03210.x

Hodnett, E.D., Downe, S. and Walsh, D. (2012*) '*Alternative versus conventional institutional settings for birth'. *Cochrane Database of Systematic Reviews* (8) CD000012. DOI: 10.1002/14651858.CD000012.pub4.

Hodnett, E., Gates, S. Hofmeyr, G., Sakala, C. (2011) 'Continuous support for women during childbirth'. *Cochrane Database of Systematic Reviews,* (3) CD003766

House of Commons Health and Social Care Committee (2021) *The safety of maternity services in England Fourth Report of Session 2021-22.* London: House of Commons. Available at: Safety of maternity services in England (parliament.uk) (Accessed 25.08.21)

Huang, J., Lu, H., Zang, Y., Ren, L., Li, C., Wang, J. (2020) 'The effects of hands on and hands off/poised techniques on maternal outcomes: A systematic review and meta-analysis'. *Midwifery,* 87, 102712 https://doi.org/10.1016/j.midw.2020.102712

Hugill, K. (2016) 'Fathers' emotional experiences in a neonatal unit: the effects of familiarity on ethnographic fieldwork' in Dykes, F., Flacking, R. (eds.) *Ethnographic Research in Maternal and Child Health.* Abingdon: Routledge pp. 141-156

Hunt S.C. and Symonds A. (1995) 'Ethnography: treating the familiar as strange' in *The Social Meaning of Midwifery*. Palgrave: London pp. 38-54

Hunter, B. (2005) 'Emotion work and boundary maintenance in hospital-based midwifery'. *Midwifery,* 21 (3) pp. 253-266 https://doi.org/10.1016/j.midw.2004.12.007

Hunter, L. (2006) 'Women give birth and pizzas are delivered: language and western childbirth paradigms'. *Journal of Midwifery & Women's Health,* 51(2) pp. 119-124

Hunter, L.P. (2008) 'A hermeneutic phenomenological analysis of midwives' ways of knowing during childbirth' *Midwifery,* 24 (4) pp. 405-415 https://doi.org/10.1016/j.midw.2007.06.001

Ismail, K.M, Paschetta, E., Papoutsis, D., Freeman, R.M. (2014) 'Perineal support and risk of obstetric anal sphincter injuries: a Delphi survey'. *Acta Obstet Gynecol Scand,* 94 pp. 165–174

Jansova, M., Kalis, V., Rusavy, Z., Räisänen, S., Lobovsky, L., Laine, K. (2017) 'Fetal head size and effect of manual perineal protection'. *PLoS ONE,* 12 (12) e0189842

Jansson, M. H., Franzen, K., Hiyoshi, A., Tegerstedt, G., Dahlgren, H., Nilsson, K. (2020) 'Risk factors for perineal and vaginal tears in primiparous women – the prospective POPRACT-cohort study'. *BMC Pregnancy and Childbirth,* 20:749 https://doi.org/10.1186/s12884-020-03447-0

Jefford, E. and Fahy, K (2015) 'Midwives' clinical reasoning during second stage labour: Report on an interpretive study'. *Midwifery,* 31 pp. 519-525 http://dx.doi.org/10.1016/j.midw.2015.01.006

Jefford, E. (2019) 'Midwifery and Decision-Making Theories' in Jefford, E., Jomeen, J. (eds.) *Empowering Decision-Making in Midwifery. A Global Perspective.* Abingdon: Routledge

Jefford, E., Jomeen, J., Guy, F., Newcombe, B., Martin, C. (2018) 'Applying a Midwifery-Specific Decision-Making Tool to Midwives' Clinical Reasoning and Midwifery Practice When Managing a Woman's Perineum in Labor: An Exploratory Study'. *International Journal of Childbirth,* 8 (1) pp. 54-66 http://dx.doi.org/10.1891/2156-5287.8.1.54

Jiang. H., Qian, X., Carroli, G., Garner, P. (2017) 'Selective versus routine use of episiotomy for vaginal birth'. *Cochrane Database of Systematic Reviews*, Issue 2 NO: CD000081. DOI: 10.1002/14651858.CD000081.pub3.

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*. Los Angeles: University of California Press

Jordan, B. (1993) *Birth in four cultures: a crosscultural investigation of childbirth in Yucatan, Holland, Sweden and the United States* 4th edn. Illinois: Waveland Press

Jowitt, M. (2012) 'The rise and rise of the obstetric bed'. *Midwifery Matters,* 132 pp. 11-16

Kalis, V., Rusavy, Z., Havelkova, L., Tolar, D., Ismail, K. M. (2020) 'Metrics of perineal support (MOPS) study'. *BMC Pregnancy and Childbirth,* 20:361 https://doi.org/10.1186/s12884-020-03042-3

Karamanou, M., Tsoucalas, G., Creatsas, G., Androutsos, G. (2013) 'The effect of Soranus of Ephesus (98–138) on the work of midwives'. *Women and Birth,* 26 pp. 226–228

Keefer, J.M. (2015) 'Experiencing doctoral liminality as a conceptual threshold and how supervisors can use it'*, Innovations in Education and Teaching International*, 52 (1) pp. 17-28, DOI: 10.1080/14703297.2014.981839

Kennedy, H.P. (2000) 'A model of exemplary midwifery practice results of a Delphi study'. *J Midwifery Women's Health*, 45 pp. 4–19.

Kennedy, H.P., Anderson, T. and Leap, N. (2010) 'Midwifery presence: philosophy, science and art' in Walsh, D., Downe, S. (eds.) *Essential Midwifery Practice: Intrapartum Care*. Oxford: Wiley-Blackwell pp. 105–23.

Kettle, C. and Tohill, S., (2008) 'Perineal Care' (Systematic Review). *Clinical Evidence* [online]. Article No: 09:1401. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2907946/pdf/2008-1401.pdf

Kahneman, D. (2011*) Thinking, Fast and Slow.* London: Penguin

Kiley, M. (2014). 'Now I know why I have been knocking my head against a brick wall: Doctoral candidates and stuck places' in O'Mahony, C., Buchanan, A., O'Rourke, M., Higgs, B. (eds.) *Threshold concepts: From personal practice to communities of practice.* Dublin: NAIRTL. pp. 73–77.

Killingley, J. (2015) 'Introducing educational theory: vaginal examination'. *The Practicing Midwife,* 18 (8) pp. 27-29

Kingston University (2016) *Kingston University Research Data Management Pilot Policy* (Apr 2016 – Mar 2017)

Kirkham, M. (1999) 'The culture of midwifery in the National health Service in England'. *Journal of Advanced Nursing,* 30 (3) pp. 732-739

Kirkup, B. (2015) *The Report of the Morecombe Bay Investigation.* London: The Stationary Office. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/408480/47487_MBI_Accessible_v0.1.pdf (Accessed 22.08.2021)

Kitzinger, S. (1997) *The New Pregnancy and Childbirth.* London: Penguin Health Books

Kleprlikova, H., Kalis, V., Lucovnik, M., Rusavy, Z., Blaganje, M., Thakar, R., Ismail, K.M. (2020) 'Manual perineal protection: The know-how and the know-why'. *Acta Obstet Gynecol Scand.* 99 pp. 445–45 DOI: 10.1111/aogs.13781

Kristin, A. (2008) 'Feminist Ethnography'. Encyclopedia of Gender and Society. Sage Reference Online. California: SAGE pp. 309-12 Available at: http://www.sagepub.com/ritzerintro/study/materials/reference/77708_3.2r.pdf (Accessed 22.08.2021)

Korstjens, I. and Moser, A. (2018) 'Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing', *European Journal of General Practice*, 24 (1) pp. 120-124 DOI: 10.1080/13814788.2017.1375092

Laine, K., Gissler, M. and Pirhonen, J. (2009) Changing incidence of anal sphincter tears in four Nordic countries through the last decades. *Eur J Obstet Gynecol Reprod Biol*., 146 (1) pp. 71-5 DOI: 10.1016/j.ejogrb.2009.04.033

Land, R., Cousin, G., Meyer, J.H.F., Davies, P. (2006) 'Conclusion: implications of threshold concepts for course design and evaluation' in Meyer, J. H. F., Land, R. (eds.) *Overcoming Barriers to Student Understanding: threshold concepts and troublesome knowledge* Abingdon: Routledge pp. 195-206

Land, R., Meyer, J.H.F. and Flanagan, M. T. (2016) 'Preface', in Land, R., Meyer, J.H.F, Flanagan, M. T. (eds.) *Threshold Concepts in Practice*. Rotterdam: Sense Publishers, pp: xi-xxxiv

Land, R., Vivian, P. and Rattray, J. (2014) 'A closer look at liminality: incorrigibles and threshold capital.' in *Threshold concepts: from personal practice to communities of practice*. Proceedings of the National Academy's Sixth Annual Conference and the Fourth Biennial Threshold Concepts Conference, January 2014. Cork, Ireland: NAIRTL, pp. 1-12. Available at: http://dro.dur.ac.uk/16814/1/16814.pdf (Accessed 24.08.2021)

Leap, N. (2010) 'The Less We Do the More We Give' in Kirkham, M. (ed.) *The Midwife-Mother Relationship.* 2nd edition. Basingstoke: Palgrave Macmillan pp. 17-36

LeCompte, M. D., Goetz, J. P. (1982) 'Problems of Reliability and Validity in Ethnographic Research', *Review of Educational Research*, 52, (1) pp. 31-60

Lederman, N. G. and Lederman, J. S. (2015) 'What is a Theoretical Framework? A Practical Answer', *Journal of Science Teacher Education*, 26 pp. 593-597 DOI 10.1007/s10972-015-9443-2

Ledger, L. (2010) 'Exploring Multiple Identities as a Health Care Ethnographer'. *International Journal of Qualitative Methods,* 9 (3) pp. 291-304

Lee, N., Firmin, M., Gao, Y., Kildea, S. (2018) 'Perineal injury associated with hands on/hands poised and directed/undirected pushing: A retrospective cross-sectional study of non-operative vaginal births, 2011–2016'. *International Journal of Nursing Studies,* 83 pp. 11–17 https://doi.org/10.1016/j.ijnurstu.2018.04.002

Liberati, E. G., Tarrant, C., Willars, J., Draycott, T., Winter, C., Chew, S., Dixon-Woods, M. (2019) How to be a very safe maternity unit: An ethnographic study. *Social Science & Medicine* 223 pp. 64-72 https://doi.org/10.1016/j.socscimed.2019.01.035

Lincoln, Y.S and Guba, E.G. (1985) *Naturalistic inquiry*. California: Sage Publications

Lindberg, I., Mella, E., and Johansson, J. (2013) 'Midwives' experiences of sphincter tears'. *British Journal of Midwifery*, 21(1) pp. 7–14

Lindberg, I., Persson, M., Nilsson, M., Uustal, E., Lindqvist, M. (2020) ' "Taken by surprise" - Women's experiences of the first eight weeks after a second degree perineal tear at childbirth', *Midwifery,* 87 pp. 102748

Lindgren, H. E., Brink, A., Klingberg-Allvin, M. (2011) 'Fear causes tears – perineal injuries in home birth settings. A Swedish interview study', *BMC Pregnancy and Childbirth,* 11 (6) https://doi.org/10.1186/1471-2393-11-6

Lindqvist, M., Lindberg, I., Nilsson, M., Uustal, E. and Persson, M., (2019) ' "Struggling to settle with a damaged body" – A Swedish qualitative study of women's experiences one year after obstetric anal sphincter muscle injury (OASIS) at childbirth'. *Sexual & Reproductive Healthcare,* 19 pp. 36-41

Lodge, F., Haith-Cooper, M. (2016) 'The effect of maternal position at birth on perineal trauma: A systematic review', *British Journal of Midwifery,* 24 (3) pp. 172-180

Mander, R. and Melender, H. (2009) 'Choice in maternity: rhetoric, reality and resistance'. *Midwifery*, 25 (6) pp. 637-648

Manresa, M., Kallis, V., de Tayrac, R., de Leeuw, J.W., Laine, K., Räisänen, S., Ismail, K.M. (2020) 'Hands up if you do not understand hands on'. *Midwifery,* 90: 102836 https://doi.org/10.1016/j.midw.2020.102836

Marshall, J. (2005) *Informed consent during the intrapartum period: an observational study of the interactions between health professionals and women in labour involving consent to procedures*. PhD thesis, University of Nottingham available at: http://eprints.nottingham.ac.uk/11882/ (Accessed 21.08.2021)

Marshall, J.E., Fraser, D.M. and Baker, P.N. (2010) 'Reflexivity: the experience of undertaking an ethnographic study to explore issues of consent to intrapartum procedures'. *Evidence Based Midwifery,* 8 (1) pp. 21-25

Mayerhofer, K., Bodner-Adler, B., Bodner, K., (2002) 'Traditional care of the perineum during birth. A prospective, randomized, multicenter study of 1,076 women'. *J Reprod Med*., 47 (6) pp. 477-482

McCandlish, R. (2001) 'Perineal Trauma: Prevention and Treatment'. *Journal of Midwifery & Women's Health,* 46 (6) pp. 391-401

McCandlish, R., Bowler, U., van Asten, H., Berridge, G., Winter, C., Sames, L., Garcia, J., Renfrew, M., Elbourne, D. (1998) 'A randomised controlled trial of care of the perineum during second stage of normal labour'. *BJOG,* 105 pp. 1262-1272

McLeod, N. L., Gilmour, D. T., Joseph, K. S., Farrell, S. A., Luther, E. R. (2003) 'Trends in major risk factors for anal sphincter lacerations: a 10-year study'. *J Obstet Gynaecol Can.* 25 pp. 586–93

McDougall, L., Campbell, O.M.R. and Graham, W. (2016) *Maternal Health: An Executive Summary for The Lancet's Series* available at: https://www.thelancet.com/series/maternal-health-2016 (Accessed 23.08.2021)

MacIvor Thompson, L. (2019) 'The politics of female pain: women's citizenship, twilight sleep and the early birth control movement'. *Med Humanit.,* 45 pp. 67–74

McPherson, K., Beggs, A., Sultan, A.H., Thakar, R. (2014) 'Can the risk of obstetric anal sphincter injuries (OASIs) be predicted using a risk-scoring system?' *BMC Research Notes* 7, (1): 471 http://www.biomedcentral.com/1756-0500/7/471

Meddings, F.S., and Nesbitt, R. (2017) Integrating threshold concepts: exploring innovations in the redesign of a problem-based learning curriculum. *MIDIRS Midwifery Digest*. 27 (3) pp. 281-285

Ménage, D. (2016a) 'Part 1: A model for evidence-based decision-making in midwifery care'. *British Journal of Midwifery,* 24 (1) pp. 44-49

Ménage, D. (2016b) 'Part 2: A model for evidence-based decision-making in midwifery care' *British Journal of Midwifery,* 24 (2) pp. 137-143

Meyer, J. H. F. and Land, R. (2003) Threshold Concepts and Troublesome Knowledge (1): Linkages to Ways of Thinking and Practising' in Rust, C. (ed.) *Improving Student Learning – Ten Years On.* Oxford: OCSLD

Meyer, J. H. F. and Land, R. (2005) 'Threshold concepts and troublesome knowledge (2): Epistemological considerations and a conceptual framework for teaching and learning'. *Higher Education,* 49 pp. 373-388 DOI: 10.1007/s10734-004-6779-5

Meyer, J. H. F. and Land, R. (2006a) 'Threshold concepts and troublesome knowledge: an introduction' in Meyer, J. H. F., Land, R. (eds.) *Overcoming Barriers to Student Understanding: threshold concepts and troublesome knowledge* Abingdon: Routledge pp. 3-18

Meyer, J. H. F. and Land, R. (2006b) 'Threshold concepts and troublesome knowledge: issues of liminality' in Meyer, J. H. F., Land, R. (eds.) *Overcoming Barriers to Student Understanding: threshold concepts and troublesome knowledge* Abingdon: Routledge pp. 19-32

Miller, S., Abalos, E., Chamillard, M., Ciapponi, A., Colaci, D., Comandé, D., Diaz, V., Geller, S., Hanson, C., Langer, A., Manuelli, V., Millar, K., Morhason-Bello, I., Pileggi Castro, C., Nogueira Pileggi, V., Robinson, N., Skaer, M., Souza, J. P., Vogel, J. P., Althabe, F. (2016) 'Beyond too little, too late and too much, too soon: a pathway towards evidence-based, respectful maternity care worldwide'. *Lancet*, 388 pp. 2176–92

Ministry of Health (1970) *Domiciliary Midwifery and Maternity Bed Needs: The Report of the Standing Maternity and Midwifery Advisory Committee* (Sub-committee Chairman J. Peel) London: HMSO

Moffatt, F. (2014) *Working the production line: productivity and professional identity in the emergency department.* PhD thesis, University of Nottingham. Available at: https://core.ac.uk/download/pdf/33567514.pdf (Accessed 21.08.21)

Muraca, G. M., Lisonkova, S., Skoll, A., Brant, R., Cundiff, G. W., Sabr, Y., Joseph, K. S. (2019) 'Ecological association between operative vaginal delivery and obstetric and birth trauma' *CMAJ,* 190: e734-41. doi: 10.1503/cmaj.171076

Murphy, E. and Dingwall, R. (2007) 'The Ethics of Ethnography' in Atkinson, P., Coffey, A., Delamont, S., Lofland, J. and Loftland, L. (eds.) *Handbook of Ethnography.* London: SAGE pp. 339-351

Myrfield, K., C. Brook, et al. (1997) 'Reducing perineal trauma: implications of flexion and extension of the fetal head during birth'. *Midwifery,* 13 (4) pp. 197-201 DOI: 10.1016/s0266-6138(97)80006-x

National Health Service Litigation Authority (2012) *Ten Years of Maternity Claims An Analysis of NHS Litigation Authority Data* London: NHS Litigation Authority https://doi.org/10.1177/1356262213486434

National Institute for Health and Care Excellence (NICE) (2014) *Intrapartum care for healthy women and babies.* Clinical guideline CG190 (updated 2017 Feb). Available at: https://www.nice.org.uk/guidance/cg190/chapter/Recommendations#care-throughout-labour (Accessed 28.08.2021)

National Maternity and Perinatal Audit Project Team (NMPAPT) (2019) *National Maternity and Perinatal Audit: Clinical Report 2019. Based on births in NHS maternity services between 1 April 2016 and 31 March 2017.* London: RCOG. Available from: https://maternityaudit.org.uk/pages/reports (Accessed 21.08.2021)

Newnhan, E. C. (2014) 'Birth control: Power/knowledge in the politics of birth'. *Health Sociology Review,* 23 (3) pp. 254-268 https://doi.org/10.1080/14461242.2014.11081978

Newnham, E. C., McKellar, L. V. and Pincombe, J. I. (2017) 'Paradox of the institution: findings from a hospital labour ward ethnography'. *BMC Pregnancy and Childbirth,* 17 (2) DOI 10.1186/s12884-016-1193-4

NHS Digital (2020) *NHS Maternity Statistics, England 2019-20*. Available from: NHS Maternity Statistics, England 2019-20 - NHS Digital

NHS England (2016) *National Maternity Review: Better Births Improving outcomes of maternity services in England: A Five Year Forward View for maternity care.* London: NHS England (online) Available at: https://www.england.nhs.uk/wp-content/uploads/2016/02/national-maternity-review-report.pdf (Accessed 12.08.2021)

NHS England and NHS Improvement (2021) *Personalised care and support planning. Guidance for local maternity systems.* Version 1, March 2021. Available at: https://www.england.nhs.uk/wp-content/uploads/2021/03/B0423-personalised-care-and-support-planning-guidance-for-lms.pdf (Accessed 27.08.2021)

Nursing and Midwifery Council (NMC) (2018) *The Code: Professional standards of practice and behaviour for nurses, midwives and nursing associates*. London: NMC

Oakley, A (1980) *Women Confined. Towards a Sociology of Childbirth.* Oxford: Martin Robertson & Company Ltd.

Odent, M. (2015) *Do we need midwives?* London: Pinter and Martin

Organisation for Economic Co-operation and Development (OECD)(2019) *Health at a Glance 2019: OECD Indicators*. Paris: OECD Publishing. Available at: https://doi.org/10.1787/4dd50c09-en (Accessed 18.08.2121)

O'Mahony, F., Hofmeyr, G.J., Menon, V. (2010) 'Choice of instruments for assisted vaginal delivery'. *Cochrane Database of Systematic Reviews*, Issue 11. No: CD005455. DOI: 10.1002/14651858.CD005455.pub2.

O'Reilly, K. (2012) *Ethnographic methods.* 2nd edition. Oxon: Routledge

O'Reilly, K. (2009) *Key Concepts in Ethnography.* London: SAGE

Orlovic, M., Carter, A. W., Marti, J., Mossialos, E. (2017) 'Estimating the incidence and the economic burden of third and fourth-degree obstetric tears in the English NHS: an observational study using propensity score matching'. *BMJ Open* 7: e015463 DOI:10.1136/bmjopen-2016-015463

Ott, J., Gritsch, E., Pils, S., Kratschmar, S., Promberger, R., Seemann, R., Fürst, S., Bancher-Todesca, D., Hauser-Auzinger, C. (2015) 'A retrospective study on perineal lacerations in vaginal delivery and the individual performance of experienced mifwives' [sic] *BMC Pregnancy and Childbirth,* 15:270 DOI 10.1186/s12884-015-0703-0

Page, L.A. (2006) *The Politics of Involving Women in Decision Making* in Page, L.A. and McCandlish, R. (eds.) The new midwifery: science and sensitivity in practice. 2nd edition Edinburgh: Churchill Livingstone Elsevier. pp. 97-124

Panke, D. (2018) *Research design and method selection: making good choices in the social sciences.* Los Angeles: SAGE

Paterson-Brown, S. (2010) 'Applied anatomy' in Bennett, P., Williamson, C. (eds.) *Basic Science in Obstetrics and Gynaecology*. 4th edn. Edinburgh: Elsevier pp. 57-95

Perkins, D. (1999) 'The Many Faces of Constructivism'. *Educational Leadership,* 57 (3) pp. 6-11

Perkins, D. (2006) 'Constructivism and troublesome knowledge' in Meyer, J.H.F. and Land, R. (eds.) *Overcoming Barriers to Student Understanding Threshold concepts and troublesome knowledge*. Abingdon: Routledge pp. 33-47

Pergialiotis, V., Vlachos, D., Protopapas, A., Pappa, K., Vlachos, G. (2014) 'Risk factors for severe perineal lacerations during childbirth'. *International Journal of Gynecology and Obstetrics,* 125 pp. 6-14

Petrocnik, P. and Marshall, J. E. (2015) 'Hands-poised technique: The future technique for perineal management of second stage of labour? A modified systematic literature review' *Midwifery,* 31 (2) pp. 274-279 https://doi.org/10.1016/j.midw.2014.10.004

Pierce-Williams, R. A. M., Saccone, G. and Berghella, V. (2021) 'Hands-on versus hands-off techniques for the prevention of perineal trauma during vaginal delivery: a systematic review and meta-analysis of randomized controlled trials'. *The Journal of Maternal-Fetal & Neonatal Medicine,* 34 (6) pp. 993-1001 DOI: 10.1080/14767058.2019.1619686

Pirhonen, J. P., Grenman, S.E., Gudmunsson, S., Lindqvist, P., Siihola, S., Erkkola, R. U., Marsal, K. (1998) 'Frequency of anal sphincter rupture at delivery in Sweden and Finland – result of difference in manual help to the baby's head'. *Acta Obstet Gynecol Scand*., 77 pp. 974–977

Pole, C and Hillyard, S. (2016) *Doing Fieldwork*. London: SAGE

Priddis, H. S. (2014) *Experiences of women who have severe perineal trauma, their associated morbidity and health service provision in New South Wales, Australia: A mixed methods study.* A thesis submitted to fulfil the requirements of a Doctor of Philosophy (PhD) Degree School of Nursing and Midwifery University of Western Sydney available at: https://researchdirect.westernsydney.edu.au/islandora/object/uws:29875/ (Accessed 28.08.2021)

Priddis, H. (2015) 'Autoethnography and severe perineal trauma—an unexpected journey from disembodiment to embodiment'. *BMC Women's Health,* 15: 88 DOI: 10.1186/s12905-015-0249-3

Priddis, H., Dahlen, H. and Schmied, V. (2013) 'Women's experiences following severe perineal trauma: a meta-ethnographic synthesis'. *Journal of Advanced Nursing,* 69 (4) pp. 748-759 DOI: 10.1111/jan.12005

Priddis, H., Schmied, V. and Dahlen, H. (2014) 'Women's experiences following severe perineal trauma: a qualitative study'. *BMC Women's Health,* 14:32. http://www.biomedcentral.com/1472-6874/14/32

Rashid, M., Caine, V. and Goez, H. (2015) 'The Encounters and Challenges of Ethnography as a Methodology in Health Research'. *International Journal of Qualitative Methods,* 14 (5) pp. 1-16 DOI: 10.1177/1609406915621421

Räisänen, S., Cartwright, R., Gissler, M., Kramer, M. R., Laine, K., Jouhki, M., Heinonen, S. (2013) 'Changing associations of episiotomy and anal sphincter injury across risk strata: results of a population-based register study in Finland 2004-2011'. *BMJ Open*; 3: e003216. DOI: 10.1136/bmjopen-2013-003216

Räisänen, S., Vehvilainen-Julkunen, K., Gissler, M., Heinonen, S. (2009) 'The increased incidence of obstetric anal sphincter rupture – An emerging trend in Finland'. *Prev Med,* 49 (6) pp. 535–40

Rattray, L. (2016) 'Affective Dimensions of Liminality' in Land, R., Meyer, J.H.F. and Flanagan, M. T. (eds) *Threshold Concepts in Practice*. pp: 67-76. Rotterdam: Sense Publishers

Reeves, S., Kuper, A. and Hodges, B.D. (2008) 'Qualitative research methodologies: ethnography'. *BMJ,* 337: a1020 DOI: https://doi.org/10.1136/bmj.a1020

Reeves, S., Peller, J., Goldman, J. and Kitto, S. (2013) 'Ethnography in qualitative educational research' AMEE Guide No. 80, *Medical Teacher*, 35 (8), e1365-e1379 DOI: 10.3109/0142159X.2013.804977

Ritgen, F. A. M. F. (1855) XXIII. 'Concerning his method for protection of the perineum' *Monatschrift für Geburtskunde* 6 (21) translated by Wynn, R. M. (1965) *Am. J. Obst. & Gynec.* 93 (3) pp. 421-433

Rock, P. (2007) 'Symbolic Interactionism and Ethnography' in Atkinson, P., Coffey, A., Delamont, S., Lofland, J. and Loftland, L. (eds.) *Handbook of Ethnography.* London: SAGE pp. 22-38

Ross-Davie, M., Cheyne, H., and Niven, C. (2013) 'Measuring the quality and quantity of professional intrapartum support: testing a computerised systematic observation tool in the clinical setting'. *BMC Pregnancy and Childbirth,* 13:163 http://www.biomedcentral.com/1471-2393/13/163

Royal College of Midwives (RCM) (2014*) Report of a survey exploring the position of midwives' hands during the birth of the baby's head.* London: The Royal College of Midwives Trust

Royal College of Midwives (RCM) (2018) *Midwifery care in labour guidance for all women in all settings.* RCM Midwifery Blue Top Guidance No.1 London: The Royal College of Midwives

Royal College of Obstetricians and Gynaecology (RCOG) (2007) *Management of third- and fourth-degree perineal tears following vaginal delivery* Green Top Guidelines No. 29 London: Royal College of Obstetrician and Gynaecologists

Royal College of Obstetricians and Gynaecology (RCOG) (2012) *Shoulder Dystocia* Green Top Guidelines No. 42 London: Royal College of Obstetrician and Gynaecologists

Royal College of Obstetricians and Gynaecology (RCOG) (2015) *Management of third- and fourth-degree perineal tears following vaginal delivery* Green Top Guidelines No. 29 London: Royal College of Obstetrician and Gynaecologists

Royal College of Obstetricians and Gynaecology (RCOG) (2018) *OASI Care Bundle Project Team: Implementation guide for maternity sites in the roll-out phase 2017-2018*. London: RCOG

Ryan, B (2013) 'Embracing mentorship'. *Midwives,* (6) pp. 30 Available at: https://www.rcm.org.uk/media/2646/midwives-issue-6-2013.pdf

Sackett, D. L., Rosenberg, W. M. C., Gray, J. A. M., Haynes, R. B., Richardson, W. S. (1996) 'Evidence based medicine: what it is and what it isn't'. *BMJ,* 312 p.71 DOI: https://doi.org/10.1136/bmj.312.7023.71

Salmona, M., Kaczynski, D., Wood, L.N. (2016) 'The Importance of Liminal Space for Doctoral Success: Exploring Methodological Threshold Concepts' in Land, R., Meyer, J.H.F. and Flanagan, M.T. (eds.) *Threshold Concepts in Practice*. Rotterdam: Sense Publishers pp. 155-164

Savin-Baden, M. (2006) 'Disjunction as a form of troublesome knowledge in problem-based learning' in Meyer, J. H. F. and Land, R. (eds.) *Overcoming Barriers to Student Understanding: threshold concepts and troublesome knowledge.* Abingdon: Routledge pp. 160-172

Scammel, M., Thornton, J., Hales, K. *et al*. (2021) OASI Care Bundle. *BJOG,* in press

Schrock, R. D. (2013) 'The Methodological Imperatives of Feminist Ethnography'. *Journal of Feminist Scholarship,* 5 (Fall) available at: http://www.jfsonline.org/issue5/articles/schrock/ (Accessed 09.08.2021)

Shinners-Kennedy D. (2016) 'How *NOT* to Identify Threshold Concepts' in Land R., Meyer J.H.F. and Flanagan M.T. (eds.) *Threshold Concepts in Practice.* Rotterdam: Sense Publishers pp. 253-268

Shorrock, S. (2016) *The Varieties of Human Work*. Humanistic Systems: views on human factors, systems and safety from the perspectives of humanistic thinking, systems thinking and design thinking. Available at: https://humanisticsystems.com/2016/12/05/the-varieties-of-human-work/ (Accessed 21.08.2021)

Silverman, D. (2013) *Doing Qualitative Research*. 4th edn. London: SAGE

Skeggs, B. (2007) 'Feminist Ethnography' in Atkinson, P., Coffey, A., Delamont, S., Lofland, J. and Loftland, L. (eds.) *Handbook of Ethnography.* London: SAGE Publications Ltd pp. 426-442

Smith, L.A., Price, N., Simonite, V., Burns, E.E. (2013) 'Incidence of and risk factors for perineal trauma: a prospective observational study'. *BMC Pregnancy and Childbirth,* 13: 59 http://www.biomedcentral.com/1471-2393/13/59

Smith, V., Guilliland, K., Dixon, L., Reilly, M., Keegan, C., McCann C., Begley, C., (2017) 'Irish and New Zealand Midwives' expertise at preserving the perineum intact (the MEPPI study): Perspectives on preparations for birth'. *Midwifery,* 55 pp. 83–89 http://dx.doi.org/10.1016/j.midw.2017.09.011

Spradley, J.P. (1980) *Participant Observation.* New York: Holt, Rinehart and Winston

Stacey, J. (1988) 'Can there be a feminist ethnography?' *Women's Studies International Forum,* 11 (1) pp. 21-27

Steen, M. and Diaz, M. (2018) 'Perineal trauma: A women's health and wellbeing issue' *British Journal of Midwifery,* 26 (9) pp. 574-584

Stride, S.L., Hundley, V.A., Way, S., Sheppard, Z.A. (2021) 'Identifying the factors that influence midwives' perineal practice at the time of birth in the United Kingdom'. *Midwifery,* 102: 103077 https://doi.org/10.1016/j.midw.2021.103077

Stopford, R. (2021) 'Threshold concepts and certainty: a critical analysis of 'troublesomeness' '. *Higher Education,* 82 pp. 163–179 https://doi.org/10.1007/s10734-020-00628-w

Swenson, C.W., DePorre, J.A., Haefner, J.K., Berger, M.B., Fenner, D.E. (2018) 'Postpartum Depression Screening and Pelvic Floor Symptoms Among Women Referred to a Specialty Postpartum Perineal Clinic'. *Am J Obstet Gynecol.*, 218 (3): 335.e1–335.e6. https://doi.org/10.1016/j.ajog.2017.11.604

Sultan, A. H., Thakar, R. (2002) 'Lower genital tract and anal sphincter trauma' *Best Practice & Research Clinical Obstetrics and Gynaecology,* 16 (1) pp. 99-115 https://doi.org/10.1053/beog.2002.0258

Sundquist, J-C. (2012) 'Long-term outcome after obstetric injury: a retrospective study'. *Acta Obstet Gynecol Scand.,* 91 pp. 715-718 DOI: 10.1111/j.1600-0412.2012.01398.x

Thornton, J. G. and Dahlen, H.G. (2020) 'The UK Obstetric Anal Sphincter Injury (OASI) Care Bundle: A critical review'. *Midwifery,* 90: 102801 https://doi.org/10.1016/j.midw.2020.102801

Tight, M. (2014) 'Theory development and application in higher education research: The case of threshold concepts'. *International Perspectives on Higher Education Research,* 10 pp. 249–267 DOI: 10.1108/s1479-3628(2014)0000010018

Trochez, R., Waterfield, M. & Freeman, R.M. (2011) 'Hands on or hands off the perineum: a survey of care of the perineum in labour (HOOPS)'. *Int Urogynecol J.,* 22, pp. 1279–1285 https://doi.org/10.1007/s00192-011-1454-8

Tufford, L., Newman, P. (2010) 'Bracketing in Qualitative Research'. *Qualitative Social Work,* 11 (1) pp. 80-96 DOI: 10.1177/1473325010368316

Tunestveit, J.W., Baghestan, E., Natvig, G.K., Eide, G.E., Nilsen, A.B.V. (2018) 'Factors associated with obstetric anal sphincter injuries in midwife-led birth: A cross sectional study'. *Midwifery,* 62 pp. 264–272 https://doi.org/10.1016/j.midw.2018.04.012

Tunçalp, Ö., Were, W. M., MacLennan, C., Oladapo, O.T., Gülmezoglu, A. M., Bahl, R., Daelmans, B., Mathai, M., Say, L., Kristensen, F., Temmerman, M., Bustreo, F. (2015) 'Quality of care for pregnant women and newborns—the WHO vision'. *BJOG*, 122 pp. 1045–1049

Tyagi, V., Perera, M., Guerrero, K. (2013) 'Trends in obstetric anal sphincter injuries over 10 years'. *Journal of Obstetrics and Gynaecology*, 33 (8) pp. 844-849 DOI: 10.3109/01443615.2013.831045

Van Maanen, J. (1995) *Representation in Ethnography.* Thousand Oaks CA: Sage

Van Maanen, J. (2011) *Tales of the Field: On Writing Ethnography.* 2nd edn. Chicago: Chicago University Press

van Teijlingen, E. (2005) 'A Critical Analysis of the Medical Model as used in the Study of Pregnancy and Childbirth'. *Sociological Research Online*. 10 (2) pp. 63-77 DOI: 10.5153/sro.1034

Voyer, A. and Trondman, M. (2015) 'Between theory and social reality: Ethnography and *Interpretation and Social Knowledge*: Introduction to the special issue'. *Ethnography*, 18 (1) pp. 3-9. DOI:10.1177/1466138115592415

Waldenström, U. and Ekéus, C. (2017) 'Risk of obstetric anal sphincter injury increases with maternal age irrespective of parity: a population-based register study'. *BMC Pregnancy Childbirth,* 17, 306 https://doi.org/10.1186/s12884-017-1473-7

Walsh, D. (1999) 'An ethnographic study of women's experience of partnership caseload midwifery practice: the professional as a friend'. *Midwifery,* 15 (3) pp: 165-176 https://doi.org/10.1016/S0266-6138(99)90061-X

Walsh, D. (2000) 'Part five: Why we should reject the 'birth bed' myth'. *British Journal of Midwifery,* 8 (9) pp. 554-558

Walsh, D. (2004) *'Becoming mother': An ethnography of a free-standing birth centre.* Doctoral thesis, University of Central Lancashire. Available at: http://clok.uclan.ac.uk/22529/ (Accessed 22.08.2021)

Walsh, D. (2012). *Evidence and Skills for Normal Labour and Birth: A Guide for Midwives*. Oxford: Routledge.

Walsh, D. (2016) 'Midwives, gender equality and feminism'. *The Practising Midwife,* 19 (3) pp. 24-26

Wang, H., Jayasekara, R. and Warland, J. (2015) 'The effect of 'hands on' techniques on obstetric perineal laceration: a structured review of the literature'. *Women and Birth,* 28 pp: 194-198

Way, S. (2012) 'A qualitative study exploring women's personal experiences of their perineum after childbirth: Expectations, reality and returning to normality'. *Midwifery,* 28 e712-e719. DOI: 10.1016/j.midw.2011.08.011

Wearn, A., O'Callaghan, A. and Barrow, M. (2016) 'Becoming a Different Doctor: Identifying Threshold Concepts When Doctors in Training Spend Six Months with a Palliative Care

Team' in Land, R., Meyer, J.H.F. and Flanagan, M. T. (eds.) *Threshold Concepts in Practice*. Rotterdam: Sense Publishers pp. 223-238

Wheatley, E. (1994) 'How can we engender ethnography with a feminist imagination? A Rejoinder to Judith Stacey'. *Women's Studies International Forum,* 17 (4) pp. 403-416

Wheeler, J.L. (2014) *Towards an understanding of midwifery practice in relation to managing the risk of severe perineal trauma for women of Asian ethnicity in the Australian setting: an ethnography.* Professional Doctorate submitted in partial fulfilment of the requirements for the degree of Doctor of Midwifery. Available at: http://hdl.handle.net/10453/29212 (Accessed 20.08.2021)

Wheeler, J., Davis, D., Fry, M., Brodie, P., Homer, C. S. E. (2012) 'Is Asian ethnicity an independent risk factor for severe perineal trauma in childbirth? A systematic review of the literature'. *Women and Birth,* 25, pp. 107-113 DOI: 10.1016/j.wombi.2011.08.003

Whitehead, T. (2005) *Basic Classical Ethnographic Research Methods: Secondary Data Analysis, Fieldwork, Observation/Participant Observation, and Informal and Semi-structured Interviewing*. Ethnographically Informed Community and Cultural Assessment Research Systems (EICCARS) Working Paper Series. July 17, 2005. Cultural Ecology of Health and Change.

Williams, A., Lavender, T., Richmond, D.H., Tincello, D.G. (2005) 'Women's experiences after a third-degree obstetric anal sphincter tear: A qualitative study'. *Birth,* 32 (2) pp.129-136

Williams, A., Tincello, D. G., White, S., Adams, E. J., Alfirevic, Z., Richmond, D. H. (2005) 'Risk scoring system for prediction of obstetric anal sphincter injury'. *BJOG*, 112, pp. 1066-1069

Williams, A., Herron-Marx, S., Hicks, C., (2007) 'The prevalence of enduring postnatal perineal morbidity and its relationship to perineal trauma'. *Midwifery,* 23 (4) pp. 392-403 https://doi.org/10.1016/j.midw.2005.12.006

Wilson, A.N., Homer, C.S.E. (2020) 'Third- and fourth-degree tears: A review of the current evidence for prevention and management'. *Aust N Z J Obstet Gynaecol,* 60 pp. 175–182 DOI: 10.1111/ajo.13127

Wind G. (2008) 'Negotiated interactive observation: Doing fieldwork in hospital settings'. *Anthropol Med.,* 15 (2) pp. 79–89

Wisker, G. (2016) 'Beyond blockages to ownership, agency and articulation: Liminal Spaces and Conceptual Threshold Crossing in Doctoral Learning', in Land, R., Meyer, J.H.F. and Flanagan, M.T. (eds.) *Threshold Concepts in Practice*. Rotterdam: Sense Publishers pp. 165-178

Wisker, G., Savin-Baden, M. (2009) **'**Priceless conceptual thresholds: beyond the 'stuck place' in writing'. *London Review of Education,* 7 (3) pp. 235–247 DOI: 10.1080/14748460903290207

Wolcott, H. F. (2005) *The art of fieldwork* 2nd edn. Lanham: AltaMira Press

Woodward, K. (2008) 'Hanging out and hanging about: Insider/outsider research in the sport of boxing'. E*thnography,* 9 (4) pp. 536–560

World Health Organisation (2016) *Standards for improving quality of maternal and newborn care in health facilities*. Geneva: WHO Press. Available at: https://www.who.int/maternal_child_adolescent/documents/improving-maternal-newborn-care-quality/en/ (Accessed 01.08.2021)

World Health Organisation (2018) *WHO recommendations: intrapartum care for a positive childbirth experience*. Geneva: World Health Organization. Available from: https://www.who.int/reproductivehealth/intrapartum-care/en/ (Accessed 21.08.2021)

World Health Organisation and United Nations Population Fund (2009) *Mental health aspects of women's reproductive health: A global review of the literature*. Geneva: World Health Organization

Yeaton-Massey, A., Wong, L., Sparks, T. N., Handler, S. J., Meyer, M. R., Granados, J. M., Stasenko, M., Sit, A., Caughey, A. B. (2015) 'Racial/ethnic variations in perineal length and association with perineal lacerations: a prospective cohort study'. *The Journal of Maternal-Fetal & Neonatal Medicine,* 28 (3) pp. 320-323 https://doi.org/10.3109/14767058.2014.916675

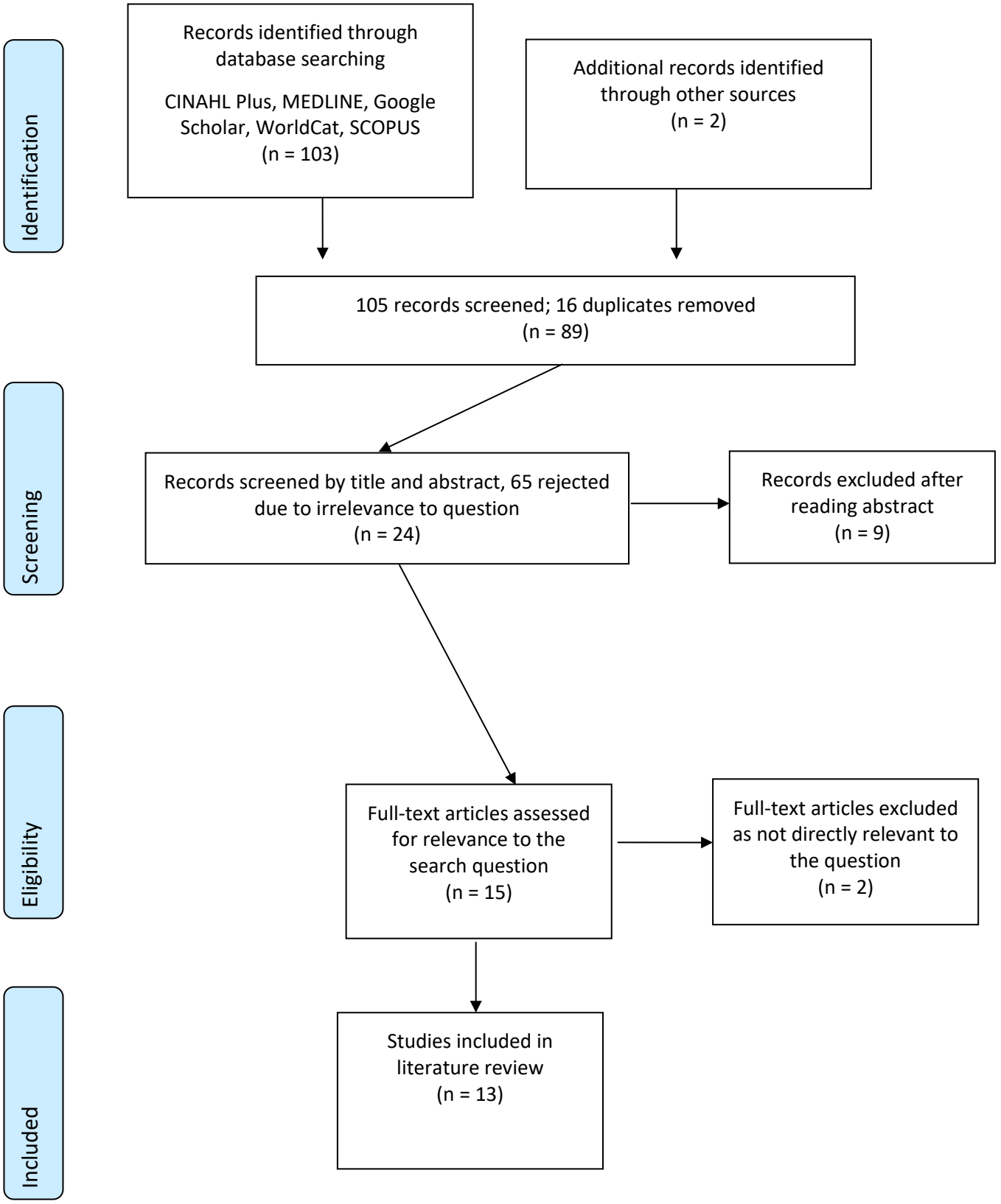
Zemčík, R., Karbanova, J., Kalis, V., Lobovský, L., Jansová, M., Rusavy, Z. (2012) 'Stereophotogrammetry of the perineum during vaginal delivery'. *International Journal of Gynecology and Obstetrics,* 119 pp. 76–80

Zhang, H.Y., Guo, R.F., Wu, Y., Ling, Y. (2016) 'Normal Range of Head-to-body Delivery Interval by Two-step Delivery'. *Chin Med Journal,* 129 pp: 1066-71. DOI:10.4103/0366-6999.180522

Zhou, X., Ma, D., Wang, F., Tian, Y. and Xu, X., (2019) ''Hands-off/poised' or 'Hands-on' method among Chinese midwives: A cross-sectional survey'. *Journal of Clinical Nursing,* 28 (15-16) pp. 2889-2898 DOI: 10.1111/jocn.14879

Appendices

Appendix 2.1 PRISMA Literature search flow diagram



From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta-*A*nalyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

Appendix 2.2 Summary of articles included in literature review

Authors	Title	Journal and date	Methods	Findings	Conclusions
Akın, B., Çolak, M. B., H. O. Can., Küni, F.	Practices of midwives working in delivery rooms for protection of perineum during intrapartum period and their feedback on these applications Turkey	*The Journal of Maternal-Fetal & Neonatal Medicine* 2020 https://doi.org/10.1080/14767058.2020.1812573	Prospective observational study questionnaire and observation 20 midwives 1 unit	The majority of midwives believed that they needed to do something to protect the perineum during labour; 40% of them used the 'hands on' technique to protect perineum and they preferred to perform routine episiotomy in all nulliparous women. Midwives were not observed doing what they said they did/would do.	The authors concluded that evidence-based practices were not observed by the midwives in the study, although they were knowledgeable did not demonstrate application of this in their practice. Midwives may not always do what they report they would do in a given situation.
Allen, J., Small, K., Lee, N.	How a perineal care bundle impacts midwifery practice in Australian maternity hospitals: A critical, reflexive thematic analysis Australia	*Women and Birth* 2021 Available online 21st January 2021 https://doi.org/10.1016/j.wombi.2021.01.012	Interviews 12 midwives from 5 hospitals in one state of Australia	Three themes were generated: 1) bundle design and implementation 2) changing midwifery practice: obedience, subversion, and compliance 3) obstetric dominance and midwifery submission. Authors identified the tensions between obstetric and midwifery constructs of safety in normal birth Midwives exhibited oppressed group behaviour. Decision-making commonly focused on obtaining consent. Midwives encouraged women to consent or decline depending on their personal preferences.	The implementation of the bundle exemplified tensions between obstetric and midwifery constructs of safety in normal birth. Maternal autonomy was not facilitated by midwives with decision-making focused on obtaining consent rather than an informed decision being made by the woman. The introduction of the perineal bundle acts as an exemplar of obstetric dominance in Australian maternity care. The authors recommend midwives advocate women's autonomy –and their own – by using clinical judgement, evidence, and woman-centred care.

Authors	Title	Journal and date	Methods	Findings	Conclusions
Ampt, A. J., de Vroome M., Ford, J. B.	Perineal management techniques among midwives at five hospitals in New South Wales – A cross-sectional survey Australia	*Australian and New Zealand Journal of Obstetrics and Gynaecology* 55 pp: 251–256 2015 DOI: 10.1111/ajo.12330	Survey Multiple-choice with free text option 108 midwives 1 unit	'Hands poised or off' was preferred by 63.0% for a low-risk birth with current practice associated with technique taught. When an increased OASI risk was perceived midwives reported switching to 'hands on' (83.4%). There has been a shift over time from teaching 'hands on' to 'hands poised or off'.	The preferred technique for a low-risk birth appears to have changed from 'hands on' to 'hands poised or off', but most midwives adopt 'hands on' in situations of high risk for OASI. Further research is needed to establish whether there is an association with the change in preferred perineal management technique for a low-risk birth and the rising OASI rate.
Barasinski, C., Debost-Legrand, A., Lemery, D., Vendittelli, F.	Practices during the active second stage of labor: A survey of French Midwives France	*Midwifery* 60 pp: 48–55 2018 https://doi.org/10.1016/j.midw.2018.02.001	Survey 1496 midwives from 377 units	Midwives advocated the use of horizontal positions during the active second stage (supine with footholds, lithotomy, lithotomy with knees turned in, or lateral positions). Almost all the midwives used the 'hands on' technique at childbirth (91.4%), and 24% reported using warm compresses	The practices of French midwives were different depending on where they worked, with midwives working in level III facilities, reporting that they cannot always ensure 'physiological childbirth'
Begley, C., Guilliland, K., Dixon, L., Reilly, M., Keegan, C., McCann C., Smith, V.	A qualitative exploration of techniques used by expert midwives to preserve the perineum intact Ireland and New Zealand	*Women and Birth* 32 pp: 87–97 2019 https://doi.org/10.1016/j.wombi.2018.04.015	Interviews 21 midwives	Four core themes: 'Calm, controlled birth' 'Position and techniques in early second stage' 'Hands on or off?' 'Slow, blow and breathe the baby out.'	Provides an understanding of the techniques used by expert midwives during birth to maintain perineal integrity. Adds to the evidence on how to preserve the perineum intact during spontaneous birth.

Authors	Title	Journal and date	Methods	Findings	Conclusions
East, C.E., Lau, R., Biro, M.A.	Midwives' and doctors' perceptions of their preparation for and practice in managing the perineum in the second stage of labour: A cross-sectional survey Australia	*Midwifery* 31 pp: 122–131 2015 http://dx.doi.org/10.1016/j.midw.2014.07.002	Survey (Based on Trochez *et al.* 2011) and expanded 17 doctors 69 midwives	Midwives and doctors used a number of techniques to reduce perineal injury including 'hands on the fetal head/perineum' (11.8% of doctors 61% of midwives) warm compresses (45% of midwives) and maternal education and guidance with pushing (49.3% of midwives). In certain situations, respondents said that they may practice hands on, hands off and episiotomy. The majority indicated that they agreed or strongly agreed that an episiotomy should sometimes be performed (midwives 97%, doctors 100%).	Midwives and doctors indicated that they would use either the 'hands on' or 'hands off' approach or episiotomy depending on the specific clinical scenario. They described a range of techniques that they would use in their overall approach to minimising perineal trauma. Midwives were more likely than doctors to indicate their lack of training and/or confidence in conducting perineal repair and diagnosing SPT.
Jefford, E., Jomeen, J., Guy, F., Newcombe, B., and Martin, C.	Applying a Midwifery-Specific Decision-Making Tool to Midwives' Clinical Reasoning and Midwifery Practice When Managing a Woman's Perineum in Labor: An Exploratory Study Australia	*International Journal of Childbirth* 8 (1) 2018 http://dx.doi.org/10.1891/2156-5287.8.1.54	Interviews narratives of good outcome (intact) and poor outcome (tear) analysed with decision-making matrix 7 midwives 1 unit	Effective clinical decision making in response to perineal trauma contingent on individualised "working hypothesis" combining distinct elements of optimal clinical decision-making process. Midwives' ability to engage in some form of clinical reasoning was identified from the narratives. Some midwives did not exhibit all elements of good midwifery practice resulting in them abdicating their professional role.	Perineal management is a complex issue. Influences on midwives' decision making, or lack of it, come from original training of perineal care, largely learned by rote and taught by example. Recommendations include balanced education between synthesis with current evidence and midwifery practice, and better integration of midwifery philosophy

Authors	Title and place	Journal and date	Methods	Findings	Conclusions
Lindgren, H.E., Brink, Å., Klingberg-Allvin, M.	Fear causes tears - Perineal injuries in home birth settings. A Swedish interview study. The aim of the study was to describe the practice of midwives in home birth settings with the focus on the occurrence of perineal injuries. Sweden	*BMC Pregnancy Childbirth* 11 (6) 2011 https://doi.org/10.1186/1471-2393-11-6	Interviews 20 midwives who had assisted home births Multiple locations although not stated	Overall theme of "No rushing and tearing about", describing homebirth midwives' focus of recognising the natural rhythms of labour. Subcategories: 1) preparing for the birth 2) going along with the physiological process 3) creating a sense of security 4) the critical moment 5) midwifery skills	Midwives who assist women giving birth at home take many things into account to minimize the risk of complications during birth. Protection of the woman's perineum is an act of awareness that is not limited to the actual moment of the pushing phase but starts during the antenatal period. It also includes good communication within a relationship of trust existing between the midwife and the woman.
Royal College of Midwives	Report of a survey exploring the position of midwives' hands during the birth of the baby's head UK	Royal College of Midwives 2014	Survey completed for women after a normal birth 469 returned 22 units	Midwives reported that in 67.5% of the births reported a 'hands on' technique was used, in 32.4% 'no touching' and 1.1% 'other'. There was a significant association between the place of birth and the position of the midwives' hands obstetric units had the least 'hands off' practice compared to home birth and free-standing midwifery led units. No significant association between years of experience and the position of the midwives' hands	The study highlighted the importance of the multiple elements that are involved in the decision-making process that midwives must undertake in most clinical situations with variation in practice seen as encouraging. The use of hands appear to be appropriately influenced by the mother's position and the birth environment. The study led the authors to question the view that most midwives have adopted "hands off" practice.

Authors	Title	Journal and date	Methods	Findings	Conclusions
Smith, V., Guilliland, K., Dixon, L., Reilly, M., Keegan, C., McCann C., Begley, C.,	Irish and New Zealand Midwives' expertise at preserving the perineum intact (the MEPPI study): Perspectives on preparations for birth Ireland and New Zealand	*Midwifery* 55 pp: 83–89 2017 http://dx.doi.org/10.1016/j.midw.2017.09.011	Interviews 21 midwives	Four themes were identified; 'Sources of knowledge for PPI' 'Associated factors' 'Decision-making on episiotomy' 'Preparations for PPI'. Participants drew heavily on multiple sources of knowledge Physical characteristics of the perineum featured prominently Episiotomy was, generally, only performed when there were fetal indications. Antenatal perineal massage was supported.	Provides insight into the views and skills of midwives, with expertise in reducing perineal injury.
Stride, S.L., Hundley, V.A., Way, S., Sheppard, Z.A.	Identifying the factors that influence midwives' perineal practice at the time of birth in the United Kingdom UK	*Midwifery* 102 103077 2021 https://doi.org/10.1016/j.midw.2021.103077	Survey (Based on Trochez *et al.* 2011) 555 midwives	Most midwives used their hands on the perineum at the time of birth (61.4%). 'Hands on' practise was significantly associated the place that midwives worked in ($p < 0.001$), risk factors for OASI ($p < 0.001$), and the approach that they were taught in their midwifery training ($p < 0.01$).	There has been an increase in the number of midwives who use the 'hands on' technique at the time of birth. Midwives require additional training to identify SPT
Trochez, R., Waterfield, M., Freeman, R. M.	Hands on or hands off the perineum: a survey of care of the perineum in labour (HOOPS) England	International Urogynecology Journal 22 pp: 1279–1285 2011 DOI 10.1007/s00192-011-1454-8	Postal questionnaire 607 returned	49.3% midwives 'prefer' the 'hands-off' method. Less-experienced midwives were more likely to prefer to use 'hands off' (72% vs. 41.4%). A higher proportion of midwives in the 'hands-off' group would never do an episiotomy (37.1% vs. 24.4% for indications other than fetal distress	The 'hands off' the perineum technique is prevalent in the management of labour. The authors hypothesise that a possible consequence of the 'hands off' technique might be an increased incidence of SPT

Authors	Title	Journal and date	Methods	Findings	Conclusions
Zhou, X., Ma, D., Wang, F.,Tian, Y., Xu, X	'Hands-off/poised' or 'Hands-on' method among Chinese midwives: A cross-sectional survey China	*Journal of Clinical Nursing* 28 pp: 2889–2898 2019 DOI: 10.1111/jocn.14879	Online survey using Trochez et al. (2011) survey Translated into Chinese and piloted 5,225 midwives 31 provinces	55.8% of the midwives preferred the 'hands-off/poised' method. Factors influencing their choice included the place of work, length of experience in a birth unit, theoretical education and skill training. When risk of SPT was perceived, 100% of the midwives in the 'hands-off' group expressed that they would change to a 'hands-on' approach.	The 'hands-off/poised' approach is widely practised by Chinese midwives. However, all midwives would adapt their practice and adopt 'hands-on' in the face of high-risk factors for SPT.

Appendix 3.1 Study poster for midwives

Kingston University London
St George's University of London
GREATER TOGETHER Kingston and St George's
Faculty of Health, Social Care and Education
www.healthcare.ac.uk
Telephone: [Redacted]

Version 2 22.09.15

Protecting the perineum during physiological birth

If you are caring for a woman who has consented to take part in this study, you may also be approached to consider taking part.

There is no agreed standardised approach to perineal protection during birth, and NICE guidance states that: either the 'hands on' (guarding the perineum and flexing the baby's head) or the 'hands poised' (with hands off the perineum and baby's head but in readiness) technique can be used to facilitate spontaneous birth (GC190 1.13.13 NICE 2014).

A research study is being undertaken in the maternity unit during 2016 to explore the factors that influence midwives' decision-making when considering which techniques to use to minimise perineal trauma during physiological birth.

Lindsay Gillman is undertaking this research study in part fulfillment of a PhD degree at Kingston University, London.

For further information please contact:

Lindsay Gillman MSc (Research Methods), BSc (Hons), RGN, RM, PGCEA
Faculty of Health, Social Care and Education

Appendix 3.2 Study poster for women

Poster (antenatal clinics/antenatal ward/delivery suite waiting areas)

version 1 12.06.15

Research study

Are you booked to have your baby [redacted] Hospital Delivery Suite, [redacted] Birth Centre or by [redacted] Team?

If you are having midwife-led care, you may be invited to consider taking part in an observational research study.

A study is taking place during 2015-2016, to observe the different ways that midwives help to reduce damage to the birth canal during birth.

You may receive an information sheet from your midwife about the study towards the end of your pregnancy.

If you are invited to take part, you can choose whether or not to agree. You will have the opportunity to discuss this in detail with the researcher and have time to talk to your partner/family before you decide.

For further information about the study please contact:

Lindsay Gillman MSc (Research Methods), BSc (Hons), RGN, RM, PGCEA

[redacted]

This study is being undertaken as part of a PhD degree at Kingston University, London.

Appendix 3.3 Participant information sheet for clinical observation

(midwives)

Faculty of Health, Social Care and Education
www.healthcare.ac.uk
Telephone: [Redacted]

Participant Information Sheet (midwives) version 3 07.11.16

The culture and context of protecting the perineum during physiological birth: an ethnographic study

I would like to invite you to take part in a research study. Before you decide whether to participate it is important that you understand why the research is being done and what it would involve for you.
Please take time to read the following information carefully and consider whether you would like to participate.

What is the purpose of the study?
The purpose of this study is to observe how midwives support women to birth their baby, with particular focus on preventing damage to the perineum. There is no agreed standard on the best way to do this, therefore I am interested in what midwives do and the factors that influence their decisions. The researcher, Lindsay Gillman, is undertaking the study in part fulfillment of a PhD degree at Kingston University, London.

Why have I been invited?
You have been chosen to be invited to take part in this study as you are a midwife working for the maternity services [redacted]

Do I have to take part?
It is up to you to decide to take part in the study. If you decide to take part, I will discuss the study with you in more detail and answer any questions that you may have. I will then ask you to sign a consent form to show that you agree to take part. You are free to withdraw from the study at any time, without giving a reason. This will not affect your relationship with the researcher or employer.

What will happen to me if I take part?
If you agree to take part in the study, I will observe the activities you undertake when providing care in labour. I will accompany you as you provide care for a woman in labour who has also consented to the observation, from the time established labour has commenced until after the birth of the baby. I will be recording my observations in writing. There will be no audio or video recording of these observations. I would also like to interview you following the observed episode to discuss my observations and explore the subject of perineal protection with you in more detail. The interviews will be audio recorded.

What will I have to do?
You need to agree that I can observe you as you provide care during labour and birth. The interviews that follow will last a maximum of one hour and will take place at a time and place convenient for you. Interviews will be audio recorded and transcribed.

What are the possible disadvantages and risks of taking part?
There are not thought to be any risks to taking part in this study. As there is no agreed standard way to undertake this aspect of care, I am interested in observing the variety of techniques that midwives use. By taking part in this study, however it will mean that I will be present in the room as you provide care during labour and birth.

What are the possible benefits of taking part?

There are no direct benefits to you by taking part in the study. The information that is gained from the study will add to the body of evidence and help to increase the understanding of the ways in which midwives aim to protect the perineum during birth.

What if I am concerned or wish to make a complaint?

If you have any concerns or wish to complain about any aspect of the way you have been treated during the course of this study, please contact me in the first instance. My research supervisor can also be contacted if you wish to discuss your concerns with someone else. Contact details are at the end of this information sheet.

If you are still not satisfied with the response, you may contact the [redacted] and [redacted], Clinical Research Governance Officer at [redacted].

Will my taking part in the study be kept confidential?

Any information that is collected about you during the course of the research will be kept strictly confidential, and any information used will have all your personal details removed so that you cannot be identified or recognised.

As a registered midwife however, I am bound to abide by the professional code of conduct (NMC 2008) and Midwives Rules and Standards (NMC 2012) therefore, if during the course of observation or interview I am aware of any unsafe practice, the Trust policy for raising concerns will be followed. I will also discuss the issue with my Supervisor of Midwives for advice.

Your participant data and observation notes will be anonymous and given a research code that will be known only to me. The list identifying research codes and participants will be kept on a password-protected computer, accessed only by me. All observation notes, interview audio recordings and transcripts will be kept in a securely locked drawer with access available only by myself. All data will be kept securely until the successful completion of the study and PhD award, and in accordance with research governance requirements after which it will be destroyed.

What will happen if I change my mind about taking part in the study?

If you decide to withdraw from the study at any point, please tell me, and the observation or interview will stop immediately. Any data collected will be destroyed. If you wish to withdraw from the study after the observation or interview, please contact me so that your data can be withdrawn.

What will happen to the results of the research study?

The results of the study will be submitted as the PhD thesis. It is also anticipated that the results will be shared with other healthcare professionals through publications and conference presentations. You will not be identifiable in any report or publication.

Who is organising or sponsoring the research?

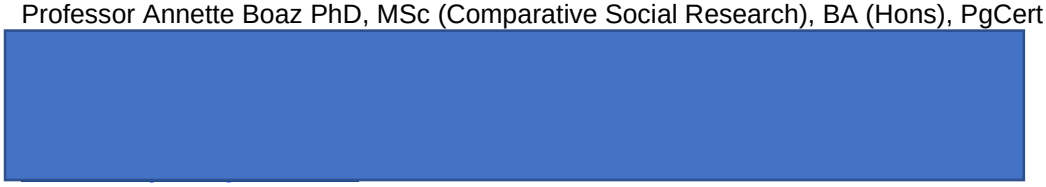
The research study is being undertaken as part of a PhD degree at Kingston University. The study is organised by myself with support from a supervisory team and [redacted] department. The study sponsor is [redacted], Associate Dean for Research, Faculty of Health, Social Care and Education, Kingston University and St.George's University of London.

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee (REC), to protect your interests. This study has been reviewed and given favorable opinion by the Wales REC4 Research Ethics Committee.

Further information and contact details:

Researcher
Lindsay Gillman MSc (Research Methods), BSc (Hons), RGN, RM, PGCEA

Contact for supervisory team
Professor Annette Boaz PhD, MSc (Comparative Social Research), BA (Hons), PgCert



Appendix 3.4 Consent form for clinical observation (midwives)

Kingston University London
St George's University of London
GREATER TOGETHER Kingston and St George's
Faculty of Health, Social Care and Education
www.healthcare.ac.uk
Telephone: [Redacted]

Consent form for midwives: version 2 22.09.15

WRITTEN CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Statement by participant
Initial

I confirm that I have read and understood the information sheet and letter of invitation for this study.	☐
I have been informed of the purpose, risks, and benefits of taking part and had the opportunity to ask questions.	☐
I understand what my involvement will entail, and any questions have been answered to my satisfaction.	☐
I understand that my participation is entirely voluntary, and that I can withdraw at any time without prejudice.	☐
I consent to the audio recording of interviews.	☐
I understand that all information obtained will be confidential unless any aspect of unsafe practice is identified.	☐
I agree that research data gathered for the study may be published provided that I cannot be identified as a subject.	☐
Contact information has been provided should I (a) wish to seek further information from the investigator at any time for purposes of clarification	☐
or (b) wish to make a complaint.	☐

Participant's Signature: _____ Date: _____

Statement by researcher

I have explained this project and the implications of participation in it to this participant without bias and I believe that the consent is informed and that she understands the implications of participation.

Name of researcher: Lindsay Gilman

Signature of researcher: _____ Date: _____

Appendix 3.5 Consent form for clinical observation (women)

Kingston University London
St George's University of London
GREATER TOGETHER
Kingston and St George's
Faculty of Health, Social Care and Education
www.healthcare.ac.uk
Telephone: [Redacted]

WRITTEN CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Statement by participant
Initial

I confirm that I have read and understood the information sheet and letter of invitation for this study.	☐
I have been informed of the purpose, risks, and benefits of taking part and had the opportunity to ask questions.	☐
I understand what my involvement will entail and any questions have been answered to my satisfaction.	☐
I understand that my participation is entirely voluntary, and that I can withdraw at any time without prejudice.	☐
I understand that all information obtained will be confidential unless any aspect of unsafe practice is identified.	☐
I agree that research data gathered for the study may be published provided that I cannot be identified as a subject.	☐
Contact information has been provided should I (a) wish to seek further information from the investigator at any time for purposes of clarification	☐
or (b) wish to make a complaint.	☐

Participant's Signature: _____ Date: _____

Statement by researcher

I have explained this project and the implications of participation in it to this participant without bias and I believe that the consent is informed and that she understands the implications of participation.

Name of researcher: Lindsay Gilman

Signature of researcher: _____ Date: _____

Appendix 3.6 Participant information sheet for clinical observation (women)

Kingston University London
St George's University of London
GREATER TOGETHER Kingston and St George's
Faculty of Health, Social Care and Education
www.healthcare.ac.uk
Telephone: [Redacted]

The culture and context of protecting the perineum during physiological birth: an ethnographic study

You are invited to take part in a research study. Before you decide whether to participate it is important to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and consider whether you would like to participate.

What is the purpose of the study?

The purpose of this study is to observe how midwives support women to birth their baby, with particular focus on preventing tears to the perineum (the area of skin and muscle between the vagina and anus that may be damaged during childbirth).

The researcher Lindsay Gillman, an experienced midwife, is undertaking the study in part fulfillment of a PhD degree at Kingston University, London.

Why have I been invited?

You have been invited to take part in this study because you are pregnant with a single baby, have not had any risks identified during your pregnancy, and you are planning to be cared for by midwives employed b[redacted] Trust.

Do I have to take part?

It is up to you to decide whether to take part in the study. If you decide to take part, I will discuss the study with you in more detail and answer any questions that you may have. I will then ask you to sign a consent form to show that you agree to take part. You are free to withdraw from the study at any time, without giving a reason. This will not affect the care you receive.

What will happen to me if I take part?

If you agree to take part in the study, I will observe the midwife providing care for you when you are in labour. I will accompany them as they provide care for you from the time established labour has started, until after the birth of you baby. I will be recording my observations in writing. There will be no audio or video recording.

What will I have to do?

You will need to agree that I can observe the midwife caring for you during your labour and the birth of your baby.

What are the possible disadvantages and risks of taking part?

There are not thought to be any risks to taking part in this study. By taking part in this study, however it will mean that I will be present in the room during your labour and birth. If you wish me to leave the room at any time, please tell me or the midwife caring for you.

What are the possible benefits of taking part?

There are no direct benefits to you by taking part in the study. The information that is gained from the study will help to increase the understanding of the ways in which midwives prevent tears of the birth canal during childbirth.

What if I am concerned or wish to make a complaint?

If you have any concerns or wish to complain about any aspect of the way you have been treated during the course of this study, please contact me in the first instance. My research supervisor can also be contacted if you wish to discuss your concerns with someone else. Contact details are at the end of this information sheet. If you are still not satisfied with the response, you may contact the [redacted] Clinical Research Governance Officer at [redacted].
The normal National Health Service complaints mechanisms are also available to you http://www.nhs.uk/choiceintheNHS/Rightsandpledges/complaints/Pages/NHScomplaints.aspx

Will my taking part in the study be kept confidential?

Any information that is collected about you during the course of the research will be kept strictly confidential, and any information used will have all your personal details removed so that you cannot be identified or recognised.

As a registered midwife however, I am bound to abide by the professional code of conduct (NMC 2008) and Midwives Rules and Standards (NMC 2012) therefore, if during the course of observation I am aware of any unsafe practice, the Trust policy for raising concerns will be followed. I will also discuss the issue with my Supervisor of Midwives for advice.

Your participant data and observation notes will be anonymous and be given a research code that will be known only to me. The list identifying research codes and participants will be kept on a password-protected computer, accessed only by me. All observation notes will be kept in a securely locked drawer, accessible only by myself. All data will be kept securely until the successful completion of the study and PhD award, after which it will be destroyed.

What will happen if I change my mind about taking part in the study?

If you decide to withdraw from the study at any point, please tell me, and the observation will stop immediately. If you wish to withdraw from the study after the observation or interview, please contact me so that your data can be withdrawn.

What will happen to the results of the research study?

The results of the study will be submitted as the PhD thesis. It is also anticipated that the results will be shared with other healthcare professionals through publications and conference presentations. You will not be identifiable in any report or publication.

Who is organising or sponsoring the research?

The research study is being undertaken as part of a PhD degree at Kingston University. The study is organised by myself with support from a supervisory team and [redacted] department. The study sponsor is Professor [redacted] Associate Dean for Research Faculty of Health, Social Care and Education, Kingston University and St. George's University of London.

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee (REC), to protect your interests. This study has been reviewed and given favorable opinion by the Wales REC4 Research Ethics Committee.

Further information and contact details:

Researcher
Lindsay Gillman MSc (Research Methods), BSc (Hons), RGN, RM, PGCEA

Contact for supervisory team
Professor Annette Boaz

Appendix 3.7 Confirmation of favourable ethical opinion

Ymchwil Iechyd a Gofal Cymru
Health and Care Research Wales

Gwasanaeth Moeseg Ymchwil
Research Ethics Service

Ariennir gan Lywodraeth Cymru
Funded by Welsh Government

Wales REC 4

[Redacted]

[redacted]

11 November 2015

Mrs Lindsay Jane Gillman
Associate Professor, Midwifery
[redacted]

Dear Mrs Gillman

Study title:	**The culture and context of perineal protection during physiological birth: an ethnographic study**
REC reference:	**15/WA/0275**
IRAS project ID:	**103293**

Thank you for your letter of 01 October 2015 together with further clarification received on 06 November 2015, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information was considered by a Sub-Committee of the REC at a meeting held on 04 November 2015. A list of the Sub-Committee members is attached.

The REC Chair considered your response to the NHS complaints procedure clarification on 10 November 2015.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this opinion letter. Should you wish to provide a substitute contact point, require further information, [redacted]

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non clinical trials this is not currently mandatory.

[redacted]lance on where to register is provided within IRAS.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS sites

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Copies of advertisement materials for research participants [Women]	version 1	12 June 2015
Copies of advertisement materials for research participants [Poster - Midwives]	version 2	22 September 2015
Covering letter on headed paper [Covering letter]	version 1	16 July 2015
Interview schedules or topic guides for participants [Interview topic guide]	version 1	01 October 2015
IRAS Checklist XML [Checklist_17072015]		17 July 2015
IRAS Checklist XML [Checklist_23072015]		23 July 2015
IRAS Checklist XML [Checklist_01102015]		01 October 2015

Letter from sponsor [Sponsor letter]	version 1	14 May 2015
Letters of invitation to participant [Women]	version 1	12 June 2015
Letters of invitation to participant [Midwives - email]	version 1	12 June 2015
Participant consent form [Midwives]	version 1	14 May 2015
Participant consent form [Women]	version 1	30 June 2015
Participant information sheet (PIS) [PIS for midwives]	version 2	22 September 2015
Participant information sheet (PIS) [PIS for women]	version 2	22 September 2015
REC Application Form [REC_Form_17072015]		17 July 2015
REC Application Form [REC_Form_23072015]		23 July 2015
Referee's report or other scientific critique report [PhD transfer report]	version 1	06 May 2015
Research protocol or project proposal [Proposal]	version 1	15 July 2015
Summary CV for Chief Investigator (CI)	version 1	27 April 2015

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document *"After ethical review – guidance for researchers"* gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/

HRA Training

We are pleased to welcome researchers and R&D staff at our training days – see details at http://www.hra.nhs.uk/hra-training/

15/WA/0275	Please quote this number on all correspondence

With the Committee's best wishes for the success of this project.

Yours sincerely

[redacted]

Chair

E-mail: [redacted]

Enclosures: *List of names and professions of members who were present at the meeting and those who submitted writtencomments*

"After ethical review – guidance for researchers"

Copy to: *Sponsor contact - Professor Annette Boaz*

[redacted]

Appendix 3.8 Permission for access

[redacted] NHS Trust

[redacted]

[redacted]

18 May 2015

Lindsay Gillman
Principal Lecturer

Dear Lindsay

Re: PhD observation study –perineal management during physiological birth

Apologies for not getting back to you earlier following our meeting about your proposal. I am very happy to confirm my support for you in your ethnographic study of perineal management. I understand you will be based primarily on the birth centre [redacted] and Delivery Suite for this, but also hope to spend time with the [redacted] homebirth team. I am very supportive of this study and see it will contribute to the evidence base around the issue of perineal management and be of great benefit to women and midwives.

[redacted]
necessary ethical and R&D approvals. It would also be useful to speak to consultant midwife [redacted], who is taking over management of the birth centre.

Yours sincerely,

[redacted]

Director of Midwifery

[redacted]

Appendix 3.9 Site permission

[redacted]

[redacted] NHS Foundation Trust

[redacted]

Email: [redacted]

18/01/2016

Lindsay Gillman

[redacted]

Dear Lindsay Gillman

PROJECT TITLE

[redacted] Protecting the perinueum at birth: an ethnographic study

15/WA/0275

15.0146

[redacted]

Lindsay Gillman

Notification of [redacted] ost site permission

Permission for the above research has been granted on the basis described in the application form, protocol and supporting documentation. The documents reviewed and approved were those specified in the ethics approval letter dated 11/11/2015. The protocol version approved is version 1 dated 27/04/2015

Permission is granted on the understanding that the study is conducted in accordance with the Research Governance Framework, and NHS Trust policies. Permission is only granted for the activities for which a favourable opinion has been given by the REC. The permission may be invalidated in the event that the terms and conditions of any research contract or agreement change significantly and while the new contract/agreement is negotiated.

The research sponsor, the Chief Investigator, or the local Principal Investigator, may take appropriate urgent safety measures in order to protect research participants against any immediate hazard to their health or safety. [redacted] be notified that such measures have been taken. The notification should also include the reasons why the measures were taken and the plan for further action. The JREO should be notified within the same time frame of notifying the REC.

All amendments to this study (including changes to the local research team) need to be submitted in accordance with the guidance on IRAS. In addition any changes to the status of a study should be notified to the [redacted]

Please note th[redacted] is required to monitor research to ensure compliance with the Research Governance Framework and other legal and regulatory requirements.

Any intellectual property that is identified should be discussed with [redacted] prior to any disclosure of this information by publication or presentations to ensure that all rights are protected.

At study closure, the [redacted] together with the approving ethics committee should be notified that the study is closed. Study findings should be disseminated as identified in the original ethics application (including participants where appropriate). Study files should be appropriately archived.

Please contact the [redacted] if you require any further guidance or information on any matter mentioned above. We wish you every success in your research.

Yours sincerely

[redacted]

[redacted]

Appendix 3.10 Observation schedule

Lindsay Gillman: Proposed observation schedule: version 1 01.10.15
REC reference: 15/WA/0275
IRAS project ID: 103293
Proposed Interview Guide
NB. refinements will occur during observation

Date:
Location:

Time observation started:

Time of visible vertex:
Time of birth of head:
Time of birth:

Time observation finished:
Perineal outcome:

MW code (s):

Examples of activity/element observed	**Time**	**Time**
People present in room		
Environmental observation: lighting, sound, ambiance, disturbance		
Communication observation: Midwife, partner, other		
Woman's position		
Midwife's position		
Analgesia		
Augmentation		
Strategies for prevention of trauma: left lateral, compresses, hands (head/perineum)		
Other comments:		
Birth of shoulders: anterior or posterior, downward traction, hands off		
Complications: cord, malposition, compound presentation hand/arm, other		

An observation schedule that creates a timeline of activity will be devised and refined, allowing space for comments to enable identify key features and to facilitate discussion at interview.

Appendix 3.11 Interview guide

Lindsay Gillman Interview guide: version 1 01.10.15
REC reference: 15/WA/0275
IRAS project ID: 103293
Proposed Interview Guide

The content of the interview will be related to the clinical observation and will enable the researcher to explore the clinical episode and midwifery decision-making in detail with the interviewee.

However, the following format may be used to guide the interview and stimulate discussion.

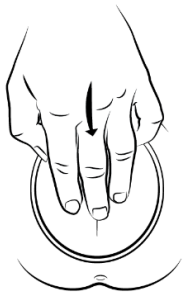
Welcome and introduction, explain purpose of interview

- How long have you been a midwife? Can you tell me about your midwifery education and training?
- I am really interested in exploring how midwives learn about the prevention of perineal trauma. How did you learn about this aspect of midwifery care?
- The clinical episode that I observed was ……. (remind midwife about the episode from the field notes). Can you remember if you used any particular method to try to prevent perineal trauma in this case?
- What factors do you think affected your decision-making?
- To what extent do you discuss perineal management with the women you care for before birth?
- Can you tell me what you know about the evidence for practice in relation to reducing perineal trauma?
- There has been an increase in the incidence of severe perineal trauma in the past few years. What factors do you think may have contributed to this is?
- Is there anything else that you would like to tell me about in relation to the prevention of perineal trauma?

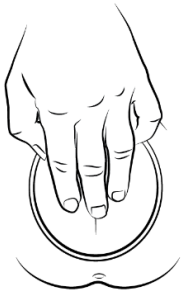
The interview will conclude with the midwife being thanked for their time.

The midwife will be asked whether they would like to be invited to a presentation of the initial results and/or a summary of the results.

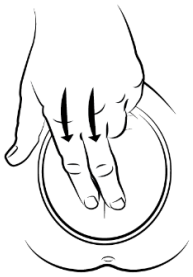
Appendix 5.1 Inventory of 'hands on' positions



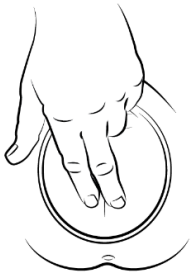
A. Active technique:
The fingertips of the first, second and third fingers apply downward pressure on the baby's head to increase flexion and slow extension.



B. Passive technique:
The first, second and third fingers are placed on the baby's head to assess the speed of extension.



C. Active technique:
The first and second fingers apply downward pressure to increase fexion and slow extension.



D. Passive technique:
The first and second fingers are placed on the baby's head to assess the speed of extension.

E. Active technique:
The hand is placed over the occiput with pressure applied through the palm to slow extension.

F. Passive technique:
The palm of the hand is placed over the occiput to assess the speed of extension.

G. Passive technique:
The second and third fingers are folded into the palm of the hand; the little finger is applied between the baby's head and anterior perineal tissues and the forefinger applied to the baby's head at the margin of the posterior perineal tissues.

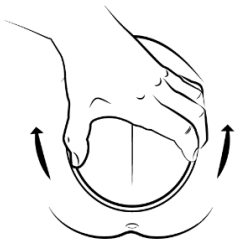
H. Active technique:
The first and second fingers are applied to the occiput with pressure applied through the thumb to increase flexion and slow extension.

I. Passive technique:
The fingertips and thumb are applied to the baby's head to assess the speed of extension.

J. Active technique:
The first, second and third fingers are placed on the saggital suture and downward pressure applied to increase flexion and slow extension.

K. Active technique:
The palm of the hand is applied to the occiput to increase flexion and slow extension.

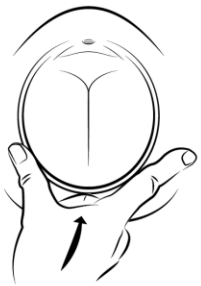
L. Passive technique:
The first, second and third fingers are placed on the saggital suture to assess the speed of extension.



M. Active technique:
The bi-parietal eminences are held between the thumb and fingers to facilitate controlled extension.

1. Active technique:
The thumb and fingers apply downward and backward pressure close to the margin of the vagina, to slow extension and to ease the perineal tissues under the advancing forehead, face and chin. The palm of the hand provides pressure to the posterior perineal structures.

2. Passive technique:
The thumb and fingers provide gentle pressure to support the posterior perineal structures.



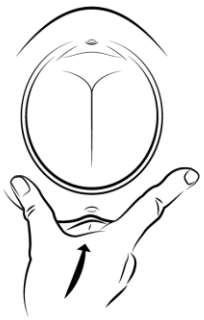
3. Active technique:
The thumb and forefinger apply pressure to the vaginal margin, the remaining three fingers are folded into the palm and apply pressure to the perineal structures and slow extension.

4. Passive technique:
The thumb and forefinger are placed at the vaginal margin, the remaining three fingers are folded into the palm and apply gentle pressure to support the perineal structures.

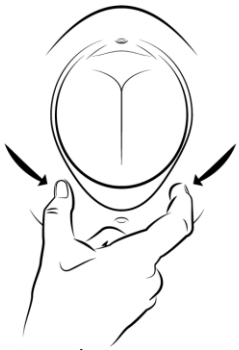
5. Active technique:
The thumb and forefinger apply downward and inward pressure to the vaginal margin, the remaining three fingers are folded into the palm and apply pressure to the posterior perineal structures.

6. Active technique:
The thumb and forefinger apply downward and backward pressure close to the margin of the vagina, to slow extension and to ease the perineal tissues under the advancing forehead, face and chin.

7. Passive technique:
The thumb and forefinger apply gentle pressure close to the margin of the vagina.

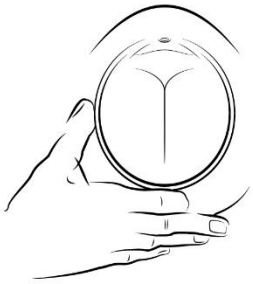


8. Active technique:
The thumb and forefinger apply pressure 2cms below the vaginal margin, the remaining three fingers are folded into the palm and apply pressure behind the anus onto the baby's chin to facilitate controlled extension.

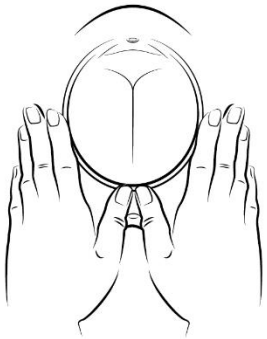


9. Active technique:
The thumb and forefinger apply downward and inward pressure 2cms from the vaginal margin, the remaining three fingers are folded into the palm and apply pressure behind the anus to the baby's chin.

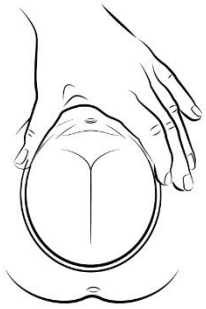
10. Passive technique:
The flattened hand is held close to the margin of the vagina with the fingers and palm providing support to the posterior perineal structures.



11. Passive technique:
The forefinger is bent under and provides support to the introitus with the rest of the fingers and palm providing support to the posterior perineal tissues.

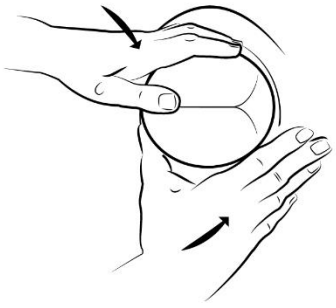


12. Passive technique:
The thumbs of both hands are placed together at the margin of the vagina to provide support.



13. Passive technique:
The thumb and forefinger provide support to the anterior perineal tissues.

S1. Active technique:
The hand on the perineum applies pressure through the palm of the hand to the posterior shoulder to facilitate the birth of the anterior shoulder under the pubic arch; the first and second fingers of other hand are placed at the base of the baby's neck and apply gentle downward traction.



S2. Active technique:
The hand on the perineum applies pressure through the palm of the hand to the posterior shoulder to facilitate the birth of the anterior shoulder under the pubic arch; the other hand is placed on the side of the baby's head to apply gentle downward traction.