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Title Page

**MIDWIFERY KNOWLEDGE AND THE
MEDICAL STUDENT EXPERIENCE**

An exploration of the concept of midwifery knowledge and its use in
medical students' construction of knowledge during a specialist
obstetric rotation

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Abstract

Midwifery Knowledge and the Medical Student Experience

An exploration of the concept of midwifery knowledge and its use in medical students' construction of knowledge during a specialist obstetric rotation

Author: Fiona Ellen MacVane

Key Words:

Midwifery knowledge, knowledge construction, interprofessional education (IPE), clinical learning, professional socialization, problem based learning (PBL), informed choice, medical model, social model, holistic care

The literature concerning what medical students learn from midwives during specialist obstetric rotations is scarce. In the UK, despite a long tradition of providing midwifery attachments for medical students, it is almost non-existent.

Working with midwives is arguably the only opportunity medical students have to experience holistic or social models of maternity care, focusing on normality rather than on the medical concept of risk.

This study sought to discover how medical students constructed their knowledge about childbirth during a six week specialist rotation in obstetrics in a Northern English teaching hospital (NETH), with particular emphasis on whether participants assimilated any concepts from midwifery knowledge (MK). A Delphi Study, done as the first phase of the research, focused on MK, utilizing an international sample of experienced midwives. Resulting themes were used to develop the data collection tool for the second phase of the research.

The research employed a qualitative case study method with students from a single year cohort comprising the case. Data were collected using a tool consisting of three problem based learning (PBL) scenarios. These were presented to the students in consecutive interviews at the beginning, the middle and the end of their obstetric rotation.

Following analysis, five main themes were identified which illuminated the medical students' construction of knowledge about maternity care. These were explored and discussed. The thesis concludes with recommendations for increasing opportunities for IPE in the medical and midwifery curricula.

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Dedication

In Memory of Uncle Bill

Dr. William Lesley MacVane Jr. 12 June 1915- 1 August 2010



(MacVane family film clip 1949)

I dedicate this PhD Thesis to the memory of my uncle, Dr. William Leslie MacVane Jr. of Portland Maine whose attributes included: intelligence, common sense, kindness, humour and determination. All of these made him both a renowned medical practitioner in his field of thoracic surgery and a very special uncle. His years as Director of Medical Education at Mercy Hospital (1965-1978) contributed to his life-long interest and involvement in education.

Fiona Ellen MacVane

2 August 2010

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Chapter 1

Introduction to the Thesis

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1. Introduction

This thesis represents the culmination of the myriad stages of the doctoral research process. As a midwife and a feminist researcher the ultimate aim of this project is to make childbirth a better experience for women. To achieve this aim I have focused on two areas. The first of these is the meaning of midwifery knowledge. Midwives claim that women need midwives, that midwives provide the most compassionate and holistic care to women during childbirth (Keen 2010). The concept that women need midwives is supported by another government document, *Maternity Matters*, which states “All women need midwives, some also need doctors” (DH 2007 page 15). However, without defining what midwives know or do that is so valuable to women, it is difficult to impart to others either the knowledge that defines midwifery practice or the vision that inspires a midwifery model of care. The first phase of this research project seeks to define midwifery knowledge as perceived by an international panel of childbirth experts who were all, with one exception, midwives.

The second area on which this thesis focuses is clinical education. This aspect of the educational experience has resonance for me as I have spent many years supporting student midwives in practice, in developing clinical curricula and in educating clinical mentors. From my background in PBL which is based on a constructivist theory of education (Savery and Duffy 2001), I chose to focus my study on medical students’ construction of knowledge pertaining to antenatal, intrapartum and postnatal care while working with midwives. The medical students of today will be the house officers of tomorrow and perhaps the obstetricians or GPs of the future. These doctors’ experiences as students may well affect their understanding of maternity care, their professional relationships with midwives (Hanson et al 2005) and their predilection for normality (Johanson and Newburn 2001) during the remainder of their careers.

This research can contribute to developing interprofessional learning for medical and midwifery students around topics important to the future careers of both doctors and

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midwives. Interprofessional learning (IPL) or interprofessional education (IPE) was therefore an important concept in the preparation of this thesis.

2. Justification for the project

“Midwives don’t do caesarean sections, do they?” This question was asked by a participant in the second stage of my PhD research, expressing a lack of clarity about the differences between the obstetric and midwifery roles on a busy National Health Service (NHS) labour ward. The question, while asked partially in jest, was significant to me as it embodied both stages of my research project: the first, examining the definition of midwifery knowledge and the second, exploring medical students’ experiences while working with midwives. The medical student asking this question expressed respect for the knowledge of both midwives and obstetricians, particularly in relation to their clinical teaching roles. He suggested that performing a caesarean section was perhaps the sole aspect of labour care that could be learned from obstetricians but not from midwives.

2.1 Finding the research question

My original question, which became the preliminary working title to this thesis, was: ‘what do medical students learn from midwives?’ It arose from a discussion with one of my PhD supervisors about possible topics which would encompass my concern with both midwifery and interprofessional pedagogy. My supervisor suggested that investigating what medical students learn through working with midwives would be an interesting PhD topic. In one of those gestalt moments when all the ideas I had been considering, and my particular areas of interest and experience coalesced, I had a very clear sense of having found my essential research question.

2.2 Improving childbirth for women

The question had resonance for me in the first instance because of my passionate concern for improving the experience of pregnancy and childbirth for women. This is the same passion that shaped my own career choices and has never ceased to be a focus

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of my work. It is based on a feminist philosophy which seeks to validate women's experiences and to understand birth from a woman-centred perspective.

2.3 Constructing a feminist perspective

Kitzinger and Wilkinson (1997) however suggest that feminist writers should reflect carefully on any claim to validate the experiences of women. Feminists, like other groups in society can be guilty of shaping reality to conform to their own preconceptions. These often serve to deconstruct social norms from a perspective that is white, Anglo-Saxon, educated and middle class. This may be a particular criticism of liberal feminism which views current social structures such as the educational system and democratic forms of government as potential tools for the liberation of women (Bandarage 1984). Feminisms such as Black Feminism or Marxist Feminism provide counterpoints, arguing that women's experiences are influenced by factors such as racial discrimination and the legacy of slavery (Collins 2000) or the exploitation of women's labour and economic dependence (Bandarage 1984). Thus women from different political, social, and ethnic groups construct stories about what it means to be female from their own unique experiences of discrimination which are layered together with the commonalities of their sex. As Oakley (1993) points out, there are different ways to tell a story and how the story is told alters the interpretation of the experience.

As a midwife, educator and researcher, I have tried to understand how women's stories illustrate pivotal life experiences from their unique perspectives rather than from my own white, liberal, Euro-centric viewpoint. This has helped me to develop a more inclusive feminist consciousness and to recognize the complex factors influencing the lived experience of women. This feminist perspective informs my understanding of the historical, social and political factors which have shaped the way society perceives pregnancy and birth in the modern world (Kitzinger 2005). As the predominant discourse in health care, the medical model has had a profound influence on women's perceptions of birth as well as on how midwives, often seen as the guardians of normality (Rosser and Anderson 1998), understand childbirth.

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3. Clinical Education

A long involvement in clinical education has reflected my interest in how students learn in clinical settings. As a clinical midwife I acted as a mentor and assessor for midwifery students. In that role I strove to make learning relevant and to discover innovative ways to teach clinical skills to students. In my subsequent role as a link lecturer for students on pre-registration midwifery courses my aim was to support both students and mentors and to help facilitate the clinical assessment process. Later I became responsible for training mentors by course leadership of the validated teaching and mentoring programme. I also had responsibility for providing mentor update sessions to enable mentors to maintain their knowledge and skills. Lately I have been the course leader for the health and social care educator programme which is delivered at Masters level and has both teacher and practice teacher pathways.

3.1 Linking theory to practice

The theoretical concepts underpinning clinical education have always been central to my experiences of mentoring and teaching. Gardner's (1983) theory of multiple intelligences, Bandura's (1986) concept of modelling and Friere's (1972) rejection of the banking system of education in favour of a more collaborative approach valuing pre-existing knowledge all helped to inform my understanding of education in both academic and practice settings. How students and practitioners learn and develop expertise in clinical settings is also a major area of interest for me as the goal of an educational programme leading to professional registration in health or social care is to create practitioners who are fit for purpose. Ultimately this means practitioners who continue to value learning and strive to achieve expertise. Mylopoulos and Regehr (2007 p.1161) distinguish between the 'routine expert' and the 'adaptive expert' in clinical practice. The routine expert is an excellent technician but when faced with new situations or unexpected challenges, attempts to fit them into a familiar heuristic. Their learning in practice focuses on doing the same things more efficiently. The adaptive expert responds to problems with creative and flexible thinking and seeks out challenges in order to achieve new competencies. Encouraging the development of adaptive expertise

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requires educational strategies fostering creativity, critical analysis and information seeking. Problem based learning (PBL) is considered such a strategy as well as a vehicle for bringing theory and practice closer together (Williams 2008; MacVane Phipps 2010). PBL will be considered more comprehensively in Chapter 4.

What and how students are taught or how they learn in practice settings is not the only area of concern for educationalists involved in clinical education. It is important to demonstrate educational congruence between what students learn in the university and the application of knowledge in practice. McCaugherty (1991) used action research to evaluate a teaching model designed to help student nurses integrate theory and practice, exploring the problem from the student perspective. Eighteen years later educationalists were still asking similar questions about whether the theory practice gap can be avoided or whether it is an inherent tension due to the differing cultures of the university and placement settings (Newton et al 2009). Williams (2008) suggests the use of PBL as a clinical teaching tool to integrate theory and practice; however a systematic review of the literature was unable to provide conclusive evidence of whether or not this is an effective strategy. Williams identifies this as a gap in the education literature.

Other suggestions for facilitating greater coherence between academic and clinical learning include the utilization of continuous placements for students over an extended period of time. McKenna et al (2009) suggest that the value of clinical learning is that it allows students to make the connection between what they have learned in the educational setting and what they experience in practice. The authors hypothesize that providing continuous long term placements for students, over periods up to two years, facilitates effective integration between theory and practice by enabling students to experience socialization as part of the healthcare team. This contrasts to the normal pattern of student allocation in clinical settings which may only be for several weeks at a time. A long clinical placement, however, may undermine values which students have acquired in the university setting. In a longitudinal study of final year nursing students Maben et al (2006) found that students qualified with a strong sense of nursing values, only to experience the sabotage of these values in practice by factors such as poor role

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models, covert rules and a lack of support. The authors concluded that this dislocation between education and practice would ultimately result in low morale, lack of job satisfaction and poor retention of nursing staff.

4. Interprofessional Education

Another of my interests is interdisciplinarity in health education and practice. This is an important component of team working in almost any healthcare setting (Atwal and Caldwell 2006), but is particularly relevant in considering the tensions between the midwifery and medical models of care (Oakley 1993, Hyde and Roche-Reid 2004; Blix-Lindström and Johansson 2008). This interest was further developed due to my work in interprofessional education and a curiosity to know more about how professional paradigms interact, particularly those of midwifery and medicine. Atwal and Caldwell (2006) conducted qualitative research into nurses' perceptions of working in multidisciplinary teams in the NHS. One of the three major themes derived from Atwal and Caldwell's study was that medical power was a barrier to effective multidisciplinary team working. The topic of medical power will be explored more comprehensively in Chapter 3.

4.1 What medical students learn from midwives

I then reflected on my preliminary question of what medical students learn from midwives following the research considerations recommended by Sarantakos (1998). (Figure 1-1).

Figure 1-1 Considerations for Qualitative Research
(Adapted from Sarantakos 1998, pp.121-122)
1. The social function of the research/needs of the community
2. Sponsorship (may influence/limit choice of topic)
3. Financial restrictions
4. Time restrictions
5. Availability of/need for additional expertise or research assistants
6. Appropriateness of methodology for research topic/ researcher's own stance
7. Political or personal perspectives and their influence on research topic/methods
8. Need for data (will this research add new knowledge?)

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In a preliminary search of the literature I discovered that there was little written on the topic of midwives teaching medical students, and the available literature, with the exception of the studies by Fraser et al (2000) and Howe et al (2000) came predominantly from the USA. Early examples included Mankoff et al's (1994) report on Certified Nurse Midwives (CNMs) teaching junior doctors at a major inner-city public hospital and Angelini et al's (1996) description of how CNMs transformed clinical medical education at a large New England women and children's hospital. A later example is Hanson et al's (2005) empirical study which used a pre and post experience survey tool to demonstrate that working with midwives changed medical students' attitudes toward midwives in a positive direction and increased the students' understanding of the roles, responsibilities and clinical competencies of midwives.

4.2 Midwifery involvement in UK medical education

However, during the course of my research there has been a growing interest in the role of nurses and midwives in medical education in the UK (Loveridge and Fiander 2007). A survey of twenty-seven UK University Departments of Obstetrics found that in twenty of these, midwives were involved in teaching medical students and five other departments were planning to introduce such a programme (Loveridge and Fiander 2007). When the midwives involved in medical education in this study were questioned about their own philosophies of midwifery and how this informed their teaching, they talked about helping medical students to understand normality, encouraging evidence based care, and providing an alternative view of obstetrics (Loveridge and Fiander 2007). This study echoed the work done earlier by American midwives (Harman et al 1998) and discovered similar findings on the views of midwives involved in medical education.

The findings from Harman et al's (1998) study informed my early consideration of the importance of what medical students learn from midwives. I discovered that I wanted to know whether medical students assimilated learning that could be classified as 'midwifery knowledge' into their understanding of obstetric medicine, as the US study

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seemed to indicate. This became the justification for the first stage of the research: exploring midwives' understanding of the term 'midwifery knowledge' through the medium of an international Delphi Survey. The Delphi methodology, using an iterative survey technique to explore sequential responses of an expert panel has been utilized previously to investigate diverse questions in the fields of nursing and midwifery (Lemmer 1998; Bowles 1999; Kennedy 2000).

5. Constructing a data collection tool for the second stage of the research

The second stage of the research mined the findings of the Delphi Survey to construct scenarios designed to stimulate the participants' exploration of aspects of practice which could be interpreted using the theme of Midwifery Knowledge. My aim was to explore whether or not medical students who received clinical teaching and mentoring from midwives utilized midwifery knowledge in constructing explanations around the scenarios which formed the data collection tool. The process of designing the data collection tool is described in Chapter 9, while the data from the Case Study stage of the research are presented in Chapter 10 and the findings discussed in Chapter 11.

6. Aims of the research

Therefore the aims of the research project developed out of my own clinical and educational interests and sought to enhance contemporary pedagogical knowledge in order to inform the future development of interprofessional curricula and continuing professional development (CPD) activities. These aims were to: a) *define the constituents of midwifery knowledge* and b) *explore medical students' construction of knowledge while working with midwives during a specialist obstetric rotation using PBL scenarios as the data collection tool.*

While considering the proposed research from a personal and political perspective (Sarantakos 1998), I was able to confirm that the research question was congruent with my own research interests and experience in education and practice. It was also a topic which could be considered from both the perspective of the pedagogical arguments for interprofessional education (Barr 2003) and in terms of the clinical governance mandate

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that health workers must be able to form interprofessional teams to provide clinically effective and resource-efficient client care (McSherry & Pearce 2002). This agenda is strongly supported by the World Health Organization in its recent report on interprofessional education and collaborative practice (Gilbert and Yan 2010). The *Framework for Action on Interprofessional Education and Collaborative Practice* clearly states that:

After almost 50 years of enquiry the World Health Organization and its partners acknowledge that there is sufficient evidence to indicate that effective interprofessional education enables effective collaborative practice (Gilbert and Yan 2010, p.33)

The report findings also indicate that health workers who are able to work collaboratively respond to local needs more efficiently.

From a broader political and sociological perspective, I considered that the research, or the interrogation of the literature used to inform the research, might shed some light on apparent conflicts within the professional discourse between midwives and obstetricians (Oakley 1993; Fraser et al 2005; Lee and Kirkman 2008; Hollins Martin and Bull 2009). This understanding could, in turn, serve to inform the current interprofessional agenda (Wilson and Mires 2000; Barr 2000; Lane 2006; Gilbert and Yan 2010).

6.1 The research questions

The project began with a question, which is the fundamental starting point of all research (Wisker 2001); in this instance the question was about what medical students learn from midwives. This led to further questions concerning the transfer of knowledge from one professional group to another, which in turn acted as an inspiration for the Delphi survey used to formulate an inquiry about the nature of midwifery knowledge.

The Delphi study was largely exploratory, rather than definitive; its purpose was to identify common themes which could be used to construct the second phase of the research. Themes elicited from the Delphi study informed the PBL scenarios designed to expose medical students to aspects of maternity care which could be termed

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‘midwifery knowledge’. The scenarios explored the meaning of pain in labour, issues of client choice and autonomy, and supporting breast feeding mother/infant dyads. While this is explained in greater detail in a later section of this chapter, a more comprehensive analysis of how the Delphi findings led to the scenario development forms part of Chapter 9.

7. Using PBL as a research methodology to unite the two phases of the research project

Methodology, as an essential component of the research project is examined in more depth in Chapter 5. However, in this introduction to the thesis I will outline how my chosen methodology facilitated the integration of the two phases of the project. I will also clarify how methodological choices influenced the data collection tool devised for the second stage of the research.

Methodology is the supportive framework in which research occurs (Eisenhardt 1989; Cohen et al 2002), providing both structure and guidance by weaving a coherent philosophical thread into the fabric of the research methods from design to dissemination. Sarantakos (1998) advises that a clear methodological perspective must be identified at the outset of any research project. However, this is tempered by the statement that in the very early stages this might be as simple as stating whether the research will be carried out using a quantitative or qualitative methodology. The choice between qualitative and quantitative methodologies is often very apparent; however for the qualitative researcher, the nuances between differing qualitative methodologies can be confusing (Thorne et al 2004).

7.1 Qualitative research

Qualitative research can, at its most basic level, be described as a research paradigm, which strives to uncover something about people’s varied experiences of their social worlds (Streubert and Carpenter 1999). This may be done using different data collection techniques such as interviews, focus groups, observation, reading past accounts, or by participating in the lives of the people being studied: the respondents, informants, or

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participants as research subjects are commonly termed in qualitative research (Denzin & Lincoln 1998).

7.2 Phenomenology, grounded theory & ethnography

The three major categories of qualitative research most commonly used within health, education and social care are: phenomenology, grounded theory, and ethnography (Speziale & Carpenter 2007). There are numerous other methods that can be employed by qualitative researchers including: case studies (Stake 1995; Tellis 1997), discourse analysis (Potter 1996; Griffiths and Elwyn 2004; Locke 2004), narrative (Rodriguez 2002; Jones 2004; Holloway and Freshwater 2007) and historical research (Donnison 2007).

7.3 Case study utilizing a PBL methodology

While this project can be categorized as a case study because data were obtained from one cohort of medical students, the underlying philosophy informing the study was derived from the teaching and learning methodology of Problem Based Learning (PBL). While the justification for this approach is presented in Chapter 5, previous experience of using PBL as a research methodology supported this approach. Haith-Cooper and I have argued that our action research exploring students' experiences of learning through PBL was itself based on the principles of educational philosophy and psychology which underpin PBL (Haith-Cooper et al 1999). The link between PBL as an educational method and its use in research is strengthened by National Teaching Fellow Gina Wisker (2001) who identifies problem-based research as a methodology which releases the inherent creativity of the researcher. Wisker (2001) suggests that a problem-based approach can be used in particular points during a research study or can be the methodology underpinning the entire project.

7.4 Constructivist principles underpinning PBL

In using PBL as a research methodology the cognitive approach to knowledge generation is borrowed from the constructivist principles inherent in PBL, whereby the researcher continually processes information leading to a modification in her understanding of the phenomena under investigation. Schmidt (1993) describes the

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process as creating new knowledge structures, which then become increasingly sophisticated as knowledge is added and modified (Dolmans and Schmidt 1996; 2006). How this might differ from other constructivist approaches to research is discussed in Chapter 5.

While the initial phase of this research was conducted using a Delphi methodology, this can be interpreted as an integral part of the process of problem identification and problem solving inherent in PBL. I argue in Chapter 8 that this, in fact, equates to the ‘brainstorming’ stage of the PBL process, thus incorporating a PBL methodology into the entire research process, rather than isolating it within the data collection phase of the second stage of the study.

7.5 The seven jump process

The process of PBL as a pedagogical technique involves distinct phases or steps (Barrows and Tamblyn 1980). The way in which these are configured varies from one educational programme to another. Schmidt (1983) describes the process developed at Maastricht University from Barrows and Tamblyn’s (1980) five steps, as a series of seven ‘jumps’, while Harvard Medical School has implemented a six step model (Davis and Harden 1999). In whatever configuration of stages used, ‘brainstorming’ is an important part of the process where students explore their collective existing knowledge and use this process to develop hypotheses (Engel 1997, Wood 2003). The adaptation of the seven-jump model used in the academic midwifery education programme in which I teach is shown on page 23 (figure 1-2).

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Figure 1-2. PBL 7 Step Model

Adapted from the Maastricht 7 jump model (Schmidt 1983; Gijssels 1995)

Step	Activities	Timing
1.	Clarification of terms/concepts	First meeting
2.	Identify the issues contained within the enigma	First meeting
3.	'Brainstorm' each issue and develop hypotheses	First meeting
4.	Analyse tentative explanations and identify gaps in knowledge	First meeting
5.	Formulate learning objectives	First meeting
6.	Collect further information through private study	Between meetings
7.	Feedback and synthesis	Second meeting

7.6 The Delphi brainstorming stage

In the Delphi phase of the research I employed McKenna's (1994) interpretation of the process as a structured method of 'brainstorming'. Using a dual-stage technique (Proctor and Hunt 1994; French et al 1996) the Delphi survey was used to explore expert opinion on the nature of midwifery knowledge. The themes which emerged from this process informed the development of the PBL scenarios utilized as the data collection tool in the second phase of this research.

7.7 PBL scenarios as a data collection tool

This thesis demonstrates the value of PBL scenarios or enigmas (Pansini-Murrell 1996) as a data collection tool. Indeed, the use of scenarios or vignettes in data collection, is a well-established tradition in the social sciences and more recently has been applied to nursing and educational research (Hughes and Huby 2002). While vignettes can be used in a quantitative fashion to measure participants' responses to certain stimuli (Britton et al 2006), the use of scenarios in this study is congruent with a PBL philosophy as the scenarios were used to provoke discussion and stimulate reflection (Engel 1997)

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Therefore, the overarching philosophy which tied the two parts of the research study together was a PBL methodology employing constructs from educational psychology (Creedy et al 1992) to define issues, explore existing knowledge, develop hypotheses and questions and ultimately to problem-solve. This was congruent both with my understanding of the research process as an opportunity to employ a creative problem-solving technique and with the precepts of PBL as a pedagogy. The use of PBL provided a unique way of interpreting the educational environment of the maternity unit where this research took place.

8. Theoretical Components

Using a PBL methodology facilitates the investigation of the two main theoretical components of this thesis: educational and social theory.

8.1. Educational theory

Educational theory was used to explore how students learn in the clinical environment (McAllister et al 1997; Cuthbert 2005, Hays 2006) and to develop a data collection tool which could facilitate disclosure of clinical learning issues in an interesting and interactive fashion. The precepts of the constructivist approach to learning associated with PBL (Creedy et al 1992; Cust 1995) can also be applied to the research process where data are utilized to construct an informed interpretation of the research question. In research, as in education, PBL supports an interpretive, postmodern perspective which acknowledges the influence of prior knowledge (Alvesson 2002) and the individuality of the solution to any given problem or question. Within education, the function of the group process balances the individual perspective. While using a PBL research methodology objectivity can be increased in several ways. These will be elucidated in Chapter 5 along with an exploration of the tension between the scientific appreciation of objectivity (Denzin & Lincoln 1998) and the postmodern research perspective that views knowledge as subjective, encompassing many interpretations of the same picture (Lather 1991; Colliver 1996; Clark 1998). Educational theory also informs my engagement with the current interprofessional learning (IPL) agenda,

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specifically within health and social care. The IPL literature is reviewed and discussed in Chapter 2.

8.2. Social theory

The other important theoretical construct informing this research project is social theory, particularly the sociology of professions. Social theory is used to explore issues of professional socialization (MacDonald 1995) and power relationships within the health service (Abbott and Meerabeau 1998; Coombs 2004). This was particularly pertinent in gaining an understanding of the perceived conflicts in the midwifery and obstetric discourses about pregnancy and birth (Keating and Fleming 2009).

Medicine has a long history as a profession (Benton 1985) and therefore doctors are socialized to take on a professional identity during their medical education and post-registration training (Olmsted and Paget 1969, Witz 1990). Midwifery however, was traditionally seen as a craft and a vocation (Webster 1991) and has only relatively recently, together with nursing and other professions allied to medicine (PAMs) sought professional status and recognition (Vann 1998). This has both been driven by, and acted as a catalyst for, the transfer of educational provision from NHS Colleges of Health to the university sector (Hill and McNulty 1998). While it can be argued that trades identified under the heading of crafts or vocations also have their own patterns of socialization, this major change in the education of midwives has removed some barriers relating to unequal educational attainment between medical and midwifery students, thereby challenging the traditional precepts of such socialization. Altering the educational requirements for entry into midwifery might be expected to increase the medical profession's perceptions of the intellectual and academic credibility of midwives. However, tensions between obstetricians and midwives have historical antecedents (Rooks 1997) and gender-based hierarchical roots (Carpenter 1993; Coombs 2004). Therefore a change in the educational attainment of one group is unlikely to eradicate all interprofessional conflicts. It is my intention that exploring the transfer of knowledge from one professional group to another will provide

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educationalists with knowledge to facilitate improvements in interprofessional understanding and shared learning. As DeVries (1993) observed:

In the long run clients benefit from having more than one medical tradition. When strong and vital approaches to health care can interact, they learn from each other. There are several instances where physicians learned valuable techniques from midwives, including approaches to avoiding perineal tears and the importance of immediate contact between parent and babies' (DeVries 1993 p.142)

8.3 Knowledge transfer between professions

Findings from this study will be examined in light of the assumption that knowledge transfer may occur when different professional groups interact. The participants' commentaries on why they chose medicine over other health related professions will be explored within the context of professional socialization. Professional socialization and other issues relating to interprofessional learning and working are explored in Chapter 2. Chapter 3 extends this discussion to the perceived areas of professional tension between midwifery and medicine, placing this within an historical context while illuminating current concerns.

9. Personal constructs and their influence

The person of the researcher forms an integral part of the research process. From the choice of research topic, through the methodology informing the research process, to the final dissemination by report, presentation or dissertation, the researcher's: personality, education, cultural and family background, prior experience, politics, and philosophy, all have an impact on the ultimate outcomes of the research (Cohen et al 2000). The point where this is most often acknowledged in any research study, is during the data collection stages. This issue of positionality (Rose 1997) will be discussed in Chapter 6.

9.1. The role of reflexivity

However, at this point in the thesis, a recognition of the professional and life experiences which I brought to both the activities of doing and writing about this research study form part of the reflexivity which is such an important tool for the

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qualitative researcher (Taylor and White 2000). Reflexivity assisted my surrender of any pretence that I was a neutral and value-free observer and instead enabled me to acknowledge the specific circumstances influencing my construction of knowledge (Herod 1999).

9.2 A midwife on horseback

At a very basic level my background informed both my decision to undertake doctoral research and the subject matter I chose for my study. I come from a family of doctors, teachers, journalists and writers and undoubtedly this background has contributed to career choices which have resulted in my adopting aspects of these varied professions at different stages of my own professional career. I also have a relative who was one of that rare breed, an American midwife. My mother's cousin, Mardi Perry, was a member of the Frontier Nursing Service and tales I heard early in my life about her adventures while riding on horseback through poor mountain communities to attend women in childbirth perhaps influenced my interest in both equitation and midwifery.

At one period in my life I considered applying to medical school but decided that my interests lay more with the more holistic precepts of midwifery than with what I perceived as the techno-medical paradigm of obstetric medicine. However, my uncle, a surgeon with whom I had many long adolescent arguments about socialized medicine (I for, he against) was very proud of my success in nursing and since I became a midwife, demonstrated a keen interest in learning more about the midwifery model of care. I have dedicated this thesis to his memory in acknowledgement of his continued love and support.

10. Concluding Discussion

My years as both a clinical midwife and educator have confirmed how congruent this career choice is with my interest in holistic and woman-centred models of care and my concern that midwifery education should help students to incorporate these into 21st century models of practice. My family background has contributed to my conviction that medical practitioners can engage in rational debates about alternative models of

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care and this has informed a key theme in my own work with students. I have continually encouraged midwives to challenge the medical model of care from a firm knowledge base rather than circumventing medical protocols. Hollins Martin and Bull (2009) in their study of midwives' attitudes in seven UK maternity units found that circumventing medical protocols was a common strategy used to deal with the inherent conflict in the requirement for midwives working in obstetric units to follow medical protocols and at the same time comply with the directive to be advocates for women and to provide informed choice required by the *Midwives Rules and Standards* (NMC 2004). Hyde and Roche-Reid (2004) explored the same tensions in Irish maternity hospitals using Habermas' (1989) theory of communicative action and concluded that substantial changes in the way midwives and obstetricians communicate needs to occur before midwives and women can have a genuine dialogue about choice. The rationale for circumventing protocols as an attempt to protect the client and keep birth normal is clearly defined by the midwives in Hollins Martin and Bull's (2009) study. They resort to hiding visitors in toilets, redefining time and shutting doors to prevent medical intervention. However, this subterfuge does nothing to promote rational dialogue or to challenge the medical model of birth .

10.1 Education makes a difference

I propose that a university education makes a difference to midwives, both in terms of understanding how knowledge is constructed and in building confidence in students' ability to discuss and debate issues at a professional level. A belief that education can empower nurses and midwives is currently a key government strategy (Keen 2010). This viewpoint is congruent with Frierean pedagogy which proposes the concept of conscientization, that is developing a consciousness that acts as a powerful catalyst for change (Freire 1972). In the context of this research it could be argued that conscientization relates to the possibility of becoming conscious of the rationale for knowledge identified as 'midwifery knowledge' and constructing solid arguments for its use in practice. This is explored within the analysis of professional socialization in Chapter 2 and the discussion of emancipatory dialogue in Chapter 3.

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10.2 The importance of feminist discourse

I also acknowledge the influence of feminist discourse in my strong bias towards education as I come from a long line of educated women. These career women provided role models that were at odds with the Post War Parsonian (Parsons 1967) expressive model of the housewife which was so prevalent in the America of my childhood and adolescence. This functionalist interpretation of womanhood is the one which Betty Frieden in her feminist classic 'The Feminine Mystique' described as leaving so many American women asking "Is this all?" (Frieden 1963 p.15). In contrast, my role models had challenging careers, and therefore, I grew up anticipating that I too, would have the opportunity to make a contribution to society through my work.

10.3 My experiences as an educator

My experiences as an educator, particularly in the use, development and research around Problem Based Learning (PBL), and my participation in interprofessional education as a lecturer and module leader, are the final threads which make a major contribution to this work. I have been involved in writing PBL curricula, developing PBL scenarios or enigmas to meet the learning outcomes of modules, and in evaluating PBL as an educational strategy throughout my academic career (MacVane Phipps 2010). Recently I have been able to experiment with more novel applications of PBL, such as its use in dialogue work through my involvement with the Project for a Peaceful City (PPC) which is run through the Peace Studies and Conflict Resolution Department at the university where I work. I have also employed it as an interview tool in health professional education (Meddings and Porter 2008). All of these experiences encouraged my use of PBL scenarios as a data collection tool, and, with further reflection, PBL as a research methodology. The role of PBL in health professional education is examined in Chapter 4 and a justification of its application as a research methodology is presented in Chapter 5. A diagrammatic representation of the stages of the research and their relation to PBL are shown in figure 1-3 (p.31).

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In addition, I have been involved with IPE since its implementation at the School of Health Studies where I work. I have made significant contributions to the development of the IPE curriculum, including the introduction of PBL as a major teaching strategy within the two mandatory modules studied by all health care students. At the time of writing this chapter I was the module leader for the Year One IPE module.

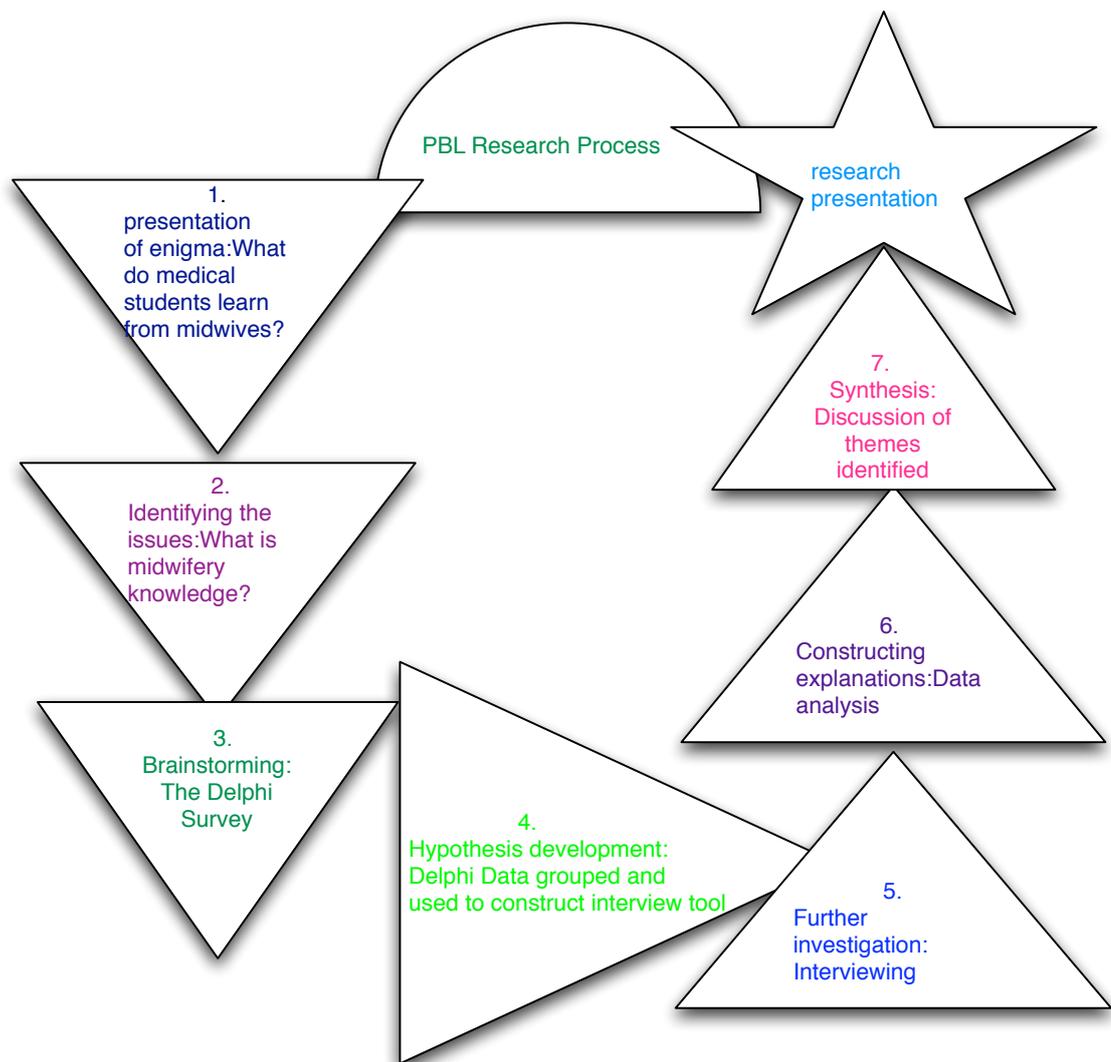
10.4 Midwifery knowledge and how it informs medical students' knowledge construction

In conclusion, this thesis aims to examine the concept of midwifery knowledge and to determine whether such knowledge informs medical students' construction of knowledge within an obstetric setting where medical students receive clinical teaching and mentoring from midwives. This question is approached in two stages: the first an exploration of how midwives perceive midwifery knowledge; the second uses a case-study approach in which participant interviews are conducted through the medium of PBL scenarios.

The Delphi study exploring midwifery knowledge elicits several key themes which describe aspects of midwifery knowledge deemed important by the sample group of respondents. The case study reveals a range of themes relating to communication, professional socialization, interprofessional work relations and the construction of knowledge around pregnancy and childbirth. The two stages of the research are integrated through the construction of the PBL data collection tool and through a philosophical and methodological identity derived from PBL. The discussion in Chapter 11 adds to the body of educational knowledge, particularly within the established field of Interprofessional Education (IPE). Chapter 12 concludes the thesis with a reflection on the process and the provision of markers for future directions arising from the current study. In short, the intention of this thesis is to add to the currently small sub-section of the IPE literature which explores the involvement of midwives in medical education. However, this study is unique in its emphasis on the experience of medical students rather than midwives within this relationship.

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Figure 1-3: 7-Stage research study construction and its relationship to PBL process



Chapter 2

Interprofessional Education

and

Professional Socialization

in the context of

Clinical Education

Chapter 2

1. Introduction

This chapter provides a framework for the study through reviewing contemporary literature on interprofessional education and professional socialization within the context of clinical education. These topics can be viewed as the supporting poles of the thesis. Issues about professional socialization, conflicting models of care, and how knowledge is transferred from one professional group to another provided a starting point for my doctoral research. Clinical education is the medium in which the topics of professional socialization and interprofessional or interdisciplinary education meet, as the participants in this research were engaged in clinical learning where some of their educational experiences were interdisciplinary. Interprofessional education represents an end point as indicated in Chapter 1. While I have played a key role in interprofessional curriculum development and delivery, this has not involved medical students. However, following completion of my doctoral studies, I hope to extend my work in this field to support the experiences of medical and midwifery students with the aim of fostering improvements in the quality of care women receive during the childbirth continuum.

1.1. Interprofessional education

Interprofessional education (IPE) is mandated both by education providers and funding bodies, and is highly recommended by the Quality Assurance Agency (2007). IPE and interprofessional working are seen also as an essential element of the clinical governance agenda in health care (Furber et al 2004) which seeks to ensure the provision of a service that is based on competence, evidence based practice (EBP) and financial responsibility through, among other things, avoiding unnecessary duplication of services (Harrison et al 2003). In the field of maternity care, the Confidential Enquiry of 1997-1999 (CEMD 2001) made specific recommendations that health professionals should work together to make women the focus of care. The most recent report: Saving Mothers' Lives 2003-2005 (Lewis 2007) continues to point out instances where poor communication between members of different health professions led to adverse outcomes. In stating that midwives should receive recognition as equal partners in care,

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and therefore should continue to be involved in the care of women with complex needs (Lewis 2007), the current report supports effective interprofessional team working. Earlier, the NHS Plan (DH 2000) called for more fluidity in the working practices of health professionals to best serve client needs; indeed interprofessionalism is a key facet of the UK government's modernization agenda for the NHS. Interprofessional education and practice have received similar endorsement in the USA where the Pew Health Professions Commission Report called for what they termed interdisciplinary competence in all health professions stating:

Resources are used in the most timely and efficient way; mistakes or duplication of services is avoided; and the expertise and instincts of a number of trained health practitioners are brought to bear in an environment that values brainstorming, consultation and collaboration. This is not a value that has been inculcated in health professional training programs of the past. Medical and professional schools should fundamentally reassess their curricula to ensure their programs embody and apply an interdisciplinary vision (O'Neil et al 1998 p.11)

Further support for interprofessional team work in health care comes from the recent WHO report (Gilbert and Yan 2010) which states that there is enough evidence to conclude that interprofessional education results in collaborative, practice-ready health workers who are able to respond appropriately to local needs.

In the course of this research study and in the preparation of the resulting thesis, interprofessional education provided a focus for thinking about how medical students work with other professional groups and how this might involve midwives. This was very helpful in light of the limited literature with specific relevance to my research focus.

1.2 Interdisciplinarity in health education and care

Interprofessional education is not a new concept and interdisciplinarity has traditionally been, and continues to be, a common feature of health professional education (Robertson and McDaniel 1995; Hall and Weaver 2001; Greiner and Knebel 2003). The notion of interdisciplinarity in education came out of the educational upheaval of the

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1960s which challenged many aspects of traditional education (Kerr 1991; Kogan et al 2006). More recently, interdisciplinarity in health care has become a major theme in health education and practice (Scholes and Vaughan 2002). The move toward the professionalization of health disciplines, which removed educational provision from the institutional training school and placed it in the university, provided an ideal opportunity for an increase in both interdisciplinary and interprofessional education (Engel and Gursky 2003).

A World Health Organization report on IPE (WHO 1988) is often cited as the start of the IPE movement in health education, yet in fact, it drew on activities already in progress at that time (Barr 2005). However, this did serve to highlight the perceived importance of IPE in the effective provision of health care for the late 20th and early 21st centuries. The WHO premise was that in order to work effectively together, health professionals must first learn together (Gilbert and Yan 2010).

2. Reviewing the literature on: multiprofessional, interprofessional & interdisciplinary learning

In reviewing interprofessional and interdisciplinary education, my aim was not to engage in a broad discussion about these topics but to explore them from the perspective of how IPE/IDE can be used to develop mutual respect and improve working relationships between health professionals. I searched English language journals published between 1995-2010, using the following data bases: Medline, Cinhal, ASSIA and the following search terms: interprofessional (inter-professional) learning, interprofessional (inter-professional) education and multidisciplinary (multi-disciplinary) learning. I also used manual search techniques and discussed the topic with experts in the field of IPE during conferences and other meetings to determine whether there was any relevant unpublished or 'grey' literature which would contribute to my understanding. Articles selected for reading were all peer reviewed and published in academic journals or books.

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My review of the appropriate literature focused on developing a more detailed understanding of the field to which I wished to contribute and an exploration of what were considered to be the benefits and detriments of interprofessional learning and working. Where possible, I looked for literature which focused on the professional groups in which I was interested, that of midwives and obstetricians or midwifery and medical students.

2.1 Systematic review of interprofessional education outcomes

A systematic review of interprofessional education determining its impact on practice and service-user outcomes was the subject of a recently-completed Cochrane review (Reeves et al 2008). Despite the large amount of literature published on IPE during the past decade, Reeves et al found only six studies which met their criteria for randomized controlled trials (RCTs), controlled before and after studies (CBAs) and interrupted time studies (ITS). The authors' conclusion was that more rigorous research into IPE is required to provide sufficient evidence into the efficacy of this type of educational intervention (Reeves et al 2008).

2.2 WHO recommendations for IPE and collaborative practice

Despite this recommendation, less than a year later the World Health Organization published a report stating that sufficient evidence exists to confirm that interprofessional education leads to better collaborative working in healthcare (Gilbert and Yan 2010). The WHO recommendations were based on evidence from twelve systematic reviews and ten international collaborative practice case studies. Overall two hundred and fifty-three studies were considered to be of sufficient quality to include in the reviews, conducted by leading researchers in the field of interprofessional education. The case studies explored practice in ten different countries in Europe, Asia, North America and the Middle East. The results supported the benefits of interprofessional education for future collaborative practice but also highlighted a number of challenges including: lack of resources, training requirements, leadership and professional prejudice.

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3. The development of interprofessional learning

Some early experiments in shared learning took the form of multiprofessional education which can be defined as members of two or more health professions sharing the same teaching at the same time (Cullen et al 2003) or learning side by side (Barr et al 2005). Merely placing students together in lecture halls or classrooms appears to do little to increase their understanding of each other's roles or to break down the barriers of entrenched professional ideology (Wilson and Mires 2000). Cullen et al (2003) suggest that a more effective learning strategy is to provide students with learning opportunities, which are relevant to their own professional discipline but also enable them to learn about each others' roles (Cullen et al 2003). This is supported by Furber et al (2004) who found that students developed a better understanding of different professional roles through participation in IPE. Initiatives to bring medical students and midwives together have focused on the benefits of fostering collaborative practice with the intention that student integration will lead to greater collaborative practice after qualification (Fraser et al 2000; Cullen et al 2003; Symonds 2003).

3.1 IPE involving medical students and midwives

Fraser et al (2000), Cullen et al (2003) and Symonds et al (2003) are all reports of research evaluating the outcome of an initiative involving the merger of the midwifery, child nursing, gynaecology and obstetric education departments at Nottingham University. This was conceived as an innovative method of promoting collaborative practice through interprofessional learning and assessment. A tool, the Interprofessional Team Objective Structured Clinical Examination (ITOSCE), was developed to assess student performance in intrapartum care. Early evaluations of this programme indicated that students and educators found the shared learning to be a valuable experience in terms of increased understanding of the other profession's role. However, questions were raised about the resource-intensiveness of the activities. This early experience has helped to inform the Centre for Interprofessional Learning at Nottingham which now involves students from a greater number of health and social care disciplines who work together in interprofessional learning sets during their undergraduate education.

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Furber et al (2004) report on an educational initiative at another UK university where midwifery, medical and nursing students worked together to solve a problem based learning (PBL) scenario. Using a quasi-experimental design with a sample of forty undergraduate students the research study explored students' perceptions of the intervention. The students indicated that they enjoyed the activity, were able to reflect on each others' roles and that their attitudes toward other professional groups changed during the experience of learning together.

4. Testing assumptions about IPE

The recent WHO report (Gilbert and Yan 2010) states that adequate evidence exists to substantiate the theory that professionals who learn together as students work more collaboratively as qualified practitioners. This conclusion was derived from the examination of systematic reviews as outlined in the introduction to this chapter. This seemingly definitive answer substantiates current UK practice in health and social care where collaborative practice is a requisite of professional practice (DH 2001a), while IPE features in some way, in almost all UK health education programmes. However, investigation is continuing into the efficacy of IPE with a large multicentre trial of an IPE intervention (Reeves et al 2009). Whether this confirms the WHO recommendations and answers questions raised by the Cochrane Review (Reeves et al 2009) remains to be seen, but with many models of IPE provision in use, and in light of the WHO findings (Gilbert and Yan 2010), it may now be more useful to test the outcomes of different models of IPE rather than to question the overall efficacy of interprofessional education and practice.

5. Better working relations through interdisciplinary education

The term interdisciplinary education is, in some instances, used to mean the same thing as interprofessional education and at other times indicates the involvement of qualified members of one discipline or professional group in the education of another. The American literature reviewed here on the topic of midwives teaching medical students uses the term in this way.

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The available evidence indicates that interdisciplinary education produces benefits in terms of working relations between doctors and midwives (Mankoff et al 1994; Howard 1998; Metheny and Angelini 2000; Cooper 2009). However, the evidence that interdisciplinary or interprofessional education, where doctors are taught by or with midwives, improves medical practice is not rigorous. Much of the literature originates from the USA and is derived from descriptive reports of changed working practices or evidence from student and staff evaluations rather than from the findings of empirical educational research. What is clear is the increasing acceptance of midwifery involvement in medical education. In 1998, 176 Certified Nurse Midwives (CNMs) were employed by medical education programmes to teach medical students and junior doctors (Harman et al 1998). By 2009 the number of CNMs in similar teaching roles had risen to 547 (McConaughy and Howard 2009) and midwives had become instrumental in developing creative methods of teaching which exposed medical students and residents to the midwifery model of care (Cooper 2009).

In one example of empirical research, Hanson et al (2005) used an experimental design in a study of medical students' knowledge about midwifery practice. Medical students based at two separate campuses of a Midwestern medical school were invited to participate in a survey of their knowledge about midwifery practice prior to and following completion of their specialist obstetric and gynaecology placement. One of the medical school campuses employed certified nurse midwives (CNMs) in their medical education programme, while the other did not. At the campus employing CNMs, students received lectures from midwives, attended midwife-led clinics and were preceptored by midwives during their labour ward experience. This included an insistence by the midwives that students provide care for women throughout the labour, not just during the second stage. At the other campus, located in another city, students were not exposed to these experiences. However, midwives were employed by the hospital, therefore students may have developed some awareness of the midwifery role through simple exposure. Pre and post tests of the survey tool were administered to all participating students. Forty-four students completed the surveys from the control group while forty-seven of the experimental group finished both the pre and post tests.

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While the outcomes demonstrated that more students in the experimental group were aware of the midwives' scope of practice, the exposure did not appear to influence the medical students' perceptions of appropriate care during the second stage of labour. As varying practices during this stage of labour could be interpreted as a marker for midwifery knowledge, this could be a significant finding. The majority of students from both the experimental and the control groups responded that forceful pushing efforts to shorten the second stage of labour were beneficial, despite the fact that this was not the practice recommended by CNMs during taught sessions. The students' choice of a medical model of practice may demonstrate the authority of medical knowledge over midwifery knowledge if this practice was recommended by senior obstetricians. Which knowledge is authoritative and how certain classifications of knowledge gain authoritative status is explored by Jordan (1997) and will be revisited in chapter 3. Another explanation is that the midwifery model of second-stage labour care taught to students during lectures by CNMs, may not be reflected in the practice of all midwives. Gould (2000) explains that many midwives internalize the medical model to such an extent that they no longer perceive 'normal' and 'natural' to be synonymous where labour is concerned. An additional factor may be compliance with obstetric guidelines concerning the length of the second stage of labour. Hollins Martin and Bull (2006) cite pressure of guidelines, fear of litigation and bullying by senior staff as reasons why midwives can be unwilling to implement a midwifery model of care in their own practice. In my experience as an educator, this is reflected in discussions among midwifery students who question why some midwives continue to promote techniques such as forceful closed-glottis pushing despite research evidence that such 'traditional' practices are either ineffective or harmful. Forceful directed pushing, for instance, can contribute to fetal hypoxia (Simpson and James 2005).

The limitations of Hanson et al's (2005) study include the small number of participants, the limitation to students from just one medical school and the survey instrument which highlighted the more medicalized aspects of midwifery care such as prescription rights of CNMs or their ability to use oxytocic drugs to augment labour. Although students were located at separate campuses cross fertilization of information and beliefs may

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have occurred due to the school's educational philosophy, shared teaching or communication between students. These possible confounders were not explicitly discussed in the research article. The focus on what could be interpreted as the CNMs' medical roles negates any philosophical differences between medical and midwifery practice. A survey focused more explicitly on midwifery knowledge may have provided a stimulus for students to reflect on the midwifery model of care.

6. Interdisciplinary teaching in the community

Howe et al (2000) report on the outcomes of a UK initiative to involve community based nurses and midwives as teachers in a community focused medical education programme. Although practitioners and students both found this valuable, one problem seemed to be the gate-keeping function of the GP tutor who acted as the team leader. This mirrored traditional gender and power roles in what was deemed by the authors as an inappropriate and hierarchical interpretation of interprofessional team working (Howe et al 2000). Dow and Evans' (2005) findings challenge those of Howe et al (2000) in terms of interpreting the way in which gender and power relate to the working practices of collaborative health care teams. They point out that patriarchal working practices in the past reflected the fact that at one time GPs were predominantly male. They suggest that today with a change in the gender balance of GPs that this is no longer a problem, and health care teams are more democratic, with the most suitable person taking on the leadership responsibility. However, Mander's (2004) assertion that success at senior levels in the medical profession requires the adoption of masculine attitudes and values in the work place seemingly contradicts this. Similar adoption of the masculine role model to achieve professional success has been reported in other professional groups including law (Guinier et al 1997).

6.1 Nurses and midwives as excellent clinical teachers

Howe et al (2000) discovered that excellence in teaching was not related to medical qualification, commenting on the high quality of teaching provided by the nurses and midwives, many of whom held formal teaching qualifications. In contrast, few GP tutors, even those experienced in medical student training, had any recognized teaching

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qualifications. The teaching skills of non-physician medical teachers was also noted by Reisenberg et al (2009) in a literature review exploring the job descriptions of medical educators from backgrounds other than medicine. These included nurses, physician assistants, emergency services personnel and midwives. Similarly, midwives in specialist clinical teaching positions on the Brown University Medical School faculty have established themselves due to their expertise in clinical practice and education (Metheny and Angelini 2000). Brought into the clinical setting to assist residents (equivalent to UK registrars) with the care of women in normal labour, their teaching skills were quickly recognized resulting in the current practice where midwives provide classroom and clinical teaching for medical students and also act as preceptors to new obstetric residents. Midwives formally assess residents' normal labour and delivery skills, including perineal suturing, and sign them off when competent.

The reported result has been genuine and effective collaborative practice where residents continue to ask for advice from their midwife mentors throughout the four years of their residency and look to them for support and encouragement. It has made residents not only value the skills and knowledge of midwives but has also encouraged doctors to adopt aspects of the midwifery philosophy of care in their own practice (Metheny and Angelini 2000).

Other US authors writing about interdisciplinary education, report positive results when midwives are involved in medical education (Mankoff et al 1994, Howard and Leppert 1998). Harman et al (1998) in a comprehensive survey into the participation of Certified Nurse Midwives (CNMs) in medical education programmes in the US, examined midwifery involvement in medical education from the perspective of the midwives. They report that US midwives teaching or mentoring in medical education view the role of medical student educator as congruent with their philosophy of midwifery practice. Over 90% of midwives involved in medical education in this study also participated in midwifery education (Harman et al 1998).

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7. Differing objectives of midwives and medical students

Involving midwives and nurses in medical student education in a more formal way than the usual short clinical attachments may have benefits in terms of learning outcomes. One problem that has been reported is that medical students and midwives appear to have differing objectives during medical students' obstetric allocations (Quinlivan et al 2003). Clear objectives may need to be negotiated for medical students to receive the full benefit of working with midwives as the educational experience could be compromised if medical students do not understand what midwives are attempting to teach them or why. For instance, midwifery objectives focused on support offered to women during a normal labour may seem unimportant to medical students whose objective may be witnessing as many births as possible. However, if medical students can be helped to understand why midwives believe that understanding women's responses to labour is equally important to learning a delivery technique, students may gain greater benefit from their midwifery attachment.

8. Creating Successful IPE

One argument for interprofessional learning lies in addressing the professional conflicts that continue to undermine effective collaborative practice in healthcare settings. As consumers become more sophisticated, their expectations of involvement in their own care increases, while their tolerance of paternalistic attitudes is reduced (Engel and Gurskey 2003). In maternity care, clients are very aware of conflicts between midwives and doctors and report that this detracts from their experience of pregnancy and childbirth (Fraser et al 2000).

Fraser et al (2000) indicated that eliminating negative stereotypes was one of the key reasons for developing interprofessional learning between midwifery and medical students. The fact that over 50% of midwifery students questioned about the prospect of a joint educational programme, could see no benefit in learning together with medical students, whom they described as arrogant, may provide a convincing argument for this aspect of IPE. Interestingly, although the student midwives could see no benefit for themselves, they felt that medical students would benefit from working with them

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(Fraser et al 2000). It could be argued that this attitude demonstrates the same professional arrogance that the midwives criticized in medical students.

8.1 Developing curricula for shared learning

In order for IPE/IPL initiatives to be successful, it is important that each professional group feels that they have gained something over and above that which could be obtained from uni-professional learning. Therefore it is important that curricula for interprofessional learning are developed with this in mind. Some authors suggest that learning about the affective domain is a beneficial focus for shared learning as medical education is often overly focused on the accumulation of scientific fact to the detriment of learning about the more humanistic side of medicine (Mankoff et al 1994; Ten Cate and De Haes 2000; Engel and Gursky 2003).

However, a recent Canadian study found that in order for students to learn to work effectively with other professional groups, a process of ‘interprofessional familiarization’ (Arndt et al 2009 p. 18) must occur. This builds on students’ initial socialization into their own professional groups which provides a sense of identity. Students can then learn to interact effectively with members of other professions if the importance of interprofessional familiarization is recognized as an essential element of the health professional curriculum.

8.2 Differing approaches to learning

Another potential issue in planning IPE programmes is the fact that students from different professional groups may have seemingly incompatible preferences or approaches to learning (Miller et al 2001; Stevenson and Sander 2002). Stevenson and Sander (2002) in a survey of first year medical, business and psychology students found that medical students valued didactic teaching from clinicians or educators whom they identified as experts over learning from their peers. They particularly rejected the concept that role-play and other experiential learning activities represented valuable learning opportunities.

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Miller et al (2001) suggest using a mixture of learning strategies and activities to appeal to different styles of learning favoured by the various professional groups. Wilson and Mires (2000) agree that some educational strategies are perhaps more suitable for particular professional groups; however, attitudes to learning may be rooted in what students have experienced in the past. I have observed that there is often an uncomfortable learning curve that takes place when students are encouraged to move out of familiar educational patterns into something that is new or strange to them. Mires et al (1999) on the other hand report on the successful implementation of interprofessional learning in an environment where the medical school philosophy is based on self-directed learning. Medical students in this instance demonstrated a consistent understanding of the role of the midwife following shared learning.

8.3 Effective teaching strategies

Some successful IPE programmes have used PBL to promote learning (Mires et al 1999; Furber et al 2004). Others have used computer aided learning or e-learning strategies (Mires et al 1999; Wilson and Mires 2000). A further popular strategy in IPE initiatives combining medical students and midwives involves students in activities based around common obstetric emergencies. Symonds et al (2003) describe the implementation of the interprofessional team objective structured clinical examination (ITOSCE) where students act out their responses to an obstetric emergency and then are assessed on their performance as a group. Having successfully used a similar teaching method with a single professional group, I can appreciate the benefits of using this type of role-play in an interprofessional learning situation. It is also proactive preparation for professional practice as it mimics the type of interprofessional activities that are now standard as part of continuing professional development (CPD) for health care professionals (Peck et al 2000; DH 2003).

9. Team working

One of the most important features of current clinical practice in health care is commonly identified as the ability to engage in team work with members of other professions. Engel and Gurskey (2003) indicate that the ability to form teams is an

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important outcome of IPE. Team working however, does not just happen, it requires facilitation. One way that Engel and Gursky suggest doing this is to make IPE a requirement for all post basic education in the health professions, as well as developing undergraduate programs around the principles of IPE. However this seems to indicate that successful interprofessional integration will occur if students are put together in mixed-professional groups, while in reality the success of any IPE initiative is dependent on careful planning and structuring as health professional educators at Yale University discovered (Heinrich et al 2003).

Yale University implemented IPE as a required element of their health professional education by establishing a Women's Health Clinic specifically to provide opportunities for interprofessional learning and team building between students from different health professional programmes such as medicine and nursing (Heinrich et al 2003). It was deemed to be a successful exercise, although one requiring a great amount of thought and planning to maximize its effectiveness for students. When government funding ran out, the clinic had to close. However, the experience acted as a stimulus for consideration of how an IPE programme could be implemented, which was both practical and feasible within budgetary constraints (Heinrich et al 2003). Successful planning for IPE requires extensive ground breaking to ensure the precepts of interprofessionalism are valued by both staff and students, followed by creative curriculum development in both theoretical and practical teaching (Freeth et al 2005; Begley 2009).

9.1 Team working impacts on other roles/responsibilities

Reeves et al (2008) highlighted additional problems in an ethnographic study exploring the challenges met by a planning group developing a shared curriculum for medical, nursing and allied health students. While the planning group achieved a successful pilot programme this was at the expense of other roles and responsibilities. Interprofessional collaboration was found to be resource-intensive and their work was further inhibited by staff and managerial changes. Hall (2005) however proposes that it is the differing values and beliefs of the various health professions, rather than just structural problems,

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which can make collaboration difficult. Hall sites social class, gender and historical issues as contributors to the barriers between professional groups.

10. Uni-directional interdisciplinary teaching as the norm

Interprofessional education and interdisciplinary education are both well-established features of health professional education today (Hammick et al 2007). At one time the traffic in interdisciplinary education was concentrated in one direction with consultants and other specialists featuring heavily in the training of nurses, midwives and other allied health professionals. Sometimes this took the form of allowing nurses and midwives to join medical lectures (Chapple et al 1993). However, it was rare for any health professionals from the professions allied to medicine, to be asked to teach medical students. The exception was during clinical placements when medical students gained some experience working with other professional groups such as nurses or midwives. The importance afforded to these arrangements was evident in their informality, which continues to some extent today. Opportunities for interdisciplinary learning are entirely dependent on the organization of individual medical programmes and the value assigned to collaborative teaching.

11. IPE as a catalyst for change

Barr et al (2005) suggest that effective IPE results in a chain reaction encouraging collaboration, reducing stress and promoting more effective client care, while earlier Barr (2003 p.266) proposed that the aim of IPE is no less than to 'change practice, change the professions'. However, Wall (2003) advises caution, stating that teamwork should not be seen as a general panacea for all that ails the health services. He advises consideration of ethical issues surrounding interprofessional working such as defining ultimate responsibility, blurring professional boundaries, and the relationship between health managers and healthcare practitioners.

11.1 IPE: potential benefits for health care workers and service users

Nevertheless, Barr et al (2005) argue that interprofessional education is good for healthcare professionals and other workers, and thus good for service users. They do

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admit however that there are issues that must be addressed such as stress, prejudice and the proliferation of specialist practitioners all with an interest in preserving or extending their own roles. Despite these difficulties, the authors recommend that a commitment to IPE is both feasible and necessary. Effective implementation of IPE, they say, can be accomplished with openness, generosity and excellent communication skills (Barr et al 2005). Indeed, this may be the best starting point for both interprofessional and interdisciplinary education. Before attempting to teach clinical skills or introduce health care professionals and students to theoretical or philosophical ideas that may be new and strange to them, perhaps educators should concentrate on helping students and practitioners acquire that very openness and generosity of heart, which is required to become an excellent communicator.

11.2 The excellent communicator

The excellent communicator listens attentively and actively as well as speaking effectively (Scarnati 1998). These skills describe a practitioner who interacts effectively on many levels and therefore is ready to engage in interprofessional education and collaboration to improve the health care provided to service-users. In fact, these skills match what Meads and Ashcroft (2005) describe as the meaning of being a professional:

Being a professional today means becoming interprofessional. It is a policy imperative, demanding behavioural change and sometimes transformation (Meads and Ashcroft 2005 p.3).

12. Professional Socialisation

However, the health professions may need to grow into this definition, if indeed, it can be shown to be the way forward in health care provision. Many writers, both in the social sciences and in health, view professional socialization as a process shaping a unique professional identity (Hall 2005; Goldie et al 2007; Mooney 2007; Thomas 2007; Ajjawi and Higgs 2008; Price 2009). Goldie et al (2007) in their findings from a qualitative study in which they interviewed both medical students and tutors, describe students entering a community of practice and note the power of role modelling in helping students to develop their professional identities. This process can be either

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positive or negative and the authors point out the power of the hidden curriculum in shaping the creation of professional identity. Ajjawi and Higgs (2008) acknowledge the power of the practice community and propose that this power can be harnessed in helping students to develop the clinical reasoning skills which they describe as a key element of professional socialization. Price (2009) in a study into early professional socialization of nurses also identified as a major theme, the powerful role of others in helping students to develop their own professional identity. This can either conflict with students' existing ideals or serve to support and strengthen them.

12.1 Conflicting messages about professional roles

Mentors and other significant members of the profession that the student is seeking to enter can also provide conflicting messages about the role of the professional. Thomas (2007) describes this in her study about the journey of becoming a midwife. While some midwives demonstrated a clear belief in women's ability to give birth, often interpreted within a feminist context, others situated birth within a techno-medical model which supported the belief that women often require medical assistance to give birth.

The importance of the affective domain is often overlooked in discussions about how health professionals learn, yet this underpins the way students acquire the values and beliefs associated with being professional (Ulrich 2004). This supports Thomas' (2007) conclusion that students are only able to internalize a belief in childbirth as a normal physiological process if they have role models with a strong belief in women's ability to give birth unaided. This has been identified by other authors as the essence of the midwifery model (Rooks 1999; Kennedy 2000).

12.2 Student engagement with professional socialization

However, professional socialization cannot be viewed as something which just happens to students without acknowledging the possibility of a more active role on the part of the student (Clouder 2003; Haidet et al 2008 a). Viewing the process of professional socialization from a social constructivist perspective acknowledges the complexity and diversity of the student's engagement with the professional role (Haidet et al 2008 a).

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This perspective identifies professional socialization as a proactive process where the individual has a role in determining his or her own engagement with professional norms and values (Clouder 2003). This can develop from a very complex interaction of many relationships that students develop with mentors, role models, tutors, family and peers and with patients (Haidet et al 2008 b).

12.3 Shifting concept of what it means to 'be a doctor'

A recent Swedish study (Johansson and Hamberg 2007) seems to confirm this shifting engagement with professional identity. An analysis of medical students' essays on 'being a doctor' revealed that current students are more concerned with how they can achieve a fulfilling life/work balance than in engaging with the traditional view of medicine as a calling which supersedes other aspects of an individual's life. The students in this study seemed to be actively constructing a professional identity which they saw as congruent with their personal values. This new professional identity included the rejection of the the concept that masculine values aid physicians in their careers (Mander 2004) as the Swedish students saw gender equity as a right and felt that men and women would both benefit from a feminization of the medical profession resulting in attribution of equal value to family and personal life (Johansson and Hamburg 2007). However, these findings may reflect norms and values within Swedish society and may be less applicable to medical students in other countries.

12.4 Professional socialization and its impact on interprofessional education and practice.

The essential conflict between professional socialization and interprofessionalism is that students are currently socialized into a uni-professional model (Apker and Eggly 2004). While this is not necessarily detrimental, as one of the definitions of a profession is the right to self-determination (Ajjawi and Higgs 2007), it causes conflict when models of 'being a professional' represent widely divergent paradigms. These differences are illustrated by the variant models of professionalism identified in studies by Kennedy (2000) and Richardson et al (2002).

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While Kennedy (2000) describes the 'exemplary practice' that puts women at the centre of care as the model of professionalism which should be adopted by midwifery students, a contemporary study demonstrated student physiotherapists adopting an authoritative role as they became socialized into their profession (Richardson et al 2002). In this joint UK/Swedish study, students felt it was important to instruct patients from a position of authority derived from specialist knowledge. These discordant models of professionalism could come into conflict as both professional groups have a collaborative role in the improvement of women's health around the time of childbirth.

12.5 Conflict between medicine and other professional groups

However, where models of professionalism most often are seen to conflict is between medicine and other health professions (Stein 1967; Smith and Preston 1996; Rumbold 1999; Iacono 2003; Coombs 2004; Keating and Fleming 2009). Apker and Eggly (2004) analysed transcripts of the 'morning report' and found that medical socialization is constructed from both a position of dominance and a strong belief in the superiority of the biomedical model of practice. The humanistic paradigm of care was seen as having little importance within this social construction. Such strongly held professional beliefs can be difficult to challenge and non-medical health professions have sometimes resorted to subversion rather than dialogue in their challenges to the superiority of the medical model.

12.6 Playing the 'game'

One example of this is the 'game' played by nurses when dealing with doctors, particularly junior doctors (Stein 1967). In this game nurses make decisions about patient care which may include aspects such as diagnosis, treatment or medication but communicate to medical staff in such a way that does not challenge the established power differential between nurses and doctors. Almost forty years later one might hypothesize that the transfer of nursing education to the higher education sphere (Francis and Humphries 1999), increasing equality of women in society and the interprofessional agenda in health care (Masterson 2002) might have obliterated the need for the game in interactions between doctors and nurses. However, thirty years

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after Stein, researchers were still reporting conflicts between doctors (particularly junior doctors) and other health professionals such as nurses (Smith and Preston 1996). More recently, while there is some evidence of improving relationships between health professionals (Iacono 2003), Salvage and Smith (2000) claim that “the core dynamic is still the same: nursing for all its new independence and expertise is still dancing around the medical maypole” (Salvage and Smith 2000 p.1019). Keating and Fleming (2009) confirm similar continuing power conflicts between midwives and obstetricians.

Hunter (2001) demonstrated how the game described by Stein (1967) is still used by midwives to protect women from unnecessary intervention. The medical model of obstetrics is driven by risk. Childbirth is seen as risky for the woman, but even more so for the fetus who is often identified as a patient in its own right (Gilmore 1983; Mahoney 1989). Despite the fact that this ‘patient’ has no legal rights in UK law (Scott 2002), many decisions appear to be made as if fetal rights took precedence over those of the mother for self-determination (McLean 2009). Hunter (2001) describes how midwives deliberately delay diagnosis of the second stage of labour in order to protect women from interventions which, according to the midwifery model are not necessary and in fact may be harmful in terms of creating iatrogenic complications (Illich 1976). As long as such ‘games’ remain the norm between professional groups it may be difficult for honest dialogue to take place.

13. Clinical Education

The issues of professional socialization and interprofessional education and collaborative working are all expressed within the context of the clinical environment. While in some cases this may be within a community setting, most often it is within large, busy teaching hospitals where clinicians have a responsibility for meeting the training requirements of health professional students. At times the needs of students can appear to be in conflict with the need to perform the core work of the institution: to care for the patients or clients. At other times the needs of different student groups can clash. This is commonly seen on labour wards where student midwives are often given

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preferential opportunities to provide labour care due to the requirements of their professional body for specific pre-registration experience.

13.1 The clinical learning environment

Clinical learning is an essential component of health professional education, providing students with an opportunity to apply learning to practice in real situations (Edwards et al 2004). According to Spencer (2003) it is the only opportunity students have to amalgamate learning from many different disciplines and put them into practice all at the same time. An example of this in midwifery might be when a student conducts a 'booking' interview. She has the opportunity to use her knowledge of reproductive physiology, sociology, psychology and of practice while utilizing communication skills and modelling professional behaviour. However, the benefits of such experiential learning have been shown by several studies to be directly related to the quality of mentoring or clinical supervision which occurs during the placement (Dunn and Hansford 1997; Saarikoski and Leino-Kilpi 2002; Chan 2003; Papp et al 2003; Dolmans et al 2008). Saarikoski and Leino-Kilpi (2002) in a study used to validate a clinical learning environment and supervision instrument (CLES), surveyed 416 students from four different schools of nursing in Finland using both the CLES instrument and a previously validated tool (Dunn and Burnett 1995). They found that the supervisory relationship with the clinical mentor was the most important factor in creating a good clinical learning environment. This occurred more frequently where students reported good management and a positive atmosphere within the learning environment. Dolmans et al's (2008) survey of medical students' experiences identified the characteristics of poor learning environments. 350 medical students completed 1425 questionnaires about the learning environments during their specialist rotations. The students experienced a lack of continuity of supervision, staff disinterest in or criticism of students and few opportunities for independent practice. Similar problems were described by Chamberlain (1997) in a study of student midwives in the South of England. A lack of communication and inadequate supervision created anxiety and led to student midwives feeling inadequately prepared for professional practice. Begley (1999) reported comparable findings in a study of Irish midwifery students, where students stated that

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much of their learning took place by trial and error with inadequate clinical teaching or assistance in learning how to problem solve and make clinical decisions. Chan (2003), in a study validating a clinical learning evaluation tool with nursing students, found that there was a gulf between the clinical learning environment that the students felt would be most beneficial for their learning and the reality of clinical placements. Chan concluded that it was essential to alter the clinical learning environment to better meet students' needs. However, Spencer (2003) argues that even when the clinical learning environment is less than ideal, it remains the only venue in which clinical skills and professional behaviours can be taught in an integrated fashion.

14. Conclusion

Some of the issues raised by these studies relate to precepts of professional socialization and may have an impact on how students perceive other professions as well as affecting how they model behaviour on members of their own profession. Interprofessional learning, professional socialization and clinical learning are therefore inter-related topics which all contribute to students' perceptions about the clinical learning experience. Some of these issues will be discussed further in Chapter 3 when conflicts between the techno-medical model of obstetric-led maternity care and the social model of midwifery care are explored.

Chapter 3

Midwifery

in the shadow of

Medical Obstetrics

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1. Introduction

This chapter explores some of the dichotomies between the professions of obstetrics and midwifery. These can be as simple as misunderstandings about role or scope of practice or as complex as the professional and political conflicts which Foucault (1973) describes as informing the emergence of the medical model. The ultimate result of these diverging perspectives is that they have the potential to impair the quality of the care women receive in the peripartum period (Schuman and Marteau 1993; Cahill 2001; Reiger 2008). While the primary focus of this thesis is UK practice, examples from North America, Europe and Australia/New Zealand will be included as they have resonance for the UK experience, having technically advanced health care systems based on the medical model. In all these areas a growing midwifery voice has emerged and has challenged some of the precepts of technological childbirth. Banks (2007) provides perhaps the most poignant example of this in her doctoral thesis illustrating the struggles of New Zealand's domiciliary midwives to remain true to their vision of midwifery in a society where midwifery had been all but subsumed into nursing.

2. Risk Assessment and Decision Making: Obstetricians and Midwives

Baldwin (1999) identifies a dichotomy as existing in the concept of decision-making with obstetricians seeing themselves as the arbiters of decisions during a woman's pregnancy and labour while midwives strive to educate women so they can make their own choices. This is closely allied to their differing constructs of risk, which Rooks (1999) attributes to the differences between the two models of care. While obstetricians treat women prophylactically with the view that childbirth is risky, midwives view childbirth as a normal process which can be achieved by most women's bodies (Rooks 1999). While Baldwin and Rooks were both writing over a decade ago, these potentially conflicting interpretations of risk still have the ability to divide obstetricians and midwives (Cragin and Kennedy 2006; Reiger 2008).

2.1 The fetus as a patient

Lupton (2003) suggests that a potential area of conflict is the trend for obstetricians to identify the fetus as a patient which Arney (1982) identifies as commencing in the

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1940s. This view can result in medical decisions which prioritize fetal health (Gilmore 1983; Mahoney 1989) while denying women their own accountability in the process of pregnancy and childbirth (McLean 2009). Viewing pregnancy from the perspective of fetal risk can impact upon a woman's ability to make responsible decisions about her own health encompassing that of her fetus (Symon 2006; Edwards and Murphy-Lawless 2006).

2.2 Midwives' adoption of obstetric risk mentality

However, a risk perspective can also influence midwives' beliefs. Midwives working in obstetric-led settings begin to overestimate risk and to adopt a belief in the efficacy of interventions which are unproven or possibly detrimental in terms of helping women to achieve a normal birth experience (Mead and Kornbrot 2004; Mead et al 2006). This has a significant impact on informed choice as Hindley and Thomson (2005) observed in their study into midwives use of continuous electronic fetal monitoring in labour. They reported midwives steering women toward obstetrically sanctioned forms of care while purporting to be offering informed choice.

2.3 Subtle differences of meaning in the definitions of midwifery and obstetrics

While it would seem that the professions of midwifery and obstetrics have very similar stated objectives, that is the health and safety of the woman and fetus/infant (Rooks 1999), the different world views describing the professional discourse of each profession have led to conflict in the past and continue to do so. The role of the midwife is to care for a woman while she is nurturing new life; to provide accurate evidence based information to help her make decisions about her own health; to help her understand how her health decisions may affect her child's health; and to support her in achieving a birth that is both meaningful and safe (Paine et al 1999). The universally accepted definition of what a midwife does is the WHO/ICM/FIGO¹ statement:

A midwife is a person who, having been regularly admitted to a midwifery educational programme, duly recognized in the country in which it is located, has successfully completed the prescribed course of studies in midwifery and has acquired the requisite qualifications

¹ World Health Organization/International Confederation of Midwives/International Federation of Gynaecology & Obstetrics

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to be registered and/or licensed to practice midwifery. She must be able to give the necessary supervision, care and advice to women during pregnancy, labour and the postpartum period, to conduct deliveries on her own responsibility and to care for the newborn and the infant. This care includes preventative measures, the detection of abnormal conditions in mother and child, the procurement of medical assistance and the execution of emergency measures in the absence of medical help. She has an important task in health counselling and education, not only for the women, but also within the family and community. The work should involve antenatal education and preparation for parenthood and extends to certain areas of gynaecology, family planning and child care. She may practice in hospitals, clinics, health units, domiciliary conditions or in any other service. (WHO 1999)

Obstetrics, similarly, draws upon evidence based knowledge to guide decisions around the care of women during pregnancy, labour and the puerperium. The dictionary definition of obstetrics however discloses a subtle distinction between the obstetric and midwifery role in the focus on pathology and the identification of the fetus as a patient (emphasis mine):

A branch of medicine concerned with pregnancy and childbirth, including the study of the physiologic and *pathologic function* of the female reproductive tract and the care of the mother *and fetus* throughout pregnancy, childbirth and the postpartum period (Mosby 2009)

In the UK and much of the rest of Europe, this role is largely confined to the care of women who have pre-existing health problems or who develop pregnancy-related complications (van Teijlingen et al 2009). However, in North America, where obstetricians provide services for the majority of pregnant women, competition for obstetric cases almost eradicated midwifery (Baldwin 1999) and continues to inform the professional discourse concerning the provenance of maternity care (van Teijlingen et al 2009).

3. The complementary nature of midwifery and obstetric medicine

An acknowledgement of obstetrics and midwifery as complementary professions, each retaining its own sphere of knowledge and set of skills, yet understanding and respecting the other may serve to engender a healthy professional respect promoting

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appropriate referral and consultation (Reiger 2008). In a qualitative study using both observation and interviews as methods of data collection, Reiger (2008) explored areas of interprofessional conflict between obstetricians and midwives. Analysis of the data used critical social and feminist theory to interpret issues around domination and disrespect. She concluded that midwives and obstetricians need to replace conflicts which are often historical and gender-based with mutual respect and recognition in order to improve trust and communication. Accomplishing this will affect the way maternity service users perceive their care (Reiger 2008).

Simpson and Barker (2008) describe the benefits to women of a more integrated approach to care between midwives and obstetricians as improved client satisfaction and a reduction in admission to an intensive care unit (ICU). However, this paper discussed an expanded midwifery role within the medical obstetric model without any corresponding acknowledgement of midwives as experts in diagnosis and promotion of normality. While midwives and nurses have at times gained acknowledgement for expanding their roles into areas previously considered the province of the medical profession (Hayes 1997; Masterson 2002), recognition of the importance of the primary function of the nurse or midwife seems somewhat less forthcoming (Pietroni 1991). Baldwin (1999) proposes that the solution is to train midwives and doctors together so that both professional groups develop a deep understanding and respect for the role played by the other profession. She suggests that the model of obstetric training at Beth Israel and Bronx Lebanon Hospitals in New York goes some way towards doing this as midwives act as preceptors for junior doctors on their obstetric rotations. The midwives are the acknowledged experts in normality (Baldwin 1999). However, there is little indication that the training done by midwives, focusing on knowledge and skills, addresses any of the deeper philosophical issues that have divided medicine and midwifery. These have to do with issues such as decision-making and informed choice, the place of intuition as authoritative knowledge, the evaluation of risk, and the meaning of time. Retention of traditional models of dominance and hierarchical thinking is also an impediment to effective collaboration between obstetricians and midwives (Keating and Fleming 2009).

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Baldwin (1999) found that one of the key differences between obstetric and midwifery care was in the way midwives were able to place women at the centre of care:

Midwives tend to view their relationship with pregnant women differently than doctors. Doctors usually see themselves as the key decision makers in the birthing process whereas midwives strive to educate, nurture and support the pregnant woman to make her own decisions. (Baldwin 1999 p.77)

Simonds (2001) suggests that the conflict between the medical and midwifery models of care arises from the fact that they are embodied in two very differing concepts of time:

Thus, the midwifery model offers a solution by way of radical opposition to the oppressiveness of the medical model: it posits a liberatory point of view of time as expansive (as opposed to the restrictive time keeping of medicine) because of its holistic (rather than fragmenting) world-view (Simonds 2001 p.15)

Other midwifery writers have found resonance in Simonds' theory. Maher (2008) discusses the tensions between medical time and natural birth time as women try to create their own timeline for birth. However, Maher points out that time remains important to women in labour as they find difficulty in distancing themselves from a medical model of birth that defines progress within a strict definition of time. Deery (2008) analyses the impact of time on care provision by community midwives and proposes new ways of working that are less task and time orientated through a model of clinical supervision. Most recently, Browne and Chandra (2009) propose a new movement for midwives based on the Slow Food movement. Slow Midwifery, they suggest, would assist midwives in becoming more connected to women and less dependent on time keeping.

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4. Historical conflicts between medicine and midwifery

Some of the mistrust and misunderstanding which exists between obstetrics and midwifery appears to be rooted in historical conflict based on a patriarchal distrust of traditional female healers (Achterberg 1990). This was particularly pertinent when scientific rationalism based on Cartesian principles gained ascendancy over knowledge systems based on myth, religion and occult (in the meaning of hidden) knowledge (Donnison 1988; Cahill 2001). At other times conflict between doctors and midwives seems to have largely been the result of simple economics and the quest for enhanced medical status (Flexner 1910; DeVries 1993). Historically, there seem to be distinct periods of time in which midwifery care became marginalized. Mander (2004) suggests that this occurred only during times of great cultural change and disruption, enabling men to take control of what up to then had been considered a normal life event under female control. Murphy-Geiss et al (2009) provide an interesting analogy for midwifery as a sect of the established church, which represents Western medicine. They suggest that using church-sect theory offers an explanation of how midwifery can be accepted as a profession while maintaining values that are in opposition to the medical establishment.

4.1 The advent of the man-midwife

The invention of the forceps and the emergence of the man-midwife provided a direct challenge to the midwifery monopoly of birth attendance in the seventeenth and eighteenth centuries (Towler and Bramall 1986). The newly invented forceps facilitated the delivery of an infant who may have previously died or been severely damaged, but necessitated childbirth in the supine position. The use of forceps increased the status of practitioners (Mander 2004). Midwives were not permitted to use forceps and the Chamberlen family endeavoured to keep their invention a secret (Mander 2004). It became fashionable for upper class, and aspiring merchant class women to be attended in childbirth by the man-midwife while poor women continued to use the services of the traditional female midwife (Wilson 1995).

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4.2 DeLee and a modern witch hunt

A major threat to the profession of midwifery in the USA came at the beginning of the twentieth century. At the time midwives gained state recognition in the UK, the medical profession in the USA was seeking to have the profession of midwifery eradicated (Arney 1982). DeVries (1993) points out that doctors were able to do this by exploiting their connection to the political system. As women had not achieved suffrage at this time, their collective political voice was muted where it existed at all. However, women who later became politically active were largely from the educated classes (McGerr 1990). Such women did not always demonstrate sisterly solidarity towards midwives but instead chose hospitalized childbirth which was seen as modern and scientific and where they could be cared for by specialist medical practitioners (Litoff 1982) .

4.3 The status of obstetric medicine

One reason why the medical profession wished to eradicate midwifery was the low status of obstetrics which New York doctor, Joseph DeLee, successfully campaigned to have elevated to a professional status approaching that of surgery (DeLee 1915). This was done by emphasizing the risk of childbirth and as DeVries (1993) points out, the perception of risk elevates the status of those who can claim to be able to protect the public from risk. DeLee used this perception of risk to propose that all women should have prophylactic forceps deliveries (Katz Rothman 1991). DeLee seems to have ignored the risks of using forceps which had been recognized as early as 1634 when the London College of Physicians refused one of their members, Dr Peter Chamberlen, the right to set up a regulating body for midwives (Arney 1982). They argued that experienced midwives should be the teachers of midwives and that Chamberlen had no knowledge of normal birth, only how to use his 'instruments of extraordinary violence in desperate occasions' (Dunn 1999 p.F232).

5. The 1910 Flexner Report

Another influence in the early part of the 20th century was the Flexner Report (1910) which criticized the lecture-based format of obstetric teaching in US medical schools. Noting that European midwives were required to complete a significant number of

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supervised cases before being allowed to practice independently, the report recommended more intensive clinical obstetric training for medical students, which necessitated taking maternity care out of the hands of the midwives (Flexner 1910).

5.1 Interventionist techniques and risk management

However, as the medical students were instructed, not by midwives, but by doctors with little understanding of the techniques or principles of midwifery care, obstetrics was used as an opportunity to practice highly interventionist medical and surgical techniques which resulted in an increase in maternal and neonatal morbidity and mortality (Litoff 1982). Women's lack of social and political power during this era virtually eliminated any consideration of female voice in such far-reaching changes in the way women were allowed to give birth. The poor outcomes experienced by obstetricians gave credence to the belief that childbirth was a dangerous enterprise (Arney 1982). Similarly in England, doctors' experiences of births at home were limited to obstetric emergencies such as post partum haemorrhage. This lack of engagement with normal birth supported the medical view of birth as a high risk activity and increased demands for hospitalization, and medical control of childbirth (Tew 1998).

5.2 The American way of birth

During DeLee's campaign midwives were denigrated as dirty and impoverished immigrants while the medical obstetric model of childbirth was promoted as the modern American way to give birth (Wagner 2006).

6. The 1902 Midwives' Act and the concept of professionalism

However at this time, midwifery gained establishment recognition in England with the first legal regulation of midwives, the 1902 Midwives Act (Stevens 2002). While the act provided protection for the public by requiring midwives registering under the act to have a recognized level of education and skill (Stevens 2002), it also placed the control of midwives in the hands of the medical profession. This encouraged midwives to define themselves within the construct of medical knowledge and medical skills (Simonds 2002).

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6.1 Conflicts in conceptualization

The inherent conflict with the way midwives conceptualize their profession continues to this day as midwives seek to establish a unique role and function for the profession as separate from the medical paradigm, with the concept of being with woman as central (Ginzberg 1987; Kennedy and Lowe 2001; Adams 2006). At the same time, midwives seek recognition as members of an autonomous profession, not as members of a branch of nursing or a lower order of obstetric medicine (Katz Rothman 1984).

6.2 Authoritative knowledge

In the medicalized setting of modern maternity care, the authoritative knowledge adopted by the midwife is very often the techno-medical knowledge of obstetrics and not the embodied, intuitive knowledge of midwifery (Davis-Floyd and Davis 1996; Davis and Davis- Floyd 1997). This has occurred as midwives have striven to gain or retain status within a medical setting, often assimilating the values of medicine in order to do so (Jordan 1997), thereby endangering the perpetuation of a unique body of knowledge. However Davis-Floyd and Davis (1996) discovered that for midwives caring for women having out of hospital births, intuition can be the authoritative knowledge informing practice if midwives learn to trust in it.

6.3 The oppressed becoming the oppressors

This process of socialization where an oppressed group adopts the values of their oppressors in an attempt to gain recognition and credibility by the dominant order is a well-documented social phenomena (Friere 1972) and may happen without the subordinate group either realizing their own oppression or that the values adopted are not authentically their own. For instance: acquiring skills traditionally identified as medical enables the midwife working within an obstetric setting to win the respect of both her midwifery and medical colleagues, insofar as she restricts her practice to the medical paradigm. However, such close association with medical obstetrics may also result in the assimilation of the medical mantra that no labour is normal until it is over

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(Gould 2000). The ability to recognize these inherent conflicts is one benefit of developing a critical reflexivity in practice (Hughes et al 2002), although midwives who do so, are often frustrated by their inability to change the status quo due to financial and administrative barriers (McCloskey et al 2002) as well as from medical dominance (Keating and Fleming 2009).

6.4 Lack of intuition and trust

Midwives socialized into the medical model may fail to develop the intuitive skills and trust in the normal process of labour to provide safe care outside of medical protocols (Szurzek 1997). This is congruent with the concept of authoritative knowledge which is powerful, not because it is inherently right, but because it counts (Jordan 1997). In modern birth, the scientific and technical knowledge of medicine, not the intuitive knowledge of midwives and of women has become the authoritative knowledge. Pietroni (1991) suggests that the medical profession has difficulty in relinquishing power to other health workers, or to the users of healthcare services, because medicine resonates with a recognized archetype of the hero-god. In ancient societies medicine was the province of warrior gods such as Apollo, and thus, even in modern times, medicine has taken an active and even aggressive stance against illness, operating within the construct of the heroic rescue (Pietroni 1991). Illich (2005) labels professions such as medicine 'disabling' as they:

assert secret knowledge about human nature, knowledge which only they have the right to dispense. They claim a monopoly over the definition of deviance and the remedies needed.....In any area where a human need can be imagined these new professions, dominant, authoritative, monopolistic, legalized- and at the same time debilitating and effectively disabling the individual- have become exclusive experts of the public good (Illich 2005 p.19)

6.5 Lack of traditional knowledge

The assimilation of midwifery into the obstetric model of maternity care has resulted in the suppression and ultimate loss of traditional knowledge, skills and values (Fleming 1998). While twenty-first century midwives are adept at much of the techno-medical

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expertise that has become part of standard obstetric practice, some midwives express concern that their unique role in being with woman is further eroded when midwifery excellence is defined in terms of medical skills (Gould 2003). Cahill (2000) agrees that true midwifery practice needs to be revitalized, rather than facilitating the extension of the midwifery role into the technology that was once the province of medical practitioners alone. She points out that: “If the technology and approach utilized by medicine is unwanted, having a midwife to fulfill the role will offer no significant improvement” (Cahill 2000 p.341).

However Jordan (1997) warns that midwives attempting to define midwifery expertise in terms of the traditional skills of watching and waiting may be subject to ridicule and persecution from both the medical profession, and more significantly, other midwives. This can be explained by Freidson’s (1988) assertion that the status of paramedical professions is derived from their association with medicine. Therefore, midwives who adopt the medical model of care are perceived as having a higher professional status than those allying themselves more closely with low status models of alternative health. Jordan suggests that this identification of one type of knowledge as authoritative results in the dismissal of all other types of knowledge: “Those who espouse alternative knowledge systems then tend to be seen as backward, ignorant and naïve, or worse, simply as trouble makers” (Jordan 1997 p.56) .

However, it may be too simplistic to conceive of professional differences as merely a problem of authoritative knowledge. A traditional view of professional knowledge postulates a linear path from the discipline’s science to its application in practice and the development of skills and attitudes which are congruent with both scientific knowledge and its application (Schein 1974). Schön (1987) critiqued this inherent linearity by pointing out that as this model is unworkable because it denies the artistry of professional practice. According to Schön, even professionals seemingly rooted in a positivist model of practice become confused as they attempt to implement practice

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which denies the essential artistry of professional decision making in the ‘messy, indeterminate and problematic situations’ (Schön 1987 p.53) of real life.

7. The Sociology of Power

A seminal work on the sociology of medical power and dominance is *The Profession of Medicine* (Freidson 1988) as much of the subsequent discussion in this field either builds on or critiques Freidson’s ideas. Freidson theorizes that medical dominance arises in part from the fact that medicine is: “organized as a consulting occupation which may serve as discoverer, carrier and practitioner of certain types of knowledge” (Freidson 1988 p.5). Thus medicine’s power comes from the fact that lay people consult doctors, rather than other types of practitioners for their health needs. This is assisted by the fact that the medical profession has achieved official approval and the monopoly of certain types of diagnosis and treatment. However, if medical practitioners begin to lose their client base, their power could diminish.

7.1 Challenges to medical dominance

MacDonald (1995) discusses how professions own their specialist knowledge and promote the concept that no-one other than members of the profession can be trusted to use it correctly. This concept is largely supported and regulated by the state which, for example, regulates who may provide assistance at the time of childbirth. However, a theme running through current literature suggests that medical dominance of modern healthcare is in a state of change in response to societal, technological and economic demands (Kenny 2004; Kemp 2007). Consumerism and the increasing involvement of the patient or service user in making informed choices about the management of their own care has also served to reduce medical dominance (Zadoroznyj 2001; Tousijn 2006; Bury and Taylor 2008). Bury and Taylor (2008) suggest that these factors, together with the emergence of evidence based practice (EBP), have served to alter the nature of professionalism, particularly in terms of reducing autonomy and increasing accountability.

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7.2 Dominance and autonomy

Occupational groups other than doctors may take on tasks that were once the province of the medical profession (Hayes 1997), however, this does not challenge medical dominance as long as doctors maintain control of the practice (Freidson 1988). Coburn (1992) proposed a model of medical dominance where dominance and subordination are endpoints of a line with autonomy as a floating mid-point. Therefore, autonomy does not necessarily equate to dominance over other professional groups. However, the closer the overlap between practice assimilated by differing occupational or professional groups, the greater the possibility of conflict (Freidson 1988). A survey of British and Australian nurses highlighted some of these potential conflicts and indicated that nurses in both countries perceived medical dominance as a structural barrier in terms of their own professional autonomy (Adamson et al 1995). Just over ten years later Coburn (2006) claimed that there had been a significant decline in medical dominance and that self regulation is no longer enough to enable the medical profession to maintain traditional dominance over other groups. Members of such occupational groups are developing their own areas of expertise and may be able to provide care more efficiently in the era of increasing healthcare regulation. Tousijn (2006) explains this in terms of postmodernity, suggesting that healthcare has moved beyond the clear boundaries that separated medicine from other occupational groups and this necessitates new interpretations of professionalism.

8. Comparing midwifery and obstetric care

Medical dominance theory (Freidson 1988) can be used to understand some of the conflicts between midwives and obstetricians. In the UK, it can be difficult to directly compare midwifery and obstetrics because each profession has a distinct role. In the US however, midwives and obstetricians both care for women with so-called low risk pregnancies and attend births where there are no complications. Jeanne Raisler, Professor of Nurse-Midwifery from the University of Michigan, compiled a database of midwifery practice to answer questions around the differences in medical and midwifery care (Raisler 2000).

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8.1 Using Donabedian to evaluate studies of midwifery care

Raisler utilized Donabedian's framework (1988) to group research studies which focused on midwifery into categories of structure, process or outcome. Raisler identified 161 papers describing 140 studies published over a 15 year period. While these were predominantly descriptive retrospective studies, Raisler noted that during the 15 year period under investigation more prospective studies, quasi-experimental studies, randomized control trials and multi-centre trials were beginning to emerge. Overall the research indicated that midwifery care was less interventionist while achieving higher rates of spontaneous vaginal delivery with maternal and neonatal outcomes that were equal to or better than in births attended by doctors. In some instances midwifery care took place within the context of poor socio-economic and educational status of women including young adolescents and drug-using women. Even in these instances, midwifery care was associated with less intervention and good maternal and neonatal outcomes (Raisler 2000).

8.2 Selective use of evidence

However, such scientific verification of the the beneficial outcomes of midwifery care is not new. Arney (1982) discusses how medical obstetrics often ignores research data which contradicts its professional discourse on the superiority of science and technology. Some findings supporting normality become what Arney terms 'residual normalcy' (Arney 1982 p. 51). These have sometimes been re-integrated into obstetric-controlled maternity care to provide the appearance of women-centred care or client choice. Some examples are the acknowledgement of the lack of efficacy of episiotomy to prevent fetal damage or maternal pelvic floor damage and the benefits of non-supine labour positions (Arney 1982). This is congruent with Freidson's (1988) premise that medical autonomy can blind practitioners to their own shortcomings.

8.2 The benefits of midwifery care

Raisler's findings indicated that midwives involved women more closely in their own care than doctors did. Midwives engaged in practices such as taking the time to facilitate

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authentic informed choice and encouraging women to actively participate in their own labours by the use of mobilization, non-pharmacological methods of pain relief and alternate birth positions including squatting and left lateral lying (Raisler 2000). The definition of alternate birth positions presupposes the lithotomy position as standard practice, at least in the US. The introduction of the lithotomy position as the most acceptable for childbirth has an interesting history. According to Arney (1982) early twentieth century obstetricians recognized the value of upright positions for labour while at the same time discouraging their use as primitive. The two acceptable alternatives were the lithotomy or the left lateral position but by the 1940s the latter of these had disappeared from American obstetric textbooks. Therefore, the left lateral position for birth has now assumed the status of an alternate birth position although it never completely disappeared from use in the UK, where a semi-recumbant labour position was preferred to the more extreme lithotomy position. This difference in preferred positions for birth in the US and UK may reflect the fact that birth in the UK never became as completely medicalized as it did in the US, perhaps influenced by the continuing presence of midwives in the health care system (Cassidy 2006).

8.3 Problems affecting the implementation of midwifery care

Johanson et al (2002) however argue that British midwives have been demoralized by the medical culture of birth in UK maternity units and as a result are unable to promote normality effectively. The authors suggest that the culture of maternity care needs to re-visualize birth as a normal physiological process and put strategies such as one to one midwifery care in place to encourage this.

Problems affecting the implementation of more widespread adoption of midwifery care in the United States include: lack of midwifery control over the regulation of midwifery practice, the complicated funding structure of maternity care in the US, the opposition of some physicians and the preference for medical over midwifery care on the part of some women. As Lazarus (1997) observes, women may feel that they are making choices about birth; however those choices are largely influenced by the medical

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hegemony that convincingly portrays medical intervention as the only safe alternative for birth. Baldwin (1999) proposes that women's lack of awareness of midwifery care or their belief that improvements in maternal/fetal outcome rise in direct proportion to the amount of technology used during childbirth, are additional factors in why women in the US do not choose midwives to care for them in pregnancy. Baldwin describes her vision for a system of collaborative practice where midwives and obstetricians recognize each others areas of expertise:

Midwifery could be the cure for the “disease” that seems to afflict American obstetrics. This disease is characterized by high cost, unnecessary use of technology, excessive cesarean section rates and a higher than necessary infant mortality rate. The key to administering this cure is collaboration between physicians and midwives. In reality, both can benefit from a collegial relationship; and ultimately, the patient can be the recipient of improved health care. (Baldwin 1999, p.78)

Oakley (1993) discusses how maternity care has become reliant on technology using the example of ultrasound screening in pregnancy. This has been used to ‘discover’ aspects of fetal health that pregnant women can determine in much less invasive ways by becoming attuned to their own bodies and the life of the fetus in the womb. Oakley demonstrates how this technology has been ‘sold’ to women as a necessary routine screening tool. She cites a study on fetal screening which states as its findings, in highly technical language, that fetal movement is not constant, and high activity periods are brief, combined with periods of low activity or no activity. Oakley comments that every pregnant woman can describe the differing movements of the fetus in her uterus, cultivating an awareness of fetal sleep and wakeful periods. The collaborative relationship between midwives and obstetricians described as the ideal by Baldwin (1999) could help to reduce the unnecessary use of technology by encouraging women to become more attuned to their own bodies and more trusting in their own intuition about their own and their fetus's health.

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8.4 Midwifery in Ireland

Another example of the obstetric/midwifery dichotomy comes from the Republic of Ireland. The structure of midwifery in the Republic of Ireland is somewhat different from midwifery in either UK or USA. Active management of labour and obstetric control over midwifery practice are two features of birth in Ireland (Majeed et al 2005). However in a recent study evaluating midwifery practice in Ireland, midwives demonstrated attempts to make their care less interventionist. Midwives observed that obstetric protocols were rarely evidence based, instead depending on personal preference of particular doctors. Midwives felt that they were hindered in their aim to provide authentic midwifery care by medical dominance and the high use of technology and therefore resorted to circumventing rather than challenging medical authority (Hyde and Roche-Reid 2004). This is a clear illustration of a lack of recognition of, or respect for, the midwife's scope of practice. While unhappy with the status quo, the Irish midwives seemed to have little political power to address this issue.

9. Midwives as the invisible carer

Kennedy et al (2004) suggest that midwifery care fails to gain recognition as a viable alternative to the American model of medicalized care due to midwives' quality of 'being invisible' that is good for women but poor for the promotion of midwifery care. Midwifery care, they say, is about the woman, not about the midwife. However, because of this, midwifery care goes unrecognized and undervalued.

9.1 Invisibility as gender discrimination

This is the same invisibility that Carpenter (1993) attributes to nurses, claiming that the position of nurses within the health care arena is not an isolated phenomenon, but indicative of widespread gender discrimination in society. Pietroni (1991) in a study into how students from different health and social care disciplines perceive each other, utilizes a discussion of Jungian archetypes to explain nurses' subjection to doctors as expressing the archetype of the 'mother'. This describes the nurturer rather than the decision-maker/rescuer. Although Carpenter was writing more than ten years earlier,

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Kennedy et al's (2004) discussion of the invisible nature of the midwife in the wider political arena suggests that societal changes in terms of gendered health care occupations have not resulted in significant alterations within healthcare's male and medical orientated realm of influence. However, it is not inevitable that the non-intrusive care of the midwife must translate to the midwife's invisibility in the political realm.

9.2 Consultant midwives: a social and political force?

The role of Consultant Midwife in the UK has developed, in part, to help ameliorate the power imbalances between obstetrics and midwifery and to facilitate good communication between professional groups in areas including management and education (O'Loughlin 2001). One of the key roles of the consultant is to provide leadership outside of a managerial context. Consultants act both to directly affect change and also to empower or facilitate change in other practitioners (Guest et al 2004). The ability to engage in professional dialogues with medical or obstetric consultants is seen as a positive aspect of the role (Guest et al 2004); however the concept has also been critiqued for its introduction of a hierarchical career model into midwifery (O'Loughlin 2001). Other problems can include sabotage; this may occur deliberately or due to the familiarity of the medical model within an environment where alternate ways of being a midwife have failed to gain credibility. This was described by Shallow (2010) who lost the support of obstetricians and her fellow midwives when she attempted to introduce a more authentic midwifery model of care into an obstetric led unit as part of her role as Consultant Midwife.

10. Lack of autonomy.

The role of medical autonomy in confirming medicine as a profession has been discussed earlier in this chapter. However, the precept of autonomy is also important to midwives and is often cited to confirm midwifery's status as a unique profession apart from medicine or nursing. The concept of autonomy in midwifery can be critiqued from several perspectives. Fleming (1998) considered lack of autonomy as a primary problem in midwifery. She suggested that neither individual midwives, nor the profession as a

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whole could claim to be practising autonomously. Without collective autonomy a professional group cannot exercise professional power or self-determination (Freidson 1988). Simonds (2001) suggests that professional autonomy of midwives declined in relation to the introduction of professional standards as these standards were often established and regulated by the medical profession. Fitzgerald and Dopson (2005) relate this to the concept of medical dominance:

There is considerable supporting evidence of the continued dominance of the medical profession within the clinical setting, particularly in the processes adopted to draw up clinical protocols and guidelines. These processes are almost universally led by doctors and, in some settings, all decisions are taken by doctors without even consultation with other professionals. (Fitzgerald and Dopson 2005, p.121)

The theme of medical dominance informs Banks' (2007) discussion of how New Zealand midwives who were part of the Domiciliary Midwifery Service struggled to maintain autonomy in the face of restrictive protocols, low levels of remuneration and demands that domiciliary midwives meet standards which were not expected of hospital midwives before they were allowed to practise. One midwife she interviewed described how, as a new domiciliary midwife, she attempted to transfer hospital care to a woman's home. After she had gowned and gloved in preparation for a birth, she was distressed when the labouring woman put her cup of tea down on the 'sterile' field she had carefully prepared in compliance with hospital protocols (Banks 2007 p.82). The midwife described this as an important lesson on her road to becoming a true 'domiciliary' midwife.

10.1 Professional powerlessness

Hughes et al (2002) suggest that midwives have a vision for midwifery practice but lack the ability to turn their vision into reality due to feelings of professional powerlessness. They identify one problem as being that midwives, although highly skilled experts in normal parturition, are not routinely included in strategic NHS planning about the future direction of the maternity services. Simonds (2002) locates the problems encountered by

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midwifery in the political arena. She asserts that during midwives' attempts to gain status, obstetricians have deliberately vilified them and continue to use half-truths as well as outright falsehoods to maintain their traditional power. Other authors suggest that misinformation about pregnancy and birth is so ubiquitous that it has become internalized by many medical professionals who continue to perpetuate unscientific 'truths' rather than critically examining the evidence for many obstetric practices (Awonuga et al 2000; Marteau and Dormandy 2001). Midwives contribute to the continuation of such practices when they desist from forthright challenge but instead use subversion (Hollins Martin 2007) by playing the 'game' described by Stein (1967). As Hunter (2001) observes, the process of emancipation is not served by midwives: "playing piggy in the middle between women and medical practitioners" (Hunter 2001 p.442).

10.2 Challenging the power structure

Challenging the power structure inherent in maternity care can be difficult. Cahill (2001) suggests that medical practitioners' ability to organize themselves into a coherent group and then to gain legal recognition by the 1858 Medical Registration Act was the most important step in establishing medicine as the predominant health profession. She cites Foucault's (1973) claim that medicine could only have gained such predominance in a class and gender divided society. Such social divisions allowed women and the poor to be used as experimental subjects for medical research and teaching. However class differences that separate the medical profession from other healthcare occupations and promote medical dominance have continued well into the 20th century (Freidson 1988).

10.3 Changing Childbirth

Changing Childbirth (DH 1993) provided a map for change within UK maternity care but did not explore the emancipatory shift in thinking required to instigate these changes. No government funding materialized to support the changes recommended by Changing Childbirth nor was there any pressure put on medical practitioners involved in

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maternity care provision to alter their established methods of working in order to afford more autonomy to midwives (Cahill 2001).

10.4 The Albany Midwives

Until recently, midwives working within the Albany Midwifery Practice were able to demonstrate the real choice, continuity and control envisaged by the Changing Childbirth report (Sandall 1995; Sandall et al 2001). Held up as a model of excellence, the Albany midwives practised woman-centred care by innovations such as the 36 week birth talk which provided women with an opportunity to consider birth choices holistically (Kemp and Sandall 2008). However Kings College Hospital terminated its contract with the Albany Midwives in March 2010 after a CEMACE review into a number of infants who developed hypoxic-ischaemic encephalopathy (HIE) (Newburn and Dodwell 2010). Associate Professor of Midwifery, Denis Walsh has critiqued the report as ‘quick and dirty’ (Walsh 2010, p.2) stating that the review panel was inappropriate in both its composition and in the way it reviewed the cases. This case is an example of the socio-political constructs in healthcare which have a profound impact on the way midwives and other health professionals are able to interpret and apply their own fields of knowledge.

10.5 Political reluctance

Ryles (1999) in his discussion of empowerment in relation to nurses suggests that nurses are reluctant to consider their work within a political framework which highlights power inequities in the institutional culture within which they function. He proposes the use of reflection, dialogue and praxis to raise nurses’ political awareness of themselves as an oppressed group and emphasizes that educational programmes should promote:

an approach to nurse training that aims to raise critical consciousness as a means of recognizing the way power relations serve to fix individuals and groups within a ‘gaze’ that discredits experience and seeks to reinforce the power of the elite (Ryles 1999 p.605)

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Davis Floyd (2005 p. 33) acknowledges that: “for a midwife, the professional is always political” and suggests that the solution must be the emergence of post-modern midwives who:

are scientifically informed; they know the limitations and strengths of the biomedical system and their own, and they can move fluidly between them. These midwives play with the paradigms, working to ensure that the uniquely woman-centered dimensions of midwifery are not subsumed by biomedicine (Davis Floyd 2005 p. 33).

11. Emancipation strategies

As an educator I agree that education can serve as a form of emancipation (Hart 1990) and this can be encouraged through the introduction of teaching and learning strategies which encourage independent thought, dialogue and debate. Some of these will be discussed further in Chapter 4. However, education places a great burden on students to be agents of change. Many educators, myself included, have had the experience of seeing students graduate full of enthusiasm to put the world to rights, only to see them worn down by the reality of the institutional environments in which they find themselves (Maben et al 2006). Ultimately, surviving in those environments may mean allowing oneself to become socialized to the extant norms and values found in the workplace (Mooney 2007; White et al 2009). To counter this, experienced midwives may require empowerment, not only to recognize the political underpinnings of their disempowerment, but just as importantly, to gain the courage, confidence and political will to initiate real change. In consideration of Bandura’s (1986) theory of modelling, students will ultimately model their clinical practice on what they see as acceptable in the clinical environment (Spencer 2003). A midwifery model of practice will only be perpetuated when sufficient numbers of qualified midwives are empowered to truly embody a midwifery model of care. Midwives require collective strength to develop practice incorporating a social and humanistic or holistic model and to challenge medical assumptions about its veracity and practicality. When this occurs, midwives can

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begin to develop equitable collaborative care with obstetricians and other medical practitioners.

Hughes et al (2002) sought to address such issues in institutional maternity care by using ethnography both as a research tool and as an emancipatory dialogue.

This use of critical ethnography may be one strategy by which midwifery knowledge can, as Gould (2000) suggests, be unpicked from the medical model with which it has become enmeshed to the extent that midwives find it difficult to define normal childbirth which Gould calls: “the paradox where many midwives believe natural childbirth to be normal but do not really believe that normal childbirth needs to be natural” (Gould 2000 p.420). This observation only serves to demonstrate midwives’ internalization of the medical model as it echoes an observation by Lazarus (1997) who writes about the change in meaning of the word natural in relation to birth. The accepted definition of natural has shifted from the midwife’s understanding of natural birth as one with no intervention to the medically-defined natural birth which is any birth where the woman is awake and delivers vaginally. Such obfuscation illustrates how difficult untangling midwifery from obstetric medicine can be. Other strategies may be to make better use of evidence to demonstrate the benefits of the midwifery model of care (Bogdan-Lovis and Sousa 2006) and to increase interdisciplinary and interprofessional education so that future doctors are exposed to models and values outside the medical model (Angelini et al 1996).

12. Conclusion

The ultimate beneficiaries of authentic midwifery knowledge and care are women who use the maternity services. This fact, and the importance of consumer pressure and user involvement to the clinical governance agenda mandate that women’s views should be solicited when planning changes in service provision. However, van Teijlingen et al (2003) warn that women’s evaluations of care are often limited by their experience. If women have not experienced maternity care truly situated within a midwifery practice model, they may not understand what they are missing and therefore express satisfaction with less than optimal experiences.

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Wagner (2001) argues for a return to a more humanistic model of maternity care and suggests that this can only happen within altered social and political frameworks for health care. The question of how this can be accomplished remains open; however this thesis examines one small part of the puzzle by investigating the nature of midwifery knowledge (MK) and seeking to discover whether medical students who work with midwives employ aspects of MK in their own construction of knowledge.

Chapter 4

PBL in Health Professional Education

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1. Introduction

This chapter provides a context for the use of problem based learning (PBL) both as an underpinning philosophy for the construction and interpretation of the research and as a data collection tool. My experience of PBL consists of over thirteen years of engagement with this method of teaching and learning and involves action research (Haith-Cooper et al 1999), curriculum development and the day to day use of PBL as a learning and teaching approach in midwifery, and later, in the design and delivery of interprofessional education (Whitney and MacVane Phipps 2006).

1.1 PBL as a tool to develop critical thinking skills

PBL is not an instant solution for transforming students into scholars. However, it is a tool, which can be used to develop the critical thinking skills, debating techniques, and self confidence necessary for life-long learning (Barrows 1996; Rideout & Carpio 2001, Wood 2003; Dunlap 2007). While PBL is not an easy alternative to traditional teaching methods, commitment on the part of both educators and students can result in an enriching educational experience which is congruent with andragogical concepts of independent and life-long learning (Knowles 1970; Field 2000).

2. Learning to ‘do’ PBL

Poskiparta's (2003) data from a survey of students and teachers in the first year of implementation of a PBL programme at a Finnish Polytechnic indicated that respondents' engagement with PBL was characterized by frustration and uncertainty. They were also disappointed by the facilitation process. However, a year later when the survey was repeated both students and teachers seemed to have matured in their understanding of the PBL process as they reported effective team work to overcome barriers and create solutions which were more flexible or unconventional than those they would have considered in the past (Poskiparta et al 2003). It has also been my experience that PBL takes time for both students and educators to learn to use effectively and this may be one factor in the early discontinuation of some educational programmes' PBL provision. Twenty years ago Higgs and Boud (1991) acknowledged

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that students need time to learn how to use PBL effectively due to the fact that PBL differs fundamentally from the more traditional didactic teaching with which most students are accustomed. Uncertainty about new methods of teaching and learning also affects teaching staff and this can have a negative impact on the transition from traditional teaching to more student-directed forms of instruction such as PBL. Murray and Savin-Baden (2000) highlighted this issue while demonstrating the importance of a sound programme of staff development during the introduction of PBL into the nursing and midwifery curricula at Dundee University.

2.1 Encouraging the development of problem solving skills

PBL provides an alternative to traditional didactic approaches to education which depend on the teacher as the main provider and moderator of information (Barrows 2002). Pioneered by both McMaster University in Ontario and Maastricht University in the Netherlands, PBL is a hypothetico-deductive approach to learning that encourages the use of problem-solving skills, mimicking the way in which clinical decisions are made in practice settings (Boud & Feletti 1997). Initially developed to counteract criticisms that traditional medical education failed to develop students' enquiry skills, foster team working abilities or promote theory-practice integration (Tavakol & Reicherter 2003), PBL is now utilized across a broad spectrum of educational fields and at many levels (Hung, Jonassen & Liu 2007). Over twenty years ago, a World Health Organisation (WHO) report (Kantrowitz et al 1987) supported this increase in the use of PBL stating that knowledge development occurs at such a rapid pace, particularly in the sciences, that traditional curricula, based on current knowledge had become irrelevant. The report proposed that students now require the skills to engage with self-directed learning. This WHO report is even more relevant today in light of the rapid pace of knowledge expansion and technological change.

2.2 Small groups use a structured process to explore 'real life' problems

In PBL students work together in small groups exploring problems or scenarios relating to situations they will encounter in their professional practice. These problems may be of a profession-specific or inter-disciplinary nature. Just as in practice, some information

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may be missing or the situation may be poorly defined, mimicking the messiness of real life experience (Eraut 1994). Students work through a given problem or scenario using a structured process which is termed the '7 jumps' at Maastricht University (Schmidt 1983), a model followed or adapted in most PBL programmes (Barrows and Tamblyn 1980; Davis and Harden 1999). This process involves: identification of issues to be addressed; a period of brainstorming pre-existing knowledge or assumptions; hypothesis or question generation; identification of learning goals; a period of individual researching or knowledge seeking and finally a reconvening of the group to share new knowledge and answer the questions generated in the first stage of the process.

2.3 Facilitating the PBL experience

A tutor or facilitator works with the group to support and, at times guide the process, although students themselves take on the roles of chairperson and scribe to maintain an even flow of information and to record the group process (Wood 2003). PBL tutors adopt various styles of facilitation. These most commonly divide into either process or outcome facilitation (Haith-Cooper 2003), with process facilitation seemingly the most closely allied to the philosophy of PBL which supports self-directed learning (Ozuah et al 2001; Miflin 2004; Loyens et al 2006; Loyens et al 2008). Other differences centre around levels of participation, with some facilitators acting largely as a silent presence while others participate actively in the group discussion. Dolmans et al (2002) criticize a totally passive tutorial style and suggest instead that the tutor should encourage cognitive activities such as making connections, providing feedback and helping students to monitor their own learning. The Harvard medical school model recommends that the tutor contributes freely as a member of the group but must be able to make an expert decision about when contribution is appropriate and when to allow the group free rein during a productive discussion (Tavakol and Reicherter 2003).

3. Educational theory underpinning PBL

Since its development in the 1960s the use of PBL has seen rapid expansion into academic fields beyond medicine and health care with some universities priding themselves on their total PBL curricula such as Linköping University in Sweden

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(Fyrenius et al 2005; Savage and Brommels 2008). Although arguments exist that the benefits of PBL are difficult to prove (Taylor and Mifflin 2008; Neville 2009), the principles of PBL are congruent with the constructivist theory of cognitive learning (Schmidt 1990; Creedy et al 1992; Schmidt 1993; Cust 1995) from educational psychology. This theory postulates that the learner constructs and continually modifies his or her understanding of phenomena with the amount and type of knowledge processed being largely dependent on the individual's prior knowledge (Schmidt et al 1989; Schmidt 1993). The way in which students process and structure knowledge becomes increasingly sophisticated the more experience they gain using tools of self-directed learning such as PBL (Dolmans et al 1998). This can be related to the way health professionals exhibit enhanced decision making skills as their knowledge and expertise develops. Cust (1995) observes that while novice nurses may require decision-making tools such as the nursing process, experienced nurses process information in ways that are not well understood. Benner (1984) calls this way of processing information 'intuition' and identifies it as an attribute of the expert nurse. Barrows (1996) postulated that medical diagnosis depends on a similar type of expert decision-making which combines hypothetical-deductive reasoning and expert knowledge drawn from multiple domains. Teaching medical students knowledge in separate domains therefore, does not mimic the real life knowledge processing skills or joined-up thinking required in clinical practice. If PBL is an educational strategy that helps students develop expertise in problem recognition and solving, then its benefits in health education should be transferable to professional practice on qualification.

3.1 Learner participation and discovery learning

In terms of educational theory, PBL is congruent with the views of John Dewey (1938) who stressed the importance of the learner's participation in the learning process; with Bruner's (1961) theory of discovery learning which proposes that learning is more relevant if it is based on a problem that actively engages learner participation; and with Vygotsky's constructivist educational philosophy (Vygotsky 1962; Liu and Matthews 2005).

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Another claim for PBL is that it promotes critical reflection on practice (Williams 2000). The difficulty in all claims made for PBL lies in assessing them in an objective way.

4. Evaluating the effectiveness of PBL

There have been many attempts to evaluate the effects of PBL as a teaching and learning method. Several studies were undertaken when PBL had been in use for approximately two decades. Albanese and Mitchell (1993) in their systematic review of the PBL literature noted that one of the difficulties in effective evaluation of PBL is that the term encompasses a wide variety of practices. This problem with the lack of conformity in the definition and application of PBL has been noted more recently by Taylor and Mifflin (2008) and Neville (2009). Taylor and Mifflin (2008) reviewed the use of PBL over the past forty years and critiqued various interpretations of PBL against the original philosophy and implementation of the teaching and learning methodology. Their review supports the use of PBL as an integrative learning method which works best when applied across a curriculum, while acknowledging the value of other applications of some of the philosophical constructs and methods associated with PBL. However the authors acknowledge the transition required for students to adapt to the principles underpinning PBL, as noted by Poskiparta (2003). Neville (2009) also discusses common themes identified by a number of reviews and meta-analyses of PBL and concurs that it can be difficult to compare PBL programmes or draw meaningful conclusions about outcomes when studies may be comparing very different interpretations of what PBL actually is or entails. However, he points to evidence that the graduates of PBL programmes exhibit enhanced professional competencies early on in their professional careers

4.1 Differing interpretations of PBL

While some programmes combine some PBL work with traditional instruction, others follow a more classic interpretation of PBL following the McMaster or Maastricht models which promote a total curriculum approach (Neville and Norman 2007; MacVane Phipps 2010). Other differences in the use of PBL can range from the form of the problems or scenarios, the styles of facilitation and the amount and type of

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supporting material provided. Enthusiasm and experience of teaching staff, administrative and managerial support and resources specific to this type of teaching are also variables that cannot be controlled between educational institutions or individual courses.

4.2 Development of deep-thinking skills

However using a twelve-point tool to evaluate the available literature on PBL, Albanese and Mitchell (1993) concluded that there was some evidence, albeit limited, that PBL helped to develop deep thinking skills in students and that students and teachers preferred it to more didactic educational methods. A meta-analysis by Vernon and Blake (1993) provided similar findings. Vernon and Blake however point out that there is little evidence that PBL has any advantages in the recall of facts in traditional examination conditions. Whether this is significant or not is a question for debate; as factual recall is not claimed as a strength of PBL, it is arguably not a worthwhile measure of its effectiveness. Instead PBL is thought to improve, self-directed learning, clinical thinking skills and the application of knowledge (Mifflin 2004; Loyens et al 2008; Neville 2009). Loyens et al (2008) conducted a systematic review of empirical studies examining self-directed learning (SDL) and self-regulated learning (SRL) within PBL environments. The authors argue that these two concepts are substantially different as SDL is much broader, requiring a high level of student autonomy in the development and evaluation of learning materials. While self directed learning is inherently self-regulated, all learning can be perceived as self-regulated in that students must make decisions about how they engage with the learning opportunities presented to them. Loyens et al (2008) found that the literature is somewhat ambivalent about whether or not PBL fosters SDL. Several studies conclude that it does, and views of students reported support this. The authors conclude that effective use of PBL does result in SDL, however when the philosophy of PBL is undermined by lecturers becoming directive because they do not trust the process, then students lose faith in their ability to learn through PBL.

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4.3 Comparing educational performance

A review of the literature by Colliver (2000) compared educational performance of students on PBL and traditional programmes and concluded that the very small increases in performance seen in PBL courses were not significant, particularly in terms of the resource-intensive nature of PBL provision. Colliver found however that both students and staff found PBL an enjoyable method of teaching and learning. He further critiqued the educational theory cited as justification for PBL stating that it was based on metaphor, not science (Colliver 2000). There have been other recent evaluations of PBL, both reviews of the literature, and empirical studies into its effectiveness.

Ozuah et al (2001) examined the effects of a PBL curriculum on the learning styles of a group of eighty paediatric residents in one US hospital. All the doctors followed a lecture based syllabus together during the pre-exposure phase of the project. The group was then split into two, one group continuing with the didactic educational model while the other group learned in PBL groups for three months. Finally, the groups re-convened and completed their educational programme, returning to, or remaining with the didactic learning and teaching format. The residents completed surveys about their learning styles during all phases of the project. There were no significant differences in the learning styles of any of the residents during the pre-exposure phase. However, this changed when the groups divided into PBL and non-PBL groups with residents in the PBL group demonstrating a marked increase in self-directed learning. This increase in self-directed learning was not sustained when the residents returned to the traditional teaching model (Ozuah et al 2001). It is difficult to interpret this finding but it may be associated with the residents' relatively short exposure to PBL. This study highlights the need for further research into the long term benefits of PBL as its efficacy in preparing students for life long learning is often cited as one of the teaching method's advantages (Dunlap 2005; Neville 2009)

Miller (2003) used a control group receiving traditional didactic instruction in a pharmacology course and compared these students to a similar group using a PBL learning approach. Outcomes were assessed by mid term and final grades and by student

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evaluations demonstrating their satisfaction with their method of instruction. There were no differences in the grades or satisfaction scores of the two groups; however the researchers considered that the fact that the PBL group had to adjust to a new way of working may have had a negative impact on the outcomes. It seemed surprising that students new to PBL evaluated it equally favourably to traditional teaching and learning methods as adapting to the use of PBL often requires time and effort for students socialized into more didactic learning methodologies (Poskiparta 2003). The samples were small with 10-12 students in the two groups and the authors provided little information about the prevention of knowledge exchange or cross-fertilization of learning strategies between the two groups. Another confounding factor was that the measurements focused on short term outcomes rather than long term retention or application of knowledge in clinical settings. Other studies have demonstrated that PBL produces no advantages for short term learning or the retention of factual information out of the practice context (Newman 2003; Strobel and van Barneveld 2009). However, one study (Hwang and Kim 2006) comparing PBL with lecture based teaching in an adult nursing course demonstrated a significant difference in knowledge levels in the PBL group assessed by the use of pre and post-test scores. Both the weak and the strong students increased their knowledge levels in the PBL group, while only the stronger students showed higher post-test scores in the lecture based group. Motivation for learning was also higher in the PBL group. This was a small study with a sample of only 71 students, nevertheless the results demonstrate that for these two groups of nursing students, following a programme of study in two different year groups, PBL seemed to enhance student motivation while increasing knowledge retention.

4.4 Learning: knowledge or process?

Newman (2003) reviewed twelve controlled trials which examined evidence of the effectiveness of PBL in medical education and asked whether PBL increases student participation in the learning process, over other methods of instruction, and whether a pure PBL curriculum results in better student performance than a hybrid curriculum. Newman's results indicated that PBL was not advantageous for retention of purely factual knowledge but that students and tutors were highly satisfied with the use of PBL

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as a teaching and learning methodology. It could be argued that as PBL is not designed expressly to aid retention of accumulated facts, that this is not the appropriate question to ask about PBL as a teaching and learning strategy. However, for students facing future professional selection based on exam scores or degree classification, this may be a significant factor in how they evaluate their learning.

While some studies seem to indicate that PBL is superior in helping students with the application of learning (Albanese and Mitchell 1993; Bernstein et al 1995; Strobel and van Barneveld 2009), Newman's (2003) results from a systematic review and meta-analysis of the PBL literature did not demonstrate that learning methods had a strong effect on the application of knowledge.

A study done in a UK university department of Psychiatry and Behavioural Sciences (McParland et al 2004) compared the examination results of students following PBL and non-PBL curricula. Students from the PBL curriculum scored significantly higher grades in the two-part examination which included multiple choice questions and a viva. The authors related the success of the PBL instruction to the development of deep and strategic learning.

Beachey (2007) compared traditional teaching methods with PBL in four respiratory therapy degree programmes in the USA. Students were assessed using standardized graduate and employer ratings of therapists following qualification which explored cognitive, affective and psycho-motor skills. Their performance on the national qualifying exam taken by all therapy students was also evaluated. The results did not show any significant differences in either the academic results or clinical skills of students qualifying through PBL or traditional educational programmes. However, students and staff both demonstrated stronger satisfaction with the PBL curricula.

4.5 PBL in Midwifery education

A pair of recent papers discuss staff and student perceptions of PBL in Midwifery education (Rowan et al 2007; Rowan et al 2008). Teaching staff rated PBL highly as a

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means of integrating theory and practice, although students had some reservations. Among these were the dependence on the group for effective learning and perceptions of presenting information to the group as performance rather than discussion (Rowan et al 2008). This may be attributable to the techniques of information searching and sharing used in the programme under discussion. In my own department we overcame this problem very early on in our implementation of PBL. Teachers acting as PBL facilitators became aware of this issue during the discussion and problem-solving phase of the PBL process. Therefore we made a small but significant alteration in the way we interpreted the PBL process (MacVane Phipps 2010). Instead of dividing information-seeking according to topic, we began asking students to limit the number of learning issues or learning outcomes identified to no more than five. Consequently, all of the students are required to research all of the topics. They may divide the resources used to do this so some students do on-line searches while others talk to practitioners, peruse the journal stacks in the library or read books, but the resulting discussion when the group reconvenes is both rich and productive. Students engage in active discussion and debate, often demonstrating the ability to use and critique the evidence supporting practice at a very early stage of their midwifery education (MacVane Phipps 2010).

Strobel and van Barneveld (2009) have recently published a meta-synthesis of existing meta-analyses comparing PBL to traditional teaching and learning methods. The authors used two research questions: the first about how differences in the definition and measurement of learning have contributed to the lack of strong conclusions about the effectiveness of PBL and the second about generalizable value statements concerning the effectiveness of PBL that are supported by the various meta-analyses of PBL. Eight meta-analyses of PBL published since 1992 were reviewed using these questions. Twenty-seven studies were retrieved and read to obtain the eight meta-analyses included. Four categories of results were established. The first of these, called 'non-performance' by the authors examined staff and student satisfaction measures; the second category was knowledge assessment; the third was performance/skills assessment and the final category mixed knowledge and skills assessment. Satisfaction ratings by both students and staff favoured PBL. In the knowledge assessment category,

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short term recall was better with traditional teaching methods. However when students were asked to write essay type answers where they could elaborate their responses rather than MCQ or short answers, they performed better with PBL. Students also demonstrated more ability to recall information over time when they had learned using PBL. In the skills category, students performed better in clinical assessments and patient simulations when they had followed a PBL curriculum. The final category required students to demonstrate both skill and knowledge simultaneously, and again students demonstrated an enhanced ability to function effectively after using PBL (Strobel and van Barneveld 2009).

5. Conclusion

Reviewing the available evidence indicates that, regardless of some ambiguity in the research to date, PBL has certain advantages over didactic education in terms of theory/practice integration, development of group-working skills and possibly in long term retention of knowledge. How well it works as an educational method is dependent on the factors discussed at the beginning of this chapter.

My own commitment to PBL derives from action research in the years leading up to and following my participation in developing a PBL midwifery curriculum (Haith-Cooper et al 1999) as well as observation of students while acting as a PBL group facilitator. This is supported by reports from practice areas about the knowledge and practical skills of students graduating from the programme with which I am affiliated. As Albanese and Mitchell (1993) and Vernon and Blake (1993) point out, very few teachers who have experienced the role of a PBL facilitator wish to return to traditional lecture-based teaching. I find that teaching in this way is congruent with my own feminist beliefs supporting educational methods which reject patriarchal educational models in which all power is held by the instructor. As an educator, I want to see students, and in midwifery these are predominantly female, begin to trust their own ability to process and utilize knowledge to solve complex problems or discuss difficult issues. As students learn to value their own and others' knowledge they gain the confidence to voice their opinions and to support them through the use of evidence from the professional literature.

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As I have become confident in the development and utilization of PBL I have begun to experiment with using it in slightly different contexts. One of these was as a dialogue model where I worked with a small inter-professional group to explore an inter-cultural scenario using an adaptation of the PBL process. My experience also encouraged me to develop a data collection tool based on the type of loosely structured scenarios used in PBL (MacVane Phipps 2010). This will be explained more fully in Chapter 5.

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Considerations of Methodology & Rigour

Objective evidence and certitude are doubtless very fine ideals to play with, but where on this moonlit and dream visited planet are they found?

² William James 1897

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1. Introduction

This chapter examines the philosophical precepts underpinning this research project. The constructs of qualitative research are defined while issues of ontology and epistemology are explored. Choices of methodology and method relating to the dual phases of this research are discussed while the choice of a constructivist research methodology broadly based on the educational philosophy of problem-based learning is explained. The chapter concludes with a discussion about issues of rigour and of the choices made to ensure rigour within this study.

2. Issues of ontology and epistemology

In considering a research methodology, particularly in the second phase of the project, it was apparent that obtaining data which could paint a picture capturing the breadth and depth of the participants' experiences required qualitative methods of data collection and analysis (Cohen et al 2000). At the same time, I sought congruency between data handling methods and the philosophies of education and practice which informed both my construction of the research project and my methodological choices. In order to avoid the trap highlighted by Chamberlain (2000) that a narrow focus on research methods serves to undervalue the epistemology of the research, I sought to develop a clear understanding of both the ontology and epistemology underpinning my research and to apply this understanding to my choice of research methods.

2.1 Nature of the perceived world

Epistemology and ontology are both terms describing the nature of the perceived world. Ontology refers to the nature of reality (Guba & Lincoln 1994); a definition of the real world without the interpretive tools of epistemology (Oakley 2005). Epistemology, in contrast, refers to individual or collective perceptions of the world and the tools used in that interpretation of reality such as the five senses, logical or illogical thought or even intuition (Anderson 2004; Oakley 1995). Guba & Lincoln (1994 p.108) describe epistemology as: 'the relationship between the knower and what can be known'.

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2.2 Ways of seeing, ways of knowing

There are many factors which influence an individual's or a society's interpretation of the physical and social world such as culture, education, religion, family background and peer groups (Cohen et al 2000). At a very basic level, the clearest delineation between the world view described by qualitative research and that of quantitative research can be found in the definitions of ontology and epistemology. Where quantitative researchers seek knowledge about how the world *is* (ontology), qualitative researchers strive to understand how an individual or group perceives their world, and the factors contributing to that particular perception of reality (epistemology). This point is made by Earlandson et al (1993) in their discussion of naturalistic enquiry when they suggest that the researcher must divest herself of extraneous baggage acquired in previous educational settings. At the forefront of concepts to be discarded is the notion of objective truth waiting to be discovered.

2.3 Relativism and postmodernism

Such acceptance of relativism represents a paradigm shift from a modernistic, scientific view of the world where objects and phenomena have properties which are absolute and objective (Lakoff and Johnson 1980) to a postmodern or post-positivist interpretation of reality where truth is not objective but instead relies on individual interpretation (Denzin and Lincoln 1998; Green and Freed 2005). Positivist research methodologies view the researcher as an entity separate from the investigation. Delanty (2000) suggests that this can be seen clearly in the essential replicability of quantitative trials which presupposes that identical results will be obtained regardless of who conducts the study. However the belief that quantitative methodologies are not affected by the person of the researcher has been critiqued by authors such as Oakley (2000) who points out that potential bias associated with personal preferences was recognized as a threat to randomized design as early as the 18th century. Etherington (2004) continues this argument by proposing that reflexivity occurs even when it is not recognized or acknowledged. This is an interesting concept although it could be argued that, while all researchers must influence and be influenced by their research to some degree, this can not truly be termed 'reflexivity' without the researcher's conscious engagement with the process. For myself, acknowledging a post-modernist perspective helped me to come to terms with my own subjectivity as a researcher. This acceptance of subjectivity is supported by

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Denzin and Lincoln (1998) who consider that the contribution of the post-modernist perspective in qualitative research is to help the researcher understand that:

there are no objective observations, only observations socially situated in the worlds of the observer and observed. (Denzin and Lincoln 1998 p.24).

Together epistemological and ontological questions form an individual's world view or 'weltanschauung' (Guba & Lincoln 1994). This socially constructed interpretation of truth most often occurs within what Boland and Tenkasi (1995) term 'communities of knowing'. These represent groups with shared language, values and logic. For, as they observe:

Thought worlds with different funds of knowledge and systems of meaning cannot easily share ideas and may view each others' central issues as esoteric, if not meaningless (Boland and Tenkasi 1995 p.351).

2.4 Paradigm clashes

This has been evident in some of the misunderstandings between researchers working from different philosophical paradigms (Etherington 2004). An example of this is the disagreement between two of the great founding fathers of sociology. Travers (2001) notes that Durkheim proposed that sociology must adopt a scientific, positivist research methodology to be recognized as a science, while Weber argued that sociology should abandon quantitative methods and seek to understand the people being researched through the use of interpretive research methods.

However, disagreements can occur even where researchers nominally share the same paradigm. The chasm between conservative social science which values a narrow methodological purity and the freedom of emerging individualist methodological constructions which blend concepts from many schools of thought can seem deeper than that between classic qualitative and quantitative research (Green and Freed 2005). For an individual researcher, it may be difficult to challenge established methodological conventions, particularly in circumstances where the power lies within traditionalist hierarchies. As Foucault (1980) observed, truth and power are inextricably linked.

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3. The social construction of knowledge

The 20th century French philosopher and sociologist Michel Foucault (1980) understood the social construction of knowledge as a relationship between truth and power, postulating that every society decides on its own truths, therefore in accepting a particular discourse as truth, it becomes true in terms of social recognition and reinforcement. Those members of society who hold power declare the verity of what has been decided to be true and thus the status and power of those upholding the accepted position is enhanced. Therefore, a researcher must become cognizant of both social constructions and individual experiences which manifest as truth to develop an awareness of personal subjectivity when attempting to discover how research participants who may hold differing social, professional or cultural interpretations of truth, construct their own world views.

3.1 Reflexivity and the research process

An awareness of these issues increased my reflexivity as I strove to understand both my own perspective and those of the respondents of the Delphi survey and the participants in the case study phase of my research. Cohen et al (2000) define reflexivity as an understanding on the part of researchers that they too are part of the social world of the research. This echoes Taylor and White's (2000) concept of epistemic reflexivity. While these authors were primarily discussing the importance of reflexivity in health and social care practice, rather than in research, the difference is in the application rather than the concept. While Holloway and Freshwater (2007) define reflexivity in terms of self-awareness, Etherington (2004) postulates that reflexivity is more than self-awareness as she interprets this term as suggestive of a view of self as a constant entity. Instead, Etherington views reflexivity as an acceptance of an ever-changing self which both affects and is affected by the research process. While Cohen et al (2000 p.141) observe that: "Highly reflexive researchers will be acutely aware of the ways in which their selectivity, perception, background and inductive processes and paradigms shape the research", Etherington (2007) understands reflexivity as a reciprocal process which breaks down barriers formed by highly objective approaches to research. These definitions all contributed to an understanding of reflexivity which informed my engagement with the entire research process.

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3.2 Developing an epistemology relevant to the research project

Developing an epistemology, or a way of interpreting the world, which was relevant to the research process demanded the reflexivity discussed in the previous section. Acknowledging my own personal and social constructions (Taylor and White 2000) of the topics being studied and at the same time wishing to remain open to the interpretation of the respondents and participants in both phases of the research process encouraged deep thinking, extensive reflection, and creativity in the research design. While during the data collection stages of my research, I sought to discover the voices of the research participants and to understand their perspectives, I approached the task of thesis writing with an awareness that I also needed to discover my own unique voice (Belenky et al 1997).

4. Women's Ways of Knowing and the unique voice

The authors of 'Women's Ways of Knowing' (Belenky et al 1997) describe women's intellectual development as a progression of thought processes from silence to constructed knowing. At several stages along this time line, according to the authors, women begin to trust their own interpretations of knowledge. Initially these are guarded as purely personal understandings with objectivity viewed as the acceptable norm in knowledge acquisition and dissemination. However, as women become increasingly self-reliant, they begin to value a subjective interpretation of knowledge and use this together with objective ways of knowing to construct their own understanding of the world. Although it could be argued that this development of intellectual confidence is not necessarily unique to women, Belenky et al's (1997) work has resonated with a number of female academics who have based their intellectual arguments on the authors' propositions concerning knowledge and its construction. Dearnley's (2002) doctoral research into experiences of second level nurses' conversion to first level registration used Belenky et al's (1997) work as a framework for understanding nurses' intellectual and spiritual development through the process of engaging with an educational programme. Both Meddings' (2004) MSc. dissertation and Edwards' (2005) book, *Birth of Autonomy*, written from her Doctoral thesis are other good examples of academics who have found inspiration in Belenky et al's work. I too recognized my own intellectual voyage in Belenky et al's (1997) stages of knowing.

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5. Precepts of qualitative research

While it has been suggested that it might be simpler and even at times more intellectually honest to approach qualitative research from a generic perspective (Thorne et al 2004), other authors stress the importance of defining a clear epistemological stance (Caelli et al 2003). Nevertheless, in whatever form it may take, qualitative research has gained ascendancy in health, social sciences and education as investigators search for meaning in situations where there are no clear answers (Rapport 2004). Even in medicine, where the randomized control trial (RCT) has long been considered as the gold standard of medical research, investigators have for some time, acknowledged the value of qualitative research (Green & Britten 1998). However, Oakley urges caution in identifying qualitative research as a more authentic representation of the lived experiences of research participants when she states: “But in-depth interviewing and ethnographic observations may only bring us nearer to truths that flourish inside researchers’ heads” (Oakley 2000, p.72). Reflexivity, discussed in section 3.1 of this chapter is the tool which can be used to balance subjectivity and authenticity in qualitative research. Thus, while qualitative research may serve as a vehicle for the researcher’s subjective interior vision, it should also reveal something authentic about the world of the research participants.

5.1 Major categories of qualitative research

The three major categories of qualitative research used within health, education and social care are: phenomenology, grounded theory, and ethnography (Speziale & Carpenter 2007). There are numerous other methods that can be employed by qualitative researchers including: case studies (Yin 1993; Tellis 1997), discourse analysis (Potter 1996; Griffiths and Elwyn 2004; Locke 2004), narrative (Rodriguez 2002; Jones 2004) and historical research (Donnison 2007). However, Sandelowski (2000) urges qualitative researchers to consider qualitative description. While she acknowledges that descriptive research is not as ‘sexy’ (Sandelowski 2000, p.334) as other theoretically or technically sophisticated methods, she describes it as having an honesty which preserves the authenticity of the encounter between researcher and research participants and enables researchers to stay closer to their data. Many studies given the nomenclature of ‘grounded theory’, ‘phenomenology’ or ‘ethnography’ might be more accurately described as qualitative description utilizing some of

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the precepts of these more theoretical research methods. However, Sandelowski (2000) argues that this does not mean that qualitative description is any less valuable; in fact its value resides in the complex task of recording and presenting the views of research participants accurately.

5.2 Grounded theory

Grounded theory is the most seemingly positivist of the three main qualitative methodologies in that it contains many features associated with quantitative research, particularly in the original work expounding this methodology (Glaser & Strauss 1967). Bluff (2006) suggests that this may have been an intentional use of the language of quantitative research in order to make grounded theory seem more acceptable to the research community of the time.

Grounded theory straddles the inductive/deductive divide of qualitative and quantitative research as theory is developed from the data; the researcher then forms hypotheses, which can be tested (Sarantakos 1998). In grounded theory, data collection, which is done concurrently with sampling and analysis continues until saturation occurs, that is until no new theory generation is possible (Polit and Beck 2006). Researchers commencing an investigation using this methodology are cautioned to limit any initial review of the literature to avoid early hypothesis development. For a researcher with existing knowledge of an academic or clinical field this may be impossible due to extensive pre-existing knowledge of the literature in a specialist area.

This is much the same problem faced by qualitative researchers choosing phenomenology as a research methodology as they are urged to bracket their previous knowledge and experience, thus approaching the research topic with a fresh perspective (Polit and Beck 2006). The extent to which researchers can actually achieve this is arguable (Reed and Procter 1995) while Thorne et al (2004) suggest that there may be better qualitative methodologies for health research such as interpretive description.

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5.3 Phenomenology

Phenomenology is an appealing research strategy with its claims to describe or analyse the lived experience of the research subject, and I have employed this methodology myself in past research (Meddings et al 2007). Hermeneutics, or Heideggerian phenomenology was popularized by Benner (1994) and has since gained a substantial following with nurse researchers, particularly those preparing work at Doctoral level (Chadderton 2004). Robinson suggests that using phenomenology in health research: “permits the researcher to delve into and gain an understanding of otherwise poorly understood phenomena” (Robinson 2006 p.187).

German philosopher, Edmund Husserl, is credited with founding the phenomenology movement as a critique of the prevailing positivist scientific ideology (Sarantakos 1998). Husserl held the belief that people create their own reality through symbolic interactionism and that they are most often unaware of the nature of this created reality. Husserl’s phenomenology sought to delve below such created reality to describe the true essence of phenomena (Todres and Holloway 2004).

Martin Heidegger who followed Husserl as Professor of Philosophy at Freiberg University developed the concept of Dasein or being-in-the-world as he proposed that people can only be understood within their environment (Heidegger 1962). Heidegger developed a new branch of phenomenology moving away from Husserl’s descriptive phenomenology to interpretive phenomenology (Polit and Beck 2006).

While bracketing was originally a feature of Husserlian descriptive phenomenology, many past and current researchers have transferred the concept to studies more closely allied to Heidegger’s (1954) interpretive model. While the underlying philosophy supporting phenomenology is quite detailed, many researchers have developed adaptive interpretations of this methodology and have used it successfully to gain an in-depth understanding of a particular phenomena, particularly in health care.

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5.4 Ethnography

Ethnography is the final member of this trio and the methodology which I used in my Master's dissertation (MacVane Phipps 1996). Ethnography, which literally means writing about culture, was first developed in the field of cultural anthropology to describe the lives of people in little known tribes or in distant countries. However, health, social science and educational researchers soon realized that there are many cultures that warrant investigation closer to home. Madeline Leininger's (1985) endorsement of the possibilities for ethnography in obtaining substantive nursing data was a major influence on my methodological choices at Master's level.

Ethnography makes sense to me and although I could have explored medical students' experience using ethnography, this was not the best methodological match for what I was trying to achieve. My focus was specifically about how medical students constructed knowledge during their maternity experience.

5.5 Matching the research methods to the needs of the study

While these three research methodologies have been widely used in doctoral level studies within health care, none of them precisely met the needs of my two-part research into midwifery knowledge and how medical students construct their understanding of scenarios derived from midwifery knowledge while working with midwives. Aside from the four research methods mentioned above (narrative, case study, discourse analysis and historical research) researchers are limited only by their imaginations and the ability to translate a creative idea into a practicable research method (Green and Freed 2005). In current discourse in the field of qualitative research there is movement away from methodological purity to greater fluidity in research which synthesizes many methods to create something creative and individual (Green and Freed 2005; Charmaz 2008). This encourages congruency with the researcher's philosophical perspective and enabling the implementation of the unique voice (Belenky 1997).

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Green and Freed (2005) support this stance when they state:

We have a strong sense that researchers “learn by doing” and that individual perspectives are constructed and reconstructed in environments where the research ethic gives the researcher choice and autonomy to find methods that make sense for her. We suggest that research is an improvisational activity where the researcher dances among a potpourri of methods, representations and assumptions. As constructivists we now facilitate research that gives ourselves and our colleagues freedom to experiment and be creative with multiple methods; to improvise as we move back and forth on the objective/subjective continuum and the doing/being continuum- having the confidence that we will discover the “right” approach to our research (Green and Freed 2005 p.286)

I conceived the unique voice as a concept describing a research methodology which would competently fulfil the requirements of my two-phase doctoral project . The unique voice values creativity and experimentation, encouraging an examination of the research methods to determine whether or not they are congruent with the needs of the individual researcher or research project. The unique voice assisted my choice of a constructivist research methodology based on the philosophy of PBL.

6. Modified Delphi survey

The two research methods that I chose for my study were a modified Delphi technique and a longitudinal case study. The first of these was the Delphi survey, used to elicit information from a sample of fourteen experienced midwives and one childbirth researcher, about the nature of midwifery knowledge. Although both of these research methods can veer toward the quantitative end of the qualitative/quantitative research spectrum, the way in which I used them was congruent with a post modernist and social constructionist research philosophy.

6.1 A structured method of ‘brainstorming’

The Delphi survey as a research method is described and critiqued in Chapter 7. In the classic interpretation of the Delphi methodology it is used as a means of eliciting agreement. However, in what may be a more modern interpretation of the Delphi survey, I followed the guidance of McKenna (1994) and employed the technique as a structured method of

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brainstorming. Utilized in this way, a two-round process is often sufficient (Procter and Hunt 1994; French et al 1996). In the case of this study, the purpose of the Delphi technique was not to create a definitive agreement on the nature of Midwifery knowledge but to explore expert opinion that could be used to inform the next stage of the research, an investigation into what medical students learn from midwives.

7. PBL Case Study exploring knowledge construction

The second stage of the research was conducted using a longitudinal case study method (Yin 1993; Stake 1995; Donovan 2006) exploring medical students' construction of knowledge during the course of a six week obstetric and gynaecology rotation. Data were collected using PBL scenarios written from a midwifery interpretation of issues to do with pregnancy, childbirth and the postnatal period. While both longitudinal and case study research techniques have historically been employed to collect data which can be statistically analysed and therefore occupy points within the positivist spectrum of a positivist/naturalistic (or quantitative/qualitative) research divide, in this study, the longitudinal case study has been used for wholly qualitative research purposes.

7.1 A longitudinal study

Longitudinal research can be prospective or retrospective, although Ruspini (2002) advises that prospective research yields more accurate data. In a qualitative longitudinal study retrospective research requires informants to look back on what happened in the past rather than describing events fresh in their minds. Longitudinal studies however are often situated within a positivist, scientific framework and deal with large population cohorts. Some sociological research has focused on smaller samples with the inclusion of more qualitative data (Corden and Millar 2007). My study covered a short period of time in comparison to much longitudinal research but was conceived to explore knowledge construction during a restricted window of clinical experience, that of the medical students' six-week obstetric rotation.

7.2 Comparing case study models

Yin (1993) places the case study methodology within the positivist or scientific paradigm, asserting that although case studies can use a variety of quantitative and qualitative data, the

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case study should not be understood as a qualitative method of research. However, this is not a perception of the case study shared by all researchers. Donovan (2006) describes the explorative case study which sits firmly within a qualitative paradigm. Stake (1995) predates this stance with the development of case study research drawing on highly naturalistic methods of enquiry such as phenomenology, ethnography and biographic research methods, to create a research method that focuses on understanding complex relationships. For Stake, the purpose of qualitative case study research is simply to gain a better understanding of the case. However, to reject Yin's view of the case study as situated within a scientific paradigm does not necessitate a rejection of Yin who has much of value to impart to case study researchers of all genres.

Yin (1993) describes the case study as exploratory, descriptive or explanatory. While the exploratory case study functions as a pilot study helping to refine questions, methods and hypotheses, descriptive and explanatory studies may have some overlapping elements, particularly if used qualitatively. Descriptive studies describe phenomena while the explanatory study shows the relationship between variables. While the qualitative case study is inherently descriptive, description can only be given meaning through analysis. Therefore, qualitative analysis techniques take the place of those demonstrating a causative relationship between variables.

Stake (1995) added to these categories with his own classifications of intrinsic, instrumental and collective case studies. According to Stake an intrinsic case study is one in which the researcher has some particular interest in the case, while the label of instrumental denotes a case study used to understand more than what is obvious to the researcher (Tellis 1997). Logically, this would seem an apt description of most serious research as the researcher seeks to understand what lies beneath a superficial description of a particular phenomenon. Similarly, the researcher engaged in secondary analysis is seeking to bring new perspectives to previously completed research. Stake uses the term 'collective' to denote a group of cases being investigated together. From Stake's definitions my own case study into medical students' experiences during their obstetric rotation could be deemed both intrinsic and instrumental: intrinsic due to my interest and previous experience in interprofessional

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education and practice and instrumental as I hoped to gain insights through the use of PBL scenarios as a data collection tool which might not emerge through a more conventional interviewing technique.

7.3 A constructivist model

While I have described the second stage of my research as a case study, the differing interpretations of what this means requires further methodological unpicking. While it might be facile to attempt to deconstruct this study in terms of a methodology such as ethnography or phenomenology, I believe this would not allow me to remain true to what I was attempting to achieve, and therefore later evaluation of whether or not my aims were met would prove equally difficult. At its simplest, my research methodology was qualitative and constructivist. However, constructivism can be a difficult term to define. At its most basic, constructivism argues that our minds are the instruments through which we perceive the vast stream of sensory input that constantly bombards us. Therefore, knowledge and perceptions only exist inside our minds (Hendry et al 1999) and are not real in any objective sense but are dependent on the socially-constructed values of the researcher (Lincoln and Guba 1994). Schwandt (1994) suggests that constructivism has no fixed meaning, and indeed this is congruent with a world view shaped by the users of the term. Denzin and Lincoln (1998) illuminate what this means for the researcher when they state:

Post modernists have contributed to the understanding that there is no clear window into the inner life of an individual. Any gaze is always filtered through the lenses of language, gender, social class, race and ethnicity. There are no objective observations, only observations socially situated in the worlds of the observer and the observed (Denzin and Lincoln 1998 p24).

Crabtree and Miller (1999) however, argue that the constructivist paradigm, while largely subjective, does not totally dismiss the notion of objective knowledge. However, it is not clear how they define objective. The possibility exists that what they term 'objective' may actually reflect a socially sanctioned construction of knowledge as described by Foucault (1980). In the history of Western society, individuals who have constructed their own unique realities have occasionally been heralded as visionaries, but more often dismissed as fools,

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burnt as heretics or witches or been incarcerated as dangerous or mentally unstable. This would seem congruent with Searle's (1995) understanding of the social nature of knowledge construction.

7.4 PBL as a constructivist methodology for research

Holding the philosophical imperatives of PBL in mind helped me to remain within the parameters of the constructivist paradigm which is congruent with the premise of knowledge construction that underpins PBL (Hendry et al 1999) and serves to facilitate the case study methodology. This was demonstrated by Baxter and Rideout (2006) in a study which sought to answer questions about nursing students' decision making while on clinical placements. I too wished to answer questions about how students constructed knowledge during periods of clinical experience. In my research, the participants were medical students, and the placement was one in which they received clinical teaching from midwives both in formal and informal contexts. Furthermore, maintaining a philosophical or methodological focus on PBL assisted in the unification of the two stages of the research project. I conceived the original question as a problem or enigma and the Delphi study as the brain-storming stage of the PBL process. This enabled the construction of the PBL scenarios used as the data collection tool in the second stage of the research.

7.5 A voyage of discovery

The research methods used within this study, while based on sound scholarship, were adapted to meet the particular requirements of the research study and of myself as the researcher . In this I followed the advice of researchers who advocate that social research is something that can only be learned through the experience of doing it (Kvale 1996; Seale 1999; Green and Freed 2005) and the guidance of those who propose creativity as a method of resolving the research dilemma of conflicting agendas of research methods, institutional expectations and a personal understanding of knowledge construction (Green and Freed 2005) . While the research methods I chose for this study were ones with which I had not previously engaged, their use was a learning opportunity, or more aptly, my own voyage of discovery. I feel I was able to adapt my chosen research methods successfully and in keeping with my own

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considered philosophy of research and of that of teaching and learning, particularly in the creation of a data collection tool consisting of Problem-Based- Learning (PBL) scenarios. While at the same time my choices resulted in meeting the expectations of my supervisory committee for methodological rigour.

Use of scenarios or vignettes is not a new data collection strategy, as I discovered when I began researching the technique. However, it is one of which I had no previous experience and therefore (re)invented it for myself to meet my own needs. Exploring how others had used it before me, confirmed the possibilities inherent in this method and enabled me to refine my techniques. This is discussed more extensively in Chapter 9 . It is sufficient to conclude by saying that I am satisfied that I have been able to find the unique voice for my research. This has ensured the congruence of philosophy, methodology and research methods within an integrated research strategy.

8. Issues of rigour

Issues of rigour have sometimes been seen as somewhat problematical in qualitative research (Caelli et al 2003). However, such a perception provides tacit acknowledgement of the superiority of a positivist discourse in which objectivity is seen as not only desirable, but necessary to the conduct of meaningful enquiry (Golafshani 2003). The qualitative researcher can only validate subjectivity by moving beyond the bounds of positivism. If the researcher is clear about the purpose of the research, follows ethical guidance at all stages, analyses the data intelligently and reflectively and reports the findings truthfully, then rigour can be said to have been maintained (Winter 2000). However, when planning the research journey, there are two main issues around rigour that demand consideration. The first of these concerns ethical data handling and analysis and the second regards attempts to deconstruct the concepts of validity and reliability as these relate to qualitative research.

8.1 Data handling

Ethical data handling is about respecting the data. The raw data is, after all, the essence of the research. The first step is to plan data collection strategies carefully. This means thinking about how to approach the interviews, how to maintain the ethos of a discussion rather than a

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question and answer session, and by seeking to clarify or further explore issues that arise from such discussion (Speziale and Carpenter 2007).

Ethical data handling includes issues such as preserving the confidentiality of the research informants by preventing access to the data by people other than the researcher or colleagues who are assisting at some stage of the data analysis process. The traditional advice was to keep files in a locked cabinet, however today when files are much more likely to be maintained in an electronic data base, password protection is decidedly more relevant. Secure data storage ensures both that the data is available when the researcher requires it and that it cannot be obtained by anyone who has no reason for access .

Ethical data analysis is concerned with truth, but it is also about extracting the most meaning from the data (Strauss and Corbin 1990). During my research I tried to ensure that data analysis was not a rushed process. I found that alternative or creative methods of data handling assisted the process of analysis. Listening to what the data have to say and then deciding what to do with them are essentially creative endeavours (Riley 1990). Handling the data in a creative or playful fashion may enable what is commonly described as right brain thinking (Flaherty 2005) to see missed connections or even to develop fresh theoretical interpretations. This can involve artwork, diagrams or other pictorial representations of the data. My use of these techniques is explained in Chapter 8 and Chapter 9.

8.2 Judging quality in qualitative research

Once the ethical issues around data collection, storage and analysis have been considered there is still the central issue of how to judge the quality of any given research project. This is necessarily subjective but something that all researchers, research supervisors and peer reviewers must develop strategies to cope with. The important issue for the researcher is to become both reflexive and self-critical to the extent that she can make an accurate assessment of quality as a project progresses. For the researcher engaged in Doctoral studies, supervision is the structure which assists this process.

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While qualitative research methods are increasingly popular in humanistic disciplines such as midwifery, nursing or social care, some academics and clinicians continue to express concerns about the ability of qualitative research to present solutions to real-life problems (Sandelowski & Barroso 2003). One difficulty in ensuring rigour in qualitative research seems to be the common attempt to judge the value of such research by standards developed for quantitative methodologies (Brink 1991). A danger in attempting to reconstruct quantitative criteria to fit qualitative research is that the validity of a qualitative study could be decreased by denying the unique nature of qualitative investigation with its respect for subjectivity and intuitive interpretation (Green and Freed 2005).

Redfern and Norman (1994) deal with this conundrum by suggesting that the point of qualitative research is not to measure a single concept, but instead, to gain a more complete understanding of a particular subject. Different pieces of the puzzle fit together in qualitative research, thereby revealing an integrated whole, congruent with the way that in PBL, students share incomplete bits of knowledge to create a unique way of seeing (Boud & Feletti 1991; Alavi 1995). For myself, this interpretation resonated with the constructivist approach inherent in my PBL methodology (Hendry et al 1999). Nolan and Behi (1995) simplify the argument by stating that qualitative research must meet only two main criteria: that it is true and that it is relevant to some human concern.

Other factors used to increase the validity of qualitative research include low-inference descriptors, or direct quotes from the research participants (Field & Morse 1985); informant checking (Sarantakos 1998); and triangulation of data, theory or research method (Redfern and Norman 1994). Reed and Proctor (1995) suggest that qualitative research is effective if it stimulates debate and they point out that qualitative studies are not easily replicable because of their fixture in a particular time and place and their inherent subjectivity

8.3 Validity and reliability

Other qualitative researchers shun the terms used most often to describe the value of quantitative research: validity and reliability, noting that these have caused difficulties for qualitative researchers (Brink 1991; Seale 1999). Terms such as reliability and validity have

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meaning within a positivist paradigm but risk losing much of this when transferred to naturalistic enquiry. The discussion on validity in qualitative research that has the greatest congruity for me is Angen's (2000, p.392) when she explains:

The etymological root of valid is the Latin word *valere* which means to be well, strong, powerful or effective and to have worth or value. Thus validity does not need to be about attaining positivist objective truth, it lies more in a subjective human estimation of what it means to have done something well, having made an effort that is worthy of trust and written up convincingly

Within a positivist paradigm reliability is most often associated with the replicability of a study and validity with the truth of the findings. Within medical research, qualitative research has often been seen as a linked part of a quantitative methodology rather than as a separate entity (Chenail 1992) and therefore these terms continue to be used frequently to describe issues of rigour. However, in other disciplines qualitative research has moved away from such close links to positivist paradigms, stimulating new thinking about how to evaluate rigour. This has caused much discussion, particularly around the terms validity and reliability. If reliable means replicable, for instance, as qualitative research is not replicable, one might argue that it cannot therefore be termed reliable. One reason for this is that the researcher is the prime research instrument and as a unique human being, the researcher cannot be replicated. In quantitative research, Winter (2000) suggests that truth or validity is related to whether an instrument measures what it purports to measure. The notion of truth remains more elusive in qualitative research where findings are filtered through the instrument of the researcher (Mauthner and Doucet 2003).

However, this may be an oversimplification of the way reliability and validity are viewed within quantitative research. Campbell and Stanley (1966) in their classic text on experimental research design argued that there are many threats to validity which can disrupt the research process and influence the results of experimental and quasi-experimental studies. More recently, Clark (1998) suggested that quantitative research has moved beyond a strict adherence to the positivist paradigm with which it is most often associated and that the qualities of detachment and certainty inherent in positivism are incompatible with nursing

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research. He proposes that post-positivist philosophy, which acknowledges researcher bias and seeks to describe an approximation of truth, rather than making claims relating to the discovery of universal truth, is a more appropriate epistemology for quantitative researchers within health and social care (Clark 1998).

8.4 The 'r' word: where has rigour gone?

Aguinaldo (2004) warns that the complexity of the issues to do with rigour have led many qualitative researchers to avoid such discussion rather than attempting the difficult task of 'unpacking positivist assumptions' (Aguinaldo 2004, p.127). He warns that qualitative researchers are caught up in a conundrum for if they do not take on this task they can end up with very little idea of what constitutes good research or by what standards this can be judged. However attempts to judge the quality in qualitative research may inhibit the creativity inherent in this research paradigm (Green and Freed 2005). Aguinaldo's assertion about the avoidance of rigour can be illustrated by a quick scan of the index of an excellent book on qualitative methodologies edited by Rapport (2004). While the book provides insight into innovative research methods in health and social care, there is no listing for 'rigour' in the index and indeed, the topic is notable by its absence in the various discussions of research methodologies.

The researchers tackling this issue seem to have been predominantly those writing in the 1980s and 1990s, which might indicate that this is no longer considered an important issue in modern research. However, I believe that current researchers are doing the field of qualitative research few favours by ignoring the importance of rigour.

Early attempts to address rigour from a qualitative perspective often changed the terminology without addressing the positivist assumptions underlying issues of rigour. Possibly the best known example is Lincoln and Guba's (1985) categories of: credibility, confirmability, dependability and transferability. A more ambitious criteria is found in Munhal's (1994) list which demonstrates a fondness for words beginning with the letter R: resonance, reasonableness, representativeness, recognizability, raised consciousness, readability,

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relevance, revelations and responsibility. Although this appears somewhat contrived, it is easily memorized and covers a wide variety of aspects relating to rigor.

Other authors warn that researchers should not settle for easy options but need to struggle with issues of rigour on an individual basis and accept that the notion of each study's uniqueness is inherent in the individuality of qualitative research. Seale (1999) suggests that there should be a distinction between philosophical perspectives and research skills with researchers respecting all traditions. Rigour can then be maintained through selecting the research elements that best suit the requirements of an individual research project. Winter (2000 p.6) terms this "a negotiation of truths through a series of subjective accounts" suggesting that what the qualitative researcher needs to do is to tell the research story well, portray the actors (the researcher and the informants) accurately, explain the purpose of the research and describe the findings as truthfully as possible.

Earlandson et al (1993) insist that naturalistic enquiry can be just as challenging and rigorous as more traditional research and that the way to demonstrate this is to provide evidence of: long engagement with the subject, triangulation, and checks of various kinds. However, the use of checks, including triangulation has in itself been criticized for falling within a positivist framework (Blaikie 1991). Despite this, it is still common for qualitative researchers to cite triangulation as one of the ways they have increased the validity (or whatever other term is used to replace validity) of their work (Speziale and Carpenter 2007).

8.5 New ways of demonstrating rigour

One of the most constructive solutions for dealing with issues of rigour in qualitative research comes from Emeden et al (2001) who asked a panel of experienced researchers to analyse the results from a previous study by Zaruba et al (1996) evaluating reviewers comments, to determine their standards for judging qualitative research. These described good qualitative research as:

thorough in its execution and presentation; informed in terms of method and topic; well-written and well-organized; balanced and inclusive; useful and educative (Emden et al 2002 p.205).

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Eleven researchers were asked to nominate highly regarded articles and then these were analyzed to generate themes explaining why they represented good research. Impact seemed to be the most highly favoured attribute of good research. This was reflected in comments indicating that research considered good by these experts made them sit up and take notice in some way. This was because it was well planned, could be challenging, explored issues from a fresh perspective, appeared authentic and demonstrated reflection and reflexivity (Emden et al 2002).

8.6 Reflection as an indicator of rigour

Reflection seems to be a common denominator in good qualitative research. This is understandable given that in qualitative research the researcher is the central figure who influences all aspects of the research process (Finlay 2002). Reflection enables the researcher to be open about how her personality and positionality (Rose 1997) influences the process while facilitating disclosure of the thought processes and decisions taken at all stages of the research. This enables the reader to understand the research process with all its mistakes, blind alleys, surprises and triumphs, rather than being presented with a sanitized, idealized version of what took place. This removes the necessity for outmoded conceptualizations of validity in the valid/not valid model but increases the need for continuous self- interrogation on the part of the researcher (Aguinaldo 2004).

8.7 Descriptive, theoretical and pragmatic validity

Although conceding that the application of terminology designed for quantitative enquiry can be confusing and does not always accurately describe the aims of the qualitative researcher, I have found Sandelowski and Barroso's (2003) model that reinterprets validity within a qualitative paradigm very helpful. In essence, this model presents a tidy summary of the concepts with which I have been grappling in my consideration of rigour and therefore I suggest that within this research project I have demonstrated descriptive, theoretical and pragmatic validity (Sandelowski and Barroso 2003). That is to say that the study has been described accurately (descriptive validity), an interpretive synthesis has been developed using critical analysis and philosophical elucidation of events which unfolded during the research

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(theoretical validity); and finally that the knowledge gained from this work will be applied to real world situations, such as the development of shared curriculum initiatives (pragmatic validity) which are described in the concluding section of this thesis (Chapter 12).

9. Conclusion

In issues of rigour, as in all aspects of qualitative research, the researcher faces great uncertainty. There are no fixed patterns to follow, only guidance from those who have gone before along similar paths. However, I believe that researchers have an obligation to describe strategies undertaken to try to ensure that research has been well planned and conducted, that it has conformed to ethical guidelines and that data collection and interpretation has been done as conscientiously and honestly as possible. Within my own research, rigour has been demonstrated through these measures as well as through rich description and continuous reflection on the process and outcomes. If even some of the descriptive phrases that emerged from Emden et al's (2001) study, are used by readers of my research, then I shall be assured that I have succeeded.

Some specific actions taken to address rigour included discussion with colleagues at all stages of both parts of this research project, the use of an expert panel to help with coding between the rounds of the Delphi study and to test the data collection scenarios as they were being developed, and soliciting assistance from an experienced researcher in analysis of data from the interviews with medical students. In addition, field notes were kept during the interview process. These enabled me to fill in any gaps in my recorded information as well as facilitating immersion in the data as I revisited it during different stages of data analysis.

One check I rejected was the common practice of informant checking. I specifically did not write this into my protocol due to my concern that the researcher may legitimately extract information from the data which the participants may not themselves recognize (Sandelowski 1993). In other words, the researcher and the research participants may interpret the data differently and the researcher should not be limited to presenting only the participants' interpretation of the data. Morse (1994) adds to this argument with the suggestion that participants may have changed their minds in the time period between the original data

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collection and the representation of that data. Caelli et al critique the concept of informant checking as an indicator of good practice in qualitative research and suggest that: “the practice of returning to participants to review, clarify or validate tentative findings depends entirely on one’s theoretical stance” (Caelli et al 2003, p.15). From a post-modernist perspective, the subjectivity of truth creates shifting perspectives with no fixed point to which the original data, or their interpretation can be compared (Angen 2000).

However, in saying this, I stress the researcher’s responsibility to present the views of research participants as accurately and fairly as possible. Some examples of data interpretation that illuminated implicit meaning behind the explicit statements will be discussed in Chapter 10 and Chapter 11. Part of the researcher’s task is to listen for the stories within the stories, the bits of narrative that might be mentioned in an off-hand way, hinted at or joked about. These sometimes provide important clues about topics that are more meaningful than at first presumed (Rogers et al 1999).

Over the course of this study, I have interpreted my task to present the story of the research as honestly and insightfully as I can, to respect both the respondents/participants and the data obtained from them and to provide opportunities for those involved in medical education to gain new insights about the role of midwives in the education of medical students. Furthermore, I have striven to remain open to new interpretations and insights, to reflect deeply and to try to share an accurate picture of my research voyage. In doing so I am satisfied that I have been able to demonstrate rigour.

Chapter 6

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Research Ethics

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1. Introduction

This chapter discusses the process of gaining ethical approval for the research study of which the working title was: ‘What Do Medical Students Learn From Midwives?’ The first phase of the study involved a simple process of submitting the Delphi Study proposal to a Division Ethics Advisory Panel (DEAP). This was the only approval required as the study did not take place within an educational establishment or within an NHS Trust. Instead respondents, who were recruited at meetings, conferences and workshops were asked to participate in an email-mediated Delphi Survey. They were given the standard assurances of confidentiality and that they could withdraw from the research at any stage and if they opted to do so, any previously collected data would be eliminated from the study (Elliot and Stern 1997). Ethical approval for the second phase of the study was more complex as it entailed approval from the local Research Ethics Committee, the Trust Research Office and the University at which the participants were students. This chapter describes the process while discussing some of the principles of research ethics which informed both phases of this doctoral project.

2. Ethical Principles

Ethical considerations lie at the heart of any research study. The prima facie ethical principles of autonomy, beneficence, non-maleficence and justice (Beauchamp and Childress 1994) underpin an understanding of research ethics. The advancement of knowledge is not justification in itself for conducting research but must be tempered by considering ethical principles at all stages. Of primary importance is the affect participation will have on any human participants or research subjects. Participants must have autonomy in the choice of whether to participate and this must be an informed choice (Kvale 1996). Participation must not harm participants in any way and should, if possible, impart some benefit. All participants should be treated equally and agreement to participate should infer no advantage over those declining participation, other than any such benefits imparted by the participation itself.

2.1 Practical ethics

In my own study this consisted of an initial presentation about my project to the medical students I wished to recruit. I provided them with written information sheets about the

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research and ensured a time elapse of at least twenty-four hours before asking them to sign a consent form to participate (appendix 1). I made it clear that they could withdraw from the research at any time and if this happened, already collected data would also be removed from the study. The benefit to the informants was in their interaction with myself, an experienced midwife not involved in their educational programme. Potentially this provided an opportunity for extra reflective learning in the form of the scenarios used to stimulate the interview process. In addition, I informed all the students that I would be happy to discuss any outstanding issues at the end of the final interview as providing solutions to questions during the interviews would have interfered with the process of re-visiting the scenarios after clinical experience had taken place.

2.2 Research ethics

Research ethics are considered to have international consensus and the importance of creating an ethical framework for research was recognized after the Second World War when the horrors of the Nazi Death Camps were revealed. So-called medical experiments were conducted on victims who had no autonomy and who suffered extreme harm or even death as a result of experimental procedures. Thus the first international pronouncement on research ethics, the Nuremberg Code (1947), was written. The Nuremberg code provided protection for the research subject, requiring voluntary participation and the subject's right to end the experiment at any point. It also stated that any potential harm to the subject must not outweigh any potential good to mankind. The Helsinki report (World Medical Association 1964) further developed an understanding of research ethics by differentiating between research that was beneficial to the individual participant and research which was not (Speziale and Carpenter 2007).

2.3 Utilitarian vs Deontological ethics

This can be interpreted as a shift in perspective from the Utilitarian theoretical stance that the outcome (humanitarian benefit) justifies the means to that of Deontological ethics which mandates that duty is based on moral law and right action should be taken for no other reason than because it is right (Hinman 2006). However some authors continue to see a divide in the way research ethics are interpreted between the USA and Europe. In the United States, where

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health care provision is profit driven and drug companies constitute a major political lobby, Utilitarian ethics still holds sway (Hinman 2006). While post Nuremberg thinking does not allow for decision based wholly on outcome this can be seen as an example of John Stuart Mill's theory of Rule Utilitarianism where basic moral principles temper the justification of action based on outcome (Mill 2002).

In Europe, with social health care, the predominant ethical theory is the Deontological position of moral philosopher, Emmanuel Kant, who advised that people should never be treated as a means to an end, but as an end in themselves. In other words, people should not be used, but should be respected for their humanity (Hinman 2006).

2.4 Cultural interpretations of ethical principles

While Kant believed in categorical imperatives, or moral rules that were true for all people at all times (Hinman 2006), modern day researchers have argued that cultural backgrounds can shape the meaning of some ethical issues (Rashad et al 2004). For instance, while European mores dictate truth telling at all times, other societies may value politeness or the avoidance of real or imagined humiliation, commonly termed honour or saving face, over a strict adherence to truth. Similarly, Yu Zu (2004) in a letter to the editor of Nursing Ethics points out that autonomy has a very different meaning in cultures where the family expects to act as a collective unit rather than as a collection of individuals. Such cultural differences can have an impact on research being conducted across national or cultural boundaries or with research participants from different cultural backgrounds. The researcher must be aware of such issues and consider how they might impact upon her research at all stages.

2.5 Ethical considerations at seven stages of research

Kvale (1996) suggests that researchers systematically consider the ethical implications of research at each of seven research stages from the first consideration of the research question, through the literature review, sampling, data collection and analysis to dissemination. There are ethical concerns at each point starting with the very basic decision about whether the research is worth doing. This can be illustrated by the fact that until very recently a great deal of research was done in academic and clinical settings simply to provide students with the

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opportunity to learn by doing. This experiential approach to learning about research has largely been supplanted by the introduction of literature-based projects at BSc and MSc levels .

3. Ethics and qualitative research

One particular concern of qualitative researchers is that ethical guidelines have frequently been developed to meet the needs of quantitative research (Richards and Schwartz 2002). The greater fluidity in the research design of qualitative studies and the implications surrounding confidentiality and anonymity due to the rich data associated with qualitative research can pose significant challenges. I discovered some of these issues while considering how to present my analysis. For example, although I favour a liberal use of low inference descriptors (Field and Morse 1985) some data, although significant, had to be eliminated as they could have identified particular participants by comments about cultural background or personal circumstances. One way I tried to address this was to identify the student group as the case for analysis rather than focusing on the individual. However, powerful narratives developed within the case study which also merited consideration. These issues are discussed more fully in Chapter 10 and Chapter 11 of this thesis.

3.1 Research governance

Fortunately, researchers do not have to face these challenges unaided, nor would it be ethical for them so to do. In the UK a robust research governance framework exists to ensure research meets the standards of the Helsinki Declaration (World Medical Association 2000) and that of professional bodies such as the Royal Colleges or the Nursing and Midwifery Council (DH 2001). All research involving human subjects requires approval by a Research Ethics Committee (REC) (Cluett and Bluff 2006). In most instances this will be the local REC with responsibility for research that takes place within all local healthcare establishments and in the community setting. In some instances a university ethics panel and/or a Trust research board will also need to approve a research proposal. While the task of the REC is to comment on the ethics of the proposed research, it is important to note that poorly planned research in itself raises ethical questions. Thus, a REC may propose changes to the research design as well as to the strategy for sampling or for obtaining informed consent.

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In the UK many RECs use the National Research Ethics Service (NRES) formerly called the Central Office for Research Ethics Committees (COREC) guidelines and documentation. This has the advantage of standardizing procedures although some researchers feel the disadvantages include an overly long process as the forms encompass all possible ethical implications of research, some of which may not be relevant to a particular proposal.

3.2 Gaining ethical approval

The researcher submitting a proposal to a local REC must complete the NRES forms as well as submitting a written proposal and copies of information sheets and the paperwork used to document informed consent on the part of the research participants. The two essentials for approval are to have a well-considered proposal and to complete the necessary paperwork correctly. Requesting that an experienced colleague or one's research supervisor read through any proposal before submission is a way of ensuring that nothing has been overlooked.

In my case, my PhD supervisor had access to my COREC form (as it was at that time) at all points of completion as it is held as an electronic copy on the COREC website and protected by a password until completed. My primary supervisor had access to my user name and password and was able to review my form as I completed the documentation. He had also seen and advised on my proposal from the first consideration of ideas through completing the final draft.

Following approval by the REC the proposal was then submitted to the Trust Research Office in the NHS Trust where the research was to take place. This was more time consuming than the REC approval, which was granted on the day I presented it, and delayed the start of data collection. As data collection had to commence at the beginning of a six-week rotation period, there were limited points in the year when I could begin the interviews. This had an impact on the number of students I was able to recruit.

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3.3 Ethical approval for the Delphi study

The research approval for the Delphi survey was a much simpler procedure since it did not involve any clients, students or employees of the local NHS Trust or local university. The proposal was considered by a Midwifery Divisional Ethics Advisory Panel (DEAP) and I was granted permission to commence data collection. Again, my supervisor had reviewed my protocols and provided guidance prior to submission to DEAP.

4. Conclusion

Research governance is a necessary, although time-consuming part of the research process. The frustrations involved can be minimized if the researcher regards it as an integral component of the research rather than an inconvenience that must be completed before the data collection can begin. Taking the time at this stage of the process can facilitate the following stages because of the careful planning required for ethical approval. For myself, negotiating ethical approval was an important port on my personal research voyage. I revisited areas with which I was already familiar through previous research projects and, like a sailor embarking in a new and more powerful craft, I adapted existing knowledge to new challenges. While ethical approval represented one port of call, it was important throughout the journey to remind myself of Kvale's (1996) guidance on the importance of considering ethical issues throughout all stages of a research project. Thus metaphorically, research governance became the compass that guided me safely home.

Chapter 7

Delphi Methods

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1. The Delphi Survey method

This chapter considers the methods used in the first stage of the research project. I explain the choice of methodology and research methods and describe the process of conducting a two-stage Delphi study using email. The presentation of the general background to the research project assists in clarification of how the Delphi study came to be conceptualized. This project was first developed in order to explore learning that occurs when medical students work with midwives. Therefore consideration of the research started with the second stage and not with the first.

1.1 Requirement for MPhil registration

The requirement of my university to register for an MPhil qualification, as a preliminary stage of the doctoral process, necessitated considering what could be presented as evidence of sufficient scholarship to satisfy the requirements of the transfer panel. My supervisors recommended a two-stage project with a smaller initial study supporting the second larger piece of research. Therefore, I began to think about what could be investigated in support of my primary research question. I asked myself what it was I was interested in discovering in terms of medical students' knowledge gained while working with midwives. Considering the interactions between midwives and medical students, and also between midwives and doctors from a sociological perspective, I recognized that there were many sociological and political issues involved (DeVries 1993). Paramount was the issue of construction and ownership of knowledge.

2. Situated knowledge

As feminist sociologist Sandra Harding (1991) points out, all knowledge is situated and therefore, the argument that science is unbiased and ungendered is untenable. Where knowledge is situated not only has significance for its interpretation, but also for its utilization. In the example of a woman whose labour has continued for over twelve hours, the length of the labour might be interpreted very differently by the attending midwife, who sees a twelve hour labour as a normal variance (Walsh 2010), and the obstetrician who believes

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that labour should follow a strict time curve and who only identifies normality in retrospect (Kirkham 1986).

The midwife might suggest solutions to the labouring woman such as a walk, a bath, something to eat and drink, or a short nap. The obstetrician seeing the same woman, with the same twelve hour labour may decide that labour has gone on long enough and prescribe an intervention of some kind. This might range from performing an amniotomy, through augmentation of labour using an artificial oxytocin infusion to the ultimate intervention of a caesarean section.

2.1 Knowledge and conflicting agendas

Knowledge about childbirth has traditionally been women's knowledge (Lay 2000). To look back on a past golden age of childbirth may, however, be naive as some traditional knowledge was inaccurate or misinformed due to inadequate understanding of physiology or scientific principles such as those relating to infection control. However attitudes and practices of modern obstetrics have also demonstrated lack of understanding about normal physiological processes or the individuality of labour (Walsh 2010). While the introduction of evidence based practice (EBP) was envisaged as the panacea for poor practice (Kabra 2008), Swinkels et al (2002) suggest midwives and other non-medical health care providers are beginning to reject the use of EBP due to a growing dissatisfaction with hierarchies of evidence dominated by the randomized control trial (RCT). Midwifery knowledge is not necessarily situated in the type of evidence which can be demonstrated by large population based studies. It may instead reside in the relationship between a woman and a midwife, in acute observation or even in intuition (Phiri 2006; MacDonald 2007).

2.2 Conflicting 'knowledge': childbirth as a mechanistic or holistic process

The discussion of where knowledge is situated continues to be an important one. Some obstetricians situate their knowledge about childbirth within a techno-medical paradigm, viewing childbirth as a mechanistic process and agreeing to caesarean sections on request (Simpson 2004). However midwives, even those struggling to do so within an institutional setting, tend to construct their understanding of childbirth within an holistic or humanistic

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context in which birth has meaning over and above the safe removal of a live fetus from the pregnant uterus (Bates 2004). These conflicting agendas have been discussed more fully in Chapter 3, however thinking and reflecting on some of these issues drew me to the conclusion that my essential question was: *in a culture where midwives are often the recipients of medical knowledge, do medical students who gain some of their clinical experience from midwives construct their understanding of childbirth using midwifery knowledge?* It seemed to me that this was an opportunity for the transfer of knowledge to move in the opposite direction from that habitually observed due to the authoritative status of medical knowledge (Jordan 1997) over the knowledge of midwives. Therefore I needed to think more deeply about the meaning of midwifery knowledge. While I felt that I had a strong sense of what I envisaged as midwifery knowledge, the articulation of this was somewhat complex. I conceived the Delphi study as an opportunity to explore this topic with other experienced midwives.

3. The electronic Delphi Survey

The Delphi study was chosen to survey the opinions of experts in geographically diverse locations, with data collected by electronic mail (email). The Delphi survey, named after the oracle of Apollo in ancient Greece, is an iterative survey technique widely used in health care disciplines as a research tool to gain consensus, or make predictions (Greatorex & Dexter 2000). Although the predictive element and the fact that expert opinion can be gathered on complex issues without any face-to-face interaction (Kennedy 2000) have made the Delphi technique popular, it has also attracted criticism for a potential lack of both validity and reliability (Hasson, Keeney & McKenna 2001). While issues of rigour have been discussed in Chapter 5 it is relevant to note here that the validity of the survey results have been said to be highly dependent on the design of the initial questionnaire (Procter & Hunt 1994) as well as on the composition of the expert panel (Kennedy 2000). This is significant as expertise is a subjective quality and there is no evidence, given any particular study, that an alternative panel of experts would reach similar conclusions or develop common predictions.

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3.1 Seeking consensus

While some authors argue that the Delphi technique provides an opportunity for less experienced members of the panel to voice an opinion without intimidation or censure (Fraser 1999), others insist that the expertise of the participants is the key to gaining credible results (Kennedy 2000). However, even in a panel of experts, the strengths and weaknesses of expertise require evaluation. While the total knowledge of the group will be more than that of any one member, the process of consensus may serve to dilute the contribution of the panel members with the highest level of expertise (Pill 1975).

A further problem, which has been identified with the Delphi technique, is that of the panel size, as there is no agreement among researchers as to what constitutes the ideal number of participants. Panels from less than ten to more than one thousand have been reported (Williams & Webb 1994; Bowles 1999). Finally, there is the difficulty of defining consensus (Lemmer 1998) and although some researchers have endeavoured to present Delphi as a quasi-scientific process, it may be more intellectually honest to admit the subjectivity inherent in the methodology. The best way of using the Delphi technique may be as a critical stimulus for reflection (Lemmer 1998) or as a sophisticated form of brainstorming (McKenna 1994). As Crotty comments: "Delphi is a useful communication device, not a scientific method" (Crotty 1993 p.51).

3.2 The two-stage Delphi

A two-stage Delphi process was used to elicit responses from respondents concerning their perceptions about the nature of midwifery knowledge. The first stage consisted of an open question in which the panel members were asked to describe midwifery knowledge. The responses were subjected to thematic analysis (Sarantakos 1998) and the themes identified were fed back to the panel members to determine the extent of agreement with each theme. The answers to the questionnaires were analysed using the computer statistical analysis software package SPSS to obtain descriptive statistics.

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3.3 The Delphi rounds

The number of rounds appropriate to this survey method is another point debated by researchers. It has been suggested that continuing the iterative process past a third round is inefficient, both in terms of attrition and in the lack of new information generated (Daly, Chang and Bell 1996); and as McKenna (1994) points out, response rates drop rapidly as further iterations are performed. However, three rounds seem to describe the classic Delphi, particularly where the goal is decision-making or prediction. In the previously mentioned interpretation of the technique, where it is used as a structured method of brainstorming (McKenna 1994) a two-round process is often sufficient (Procter & Hunt 1994; French et al 1996). In the case of this study, the purpose of the Delphi technique was not to devise a definitive agreement on the definition of Midwifery knowledge but to explore expert opinion that could be used to inform the next stage of the research, an investigation into what medical students learn from midwives.

4. The Delphi sample

Fourteen experienced midwives (and one non-midwife researcher whose specialist area is childbirth) were invited to participate. To ensure that a range of opinions would be included in the survey a purposive sampling method was employed (Speziale and Carpenter 2007). Midwives in current clinical practice, academic midwives and research midwives were selected as panel members. Using an international sample broadened the potential opinion base even further, and finally, to capture what might be outlying opinions, two representatives of American direct entry midwifery, formerly termed lay midwives, were asked to participate. I considered their philosophy of birth as a normal life event to be a grounding influence when so many midwives today work in a culture which has become highly medicalized. As I wished to discover something about midwifery knowledge and how this might be taught to medical students, the opinions of midwives working outside of a medical culture was, I felt, of great value, as was the response from the one non-midwife who evaluated midwifery knowledge from the starting point of a service-user's perspective.

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4.1 Snowball sampling

A qualitative sampling technique, snow ball sampling (Morse 1991), alternately known as snowballing or chaining (Bluff and Cluett 2006) was one of the methods utilized to identify respondents for the Delphi survey. This technique uses selected participants to recommend or recruit further respondents for the study. In several instances, I was able to recruit a panel member for the Delphi survey due to a recommendation from a midwife whom I had previously recruited. Potential panel members were approached at conferences, meetings and study days both in the UK and in the USA where I was presenting a paper at a maternity conference. When respondents had agreed to participate they often provided contact details for other potential panel members. In this way I was able to recruit respondents with a wide range of experience and cultural perspectives and ultimately select a purposive sample.

5. The interview schedule

The interview schedules in the two stages of this research were very different. The Delphi survey, used to elicit responses about the nature of midwifery knowledge, was conducted almost entirely by email with the selected group of fifteen experts. The exception was one clinical midwife who did not have an e-mail account and who completed a hard copy of the form that was sent to other participants by e-mail. Although an international sample was used, all participants came from English speaking countries or countries where levels of English language knowledge are high. This was to avoid any possible uncertainty about responses due to language barriers. The participants were British, American, Australian, New Zealand, Swedish and Canadian, including francophone Canadian.

6. Using the findings to plan the second stage of the research

The findings from the Delphi study will be discussed in Chapter 8. These informed the thinking that underpinned the development of the second stage of the project and were utilized in developing the PBL scenarios used as the data collection tool and in creating templates for data analysis. Therefore, I found, as Sarantakos (1998) and Denscomb (1998) both advised, that developing the right questions established a strong base for the rest of the research project. My original question provided me with the opportunity to add to the body of

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knowledge about the interface between medicine and midwifery and to inform the on-going discussion around interprofessional education. This thesis demonstrates how an interesting, if simple, question developed into a mature research project which yielded insights about midwifery knowledge and information about how medical students construct knowledge while learning about normal birth from midwives.

Chapter 8

Delphi Findings

Chapter 8

1. Introduction

Defining the research question of the modified Delphi study which formed the first stage of my doctoral research has been described in Chapter 7, together with the research methods, sampling strategy and process of analysis. This chapter presents the results of the study and places them within the context of contemporary thought on midwifery knowledge.

Understanding how midwives interpret their own body of knowledge using the information from this and other studies as well as from more theoretical dialogue around what is encompassed by the term midwifery knowledge was an important first step in developing research tools which could be used to explore the acquisition of aspects of this knowledge by medical students during obstetric rotations, particularly in terms of their knowledge construction while working with midwives. Therefore, the first tentative steps in the long process of completing my doctoral education was to engage midwives in a dialogue encompassing a range of professional experience and opinion with the aim of developing a discourse on midwifery knowledge.

2. The Delphi survey

The use of the modified Delphi survey was, as previously discussed, used more as a sophisticated form of brainstorming encompassing a range of opinion than to make predictions or to achieve strong consensus for decision making as in the classic Delphi survey. However, an element of consensus did contribute to this study, enabling interpretation of the panel's responses to the initial statements formed from the open response stage of the survey. Just over a quarter of these resulted in a strong consensus among panel members.

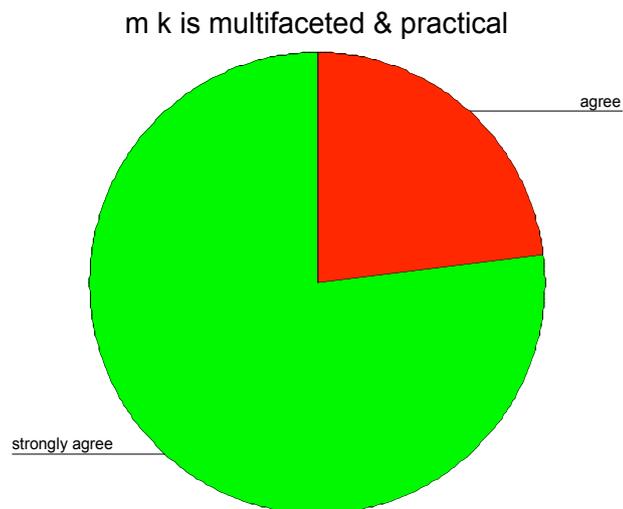
2.1 Results of the Delphi survey

Thirteen out of the original fifteen panel members completed the second phase of the survey. Out of twenty-three statements drawn from the first round of analysis and presented back to the Delphi panel six elicited a strong consensus represented by ten or more 'strongly agree' or 'agree' responses from the panel members. The three statements eliciting the highest consensus were that midwifery knowledge is multifaceted and practical, which gained total consensus; the statement that **midwifery knowledge requires autonomy and creativity**, with 12 positive responses and one non-response; and the statement that **midwifery**

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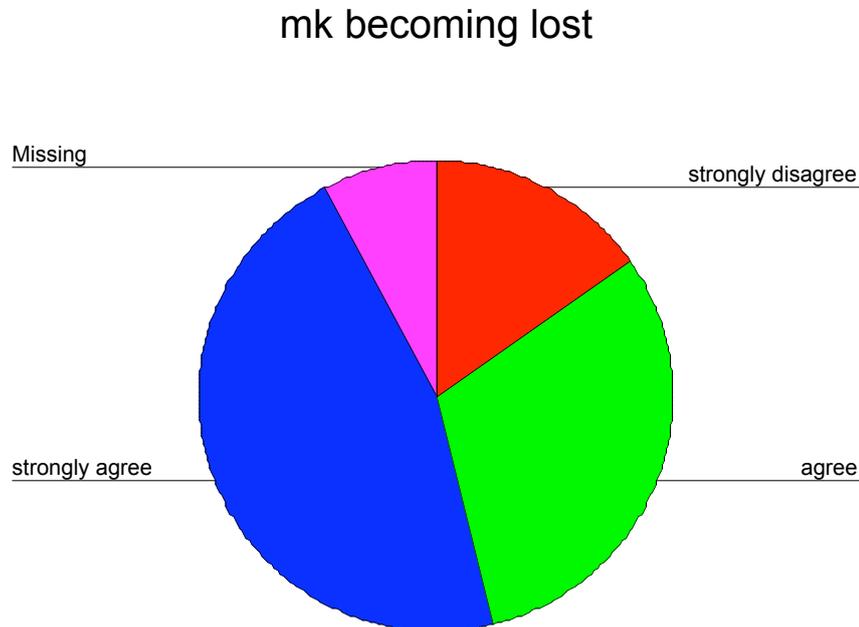
knowledge focuses on a good outcome which also elicited 12 positive responses. The other areas of strong consensus were that midwifery knowledge is: a social construction; can provide alternative and perhaps more gentle solutions in high-risk situations; is complex and difficult to define, and most worryingly from a professional perspective, that midwifery knowledge is being lost.

Figure 8-1



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Figure 8-2



The statement that midwifery is being lost may have been of less concern to the two respondents who indicated that they strongly agreed that there was no such thing as midwifery knowledge. The remaining responses to this statement indicated disagreement or neutrality. The respondent who made this comment in the first Delphi round expanded on her response to say that as midwives draw knowledge from many sources such as physical science, medicine, psychology, and sociology, there is nothing unique about their knowledge which can be identified as exclusively pertaining to midwifery. However this perception is challenged by social historian Maxine Rhodes (1999) in her study of midwives' oral history. Rhodes concludes that midwifery knowledge is a complex blend of technical and experiential knowledge tempered by the environment in which midwives practice and also by their relationships with doctors and women. She suggests that midwives' interaction with midwifery knowledge contributes to their understanding of their power and autonomy and shapes their perception of themselves as professionals.

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However Mead (2010) points out that the way midwives interpret risk and their perception of its affect on labour outcomes varies considerably from one European country to another despite the fact that all European States have signed European Directives relating to midwifery education and practice. This might suggest that there are differing perceptions of what constitutes midwifery knowledge. Adding complexity to the discussion is the fact that in France, Belgium and Luxembourg, midwives identify themselves as a branch of the medical profession which may have an impact upon their perception of the differences between medical and midwifery knowledge. None of the midwives on the Delphi panel were from these countries.

Other respondents suggested that the way in which midwives pull different strands of knowledge together enables them to interweave knowledge and ways of knowing into a pattern that can be identified as belonging uniquely to midwifery. In effect, it is the way knowledge is used and interpreted which is significant and may be dependent upon professional discourse.

In certain situations an obstetrician and a midwife, given the same information pertaining to a woman in the intrapartum period, may make differing decisions regarding the provision of care (Simonds 2002). This can be true despite the fact that both professionals profess the highest concern for maternal and fetal well-being. The difference results from the conflict between the midwifery philosophy of normality during the birth process or salutogenesis (Downe 2004a) and the medical philosophy that looks for pathology and is able to interpret birth as normal only retrospectively (Murphy-Lawless 1998; Gould 2000).

3. Evidence-based midwifery

The current requirement for evidence-based practice has often increased the credibility of midwifery knowledge as some previously accepted medical practices around birth have been demonstrated to be unhelpful or even harmful (Johnson 1997; Walsh 2007b). These include practices such as continuous electronic fetal monitoring in labour, restriction of oral fluids and nutrition during labour, routine amniotomy and giving birth in the lithotomy position. In the UK, certain aspects of the midwifery-based model of care have become the accepted

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norm however in other countries, particularly those following the US model of physician-dominated maternity care, practices such as the use of alternative birth positions, mobilization during labour, and immediate maternal/infant skin to skin contact continue to be regarded as radical. Most significantly such practices are restricted by physicians' beliefs, which, unsupported by evidence, are accepted as authoritative knowledge (Jordan 1997; Tillett 2005). This was illustrated poignantly by a conference presentation I attended in the USA where nurse researchers presented substantive data proving that neonatal stress hormones increased substantially when infants were separated from their mothers and housed in a central nursery. Despite the evidence, paediatric staff refused to authorize a change in practice. Apparently even research evidence, when collected and presented by nurses, had little authority in this particular medical setting. (9th Annual Maternity Research Conference, 2002).

3.1 Science versus artistry in midwifery

Although acknowledging that evidence supports aspects of midwifery practice (Johnson 1997), some respondents were concerned that this emphasizes the science of midwifery while under-valuing the less concrete artistry. One midwife attributed this to the historical marginalization of midwives and midwifery practice, pointing out that most of our knowledge about childbirth has been gained through the biological sciences, and more recently, clinical trials. Other respondents concurred with this view and expressed concerns that midwifery knowledge is being subsumed into the techno-medical model (Davis Floyd and Mather 2002) or is being lost to such an extent that as one panel member expressed it: *'midwives are in danger of losing their autonomy and becoming obstetric nurses'*. An alternative outcome may be an increasing absorption of medical skills into midwifery and delegation of much of the woman-centred role of the midwife to maternity assistants (Mead 2010). Either scenario could result in the loss of authentic midwifery knowledge.

3.2 Autonomy in midwifery practice

Pollard (2003) examined the concept of autonomy in midwifery and deduced that midwives see the dominance of the medical profession as a major barrier to autonomy. She found that midwives without a previous nursing qualification felt most at ease with the concept of professional autonomy. One Delphi respondent clarified what autonomy meant to her when

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she wrote about having to *critically unlearn* knowledge acquired during her midwifery education and former practice in a medical environment. She felt that it was only in out-of-hospital settings that her own autonomy had been able to flourish and she had developed the knowledge and confidence to challenge medical opinion and act as a true advocate for women.

Although some observers have argued that medical autonomy is also decreasing due largely to the impact of evidence-based practice (Walsh and Small 2001), midwives in the Delphi panel indicated that for them, autonomy was an essential construct of their professional identity. Panel members felt that autonomy was a necessary pre-condition to the creative use of knowledge and to the development of true midwifery knowledge which one respondent described as being *underpinned by self-knowledge*. However, Mead (2010) warns that while autonomy is clearly part of the rhetoric of midwifery, both in the UK and European countries, this is not matched by the reality of how midwives actually work.

3.3 Professionalization and the loss of midwifery knowledge

Another respondent suggested that the professionalization of midwifery has meant the forfeit of real midwifery knowledge. This was supported by a fellow panel member who stated that: *‘midwifery knowledge is the antithesis of the narrow focus of obstetric knowledge and its concerns with powers/passengers/parts’*. The fact that this alternative knowledge is not always visible, and therefore may be lost was a common strand running through the first round of Delphi responses. One panel member expressed the concern that as: *‘midwifery knowledge is largely subsumed within medical ideology, it has decreased in breadth and potential rather than increased’*.

This theme of lost knowledge was highlighted in Hunter’s (1999a; 1999b) work on oral history where she warned that midwifery knowledge was rapidly being lost. She pointed out that we have no way of knowing how much of this lost knowledge might have been highly relevant to current practice. One Delphi respondent suggested disempowerment as a key factor in the loss of midwifery knowledge in her warning that : *‘disempowered midwives can not develop midwifery knowledge and engage with women in a facilitative manner’*.

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3.4 The unique nature of midwifery knowledge

Many of the panel members expressed views supporting this discourse of midwifery knowledge as a unique entity separate from medical knowledge. Respondents highlighted aspects of the common theme that midwifery knowledge is women's knowledge, requiring a feminist understanding respecting individual and unique responses to labour and birth. This theme is supported by Guiver's (2004) findings that midwifery knowledge is synonymous with the individuality of the woman being cared for. She concluded that this focus on the individual facilitates an understanding of the normality of birth, thus allowing some deviations from the medical norm to be re-defined as variations within a framework of normality. As one Delphi panel member commented: '*This is not the type of knowledge commonly recorded in textbooks*'. Another panel member, considering the art of midwifery within an obstetric setting, called midwifery knowledge: '*radical, unthinkable, requiring courage*'. This was supported by an observation that midwifery knowledge was: '*on the edge*'.

However, when presented back to the panel as a Delphi survey statement only one third of the panel agreed that midwifery and obstetric knowledge are in direct opposition. These were all statements of strong agreement, with less than 1/4 of the panel disagreeing and the remaining majority neutral. This unwillingness to polarize midwifery and medical knowledge was also a characteristic of an Australian study (Lane 2002). Lane suggests that midwifery knowledge is not a discrete or static body of knowledge and that few midwives would categorize themselves as working entirely within the obstetric or midwifery model of care.

3.5 Midwifery combines technical skills with holistic knowledge

This ability to move between technical and holistic or humanistic models of care (Davis Floyd and Mather 2002) was echoed in the work of Foley and Fairclough (2003) who found that in contrast to the accepted view of obstetric and midwifery conflict, in practice midwives acknowledge and use medical knowledge as a resource to construct a professional validity for themselves. In this model, medical knowledge is used in three ways. In the first instance it is used in contrast, to describe what midwifery is not. Secondly it is used as a form of communication to open dialogue with medical practitioners. Finally it is used to construct a

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story of medical and midwifery collaboration, emphasizing the importance of midwifery as a professional group, which works collaboratively with, rather than in submission to, the medical profession.

4. The invisible nature of medical power

However, this apparent collaboration may be less than equally balanced. Fahy (2002) warns that medical power is insidious, operating most effectively with the cooperation of midwives and passivity of women. It is only when midwives have the courage to resist medical power that it becomes visible, and therefore can be recognized as a barrier to the development and utilization of midwifery knowledge. This view is congruent with Simonds' (2002) caution that although there is a general assumption that feminist and consumer movements have transformed women's experiences of childbirth, in fact medical control has only changed in style but not in scope. Keating and Fleming (2009) also identified medical dominance as a factor inhibiting midwifery autonomy.

5. Differences between the medical and midwifery models

Simonds (2002) contends that there is a fundamental difference between the medical and midwifery models pivoting on the way time is conceived. Obstetrics imposes rigid time frames on increasingly small chunks of time, both in pregnancy and during labour, while midwifery operates within a naturalist/feminist discourse, which accepts variations in labour as normal within a context of maternal and fetal well-being. As Simonds explains: "In its holistic approach midwifery shatters the hourglass of the medical model, refuting its technological and bureaucratic underpinnings" (Simonds 2002, p.560) Other statements by panel members affirm the use of any source of knowledge to support women in pregnancy and enhance their coping mechanisms in labour. In the words of one panel member:

'Midwifery knowledge is any knowledge which helps childbearing women adjust to the major life transition of childbirth'. Another respondent called midwifery knowledge: 'hands-on practical application of knowledge to achieve the best outcome for the woman, her loved ones and society.'

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5.1 Holistic knowledge and the midwifery model

However Garrat (2001) suggests that midwives' increasing exploration of more holistic forms of knowledge, particularly in the use of complementary or alternative therapies is a clear indication of a trend toward rejecting a medical interpretation of knowledge. On the other hand, the increasing use of midwives as forceps or ventouse practitioners (McConville et al 2007) demonstrates a trend in the opposite direction towards a more medicalized interpretation of midwifery practice.

5.2 The importance of the midwife-woman relationship

A significant theme emerged that midwifery knowledge is expressed through the relationship between a woman and her midwife. Unlike medical knowledge, which is seen as scientific and prescriptive, midwifery knowledge supports the provision of care for each woman according to her unique needs eliminating the requirement for rigidly defined protocols. These findings again resonate with Guiver's (2004) emphasis on the relational aspects of midwifery knowledge. One to one care, listening, supporting and nurturing women during childbirth are all aspects of practice validated by midwifery knowledge. As one respondent summarized: *'Obstetric knowledge focuses on outcomes, midwifery knowledge provides guidance for the journey and seeks to make childbirth not just safe, but also empowering'*.

5.3 Intuition and midwifery knowledge

This theme of connectedness was also highly significant in Davis-Floyd and Davis's (1997) study into the importance of intuition as a way of knowing in midwifery practice. The authors provide a physiological explanation for intuition in the corpus callosum, a structure within the brain, which is instrumental in the transfer of information between brain hemispheres. The corpus callosum, according to a previous work by Davis (1989) is significantly larger in the female brain which may explain why women often feel more comfortable with the concept and use of intuitive thought processes (Davis Floyd and Davis 1997).

Such an explicitly physiological explanation for intuition might seem to detract from, rather than add to an understanding of intuition as an emotional or spiritual way of knowing. This is a conundrum that still engages leading neuro-scientists today (Damasio, 2000, 2006).

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Damasio suggests that: “the non-conscious system is deeply interwoven with the conscious reasoning system such that a disruption of the former leads to an impairment of the latter” (Damasio 2000, p.302). Some midwives demonstrate this integration of conscious and non-conscious forms of knowledge construction in their ability to move between the scientific and spiritual realms readily, taking knowledge from both to construct an holistic model of care (Foley and Fairclough 2003). Hall (2010) questions why there is not more discussion about the spiritual nature of birth when it is a peak experience that helps women to feel a connection to God, the universe, or whatever they perceive as being beyond a purely physical consciousness. The point that Davis-Floyd and Davis (1997) make concerning intuition is the importance of the intuitive process in developing a connection between a woman and her midwife. This assists the midwife and woman to work together in a partnership which values the woman’s uniqueness during childbirth. Acknowledging intuition and the importance of connectedness enhances the safety of maternity care as it complements the medical and scientific knowledge that also inform today’s midwifery practice. This reflects Belenky et al’s (1997) exposition of intuition as a way of knowing which is particularly powerful for women.

5.4 The loss of midwifery knowledge

Several panel members discussed these issues in the first stage of the Delphi study. One spoke about other ways of knowing, or intuition and stated that this was an essential facet of midwifery knowledge but was being lost especially by midwives working within the culture of the health service. She suggested that it was being kept alive by independent midwives, but that this was becoming more difficult as their practice was under increasingly close scrutiny by the more powerful medical profession.

6. Conclusion

Although no absolute consensus on midwifery knowledge was reached, a number of key areas eliciting strong consensus have been identified and discussed. In conducting a data base search using the terms midwifery and knowledge, it is only in the past two or three decades that this topic has elicited much attention from researchers. This literature review was done following data collection and analysis to prevent any contamination of emerging themes.

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Nevertheless, I acknowledge that it was a topic area with which I was familiar before commencing the study. However, the discovery of shared themes and concepts provided substantial support for findings that emerged from the modified Delphi survey. The observation that midwifery knowledge has unique characteristics, while at the same time drawing on various sources of knowledge provided a base from which to build the subsequent stage of my research into how medical students construct knowledge about pregnancy and childbirth.

It is significant that there are embedded conflicts in the way pregnancy and childbirth are viewed from obstetric and midwifery models. If midwives can impart a clear understanding of knowledge inherent in the midwifery model of care to student doctors this may serve to inform and enhance their future medical practice, particularly in those who later specialize in obstetrics or general practice. Medical students who experience positive working relationships with midwives during their maternity placements should be well prepared for collaborative interprofessional working relationships in their future medical careers (Fraser et al 2000). In conclusion, utilization of a modified Delphi survey to explore themes arising from the trigger concept of midwifery knowledge, resulted in some significant observations that were employed in the design of the data collection tool used in the case study stage of the research.

Chapter 9

Methods of the Case Study Research

Chapter 9

1. Introduction

This chapter starts with a brief review of the findings from the Delphi Study (Chapter 8), relating these to the reasons medical students can benefit from learning about normal birth from midwives. The chapter continues with an exploration of how data from the Delphi survey, which formed phase one of the research, were used in the development of the PBL scenarios which made up the case study data collection tool. The way in which ‘learning outcomes’ which are a component in the teaching and learning methodology of PBL were used to develop prompts to assist in the second phase data collection is also discussed. The research process of the case study is described including sampling, interviewing, data analysis and the use of field notes. Reflexivity is provided by demonstrating how a continuous process of reflection on the research process shaped this study.

2. The importance of midwifery knowledge

The findings of the Delphi Study, discussed in Chapter 8, have served to shed light on the meaning of midwifery knowledge (MK) and its importance in contemporary maternity care. This lies in MK’s woman-centred holistic approach, its focus on normality rather than risk and its determination to provide the most gentle safe solutions even in complex situations labelled ‘high risk’ within the medical model. The importance of MK is upheld by recent government documents. These include the National Service Framework (NSF) for Children Young People and Maternity Services (2004), Maternity Matters (DH 2007) and Towards Better Births (2008) which together advocate a strong midwifery focus for maternity care and support client choice in how maternity care is accessed, the type of antenatal and postnatal care received and about the place of birth. The Darzi Report (2008) strengthened this woman-centred, midwifery-led focus in its assertion that women desire a high quality maternity service that provides choice and individualized midwifery care. Darzi also confirms the importance of the team approach to care which is advocated by the World Health Organisation (WHO 2010; Gilbert and Yan 2010), as does a Department of Health report on delivering high quality midwifery care which states: “Sharing clinical skills resources and training with other health professions (particularly obstetrics) will also improve team working and the ability to apply training into practice settings” (DH 2009 p.24).

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2.1 Medical students benefit by learning from midwives

Such emphasis supports one of the key themes of this thesis that medical students have benefitted and continue to benefit from learning about antenatal care, childbirth and postnatal care from midwives. An understanding of midwifery knowledge or the midwifery model of care is an important aspect of this interaction. This is not just a UK trend as medical education programmes internationally are turning to midwives to facilitate medical students' education about normal birth. The significance of such interaction was demonstrated in an empirical study by Hanson, Tillett and Kirby (2005) who reported that medical students demonstrated an increased awareness of the role and capacity of the midwife when they had worked with midwives in maternity care settings. Furthermore, such medical students looked forward to future collaboration with midwives. A recent survey of medical schools across Australia and New Zealand concluded that the most important outcome for medical students during obstetric placements is to gain an understanding of the normal processes of pregnancy and birth (de Costa 2008). Many of these centres of medical education are expanding the way in which midwives are involved in medical education to facilitate just such an emphasis on normality. Ament asserts that: "Many important improvements in obstetric practice over the past thirty years have resulted from obstetricians adopting some of the beliefs and methods associated with midwifery" (Ament 2007 p.33).

In the instance of the medical students participating in the case study phase of my research, one of the learning outcomes for their obstetric rotation specified that they should observe and participate in the care of women experiencing normal birth and that this should take place under the tutelage of midwives.

3. Developing the data collection scenarios

Data from the Delphi survey were used to develop the scenarios for the second stage data collection. This included, not only the main themes but also a wide range of concepts discussed by the Delphi respondents such as normality, client choice, empowerment and an understanding of the physiology associated with pregnancy, labour and breastfeeding. These all constituted aspects of either midwifery knowledge or of the midwifery model of care. The scenarios portrayed antenatal, intrapartum and postnatal situations as these were the areas in

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which medical students received the most exposure to midwifery knowledge or to a midwifery model of care through working with midwives.

Figure 9-1 Scenario Development

Normality	Communication	Evidence Based Practice
Assists transition to motherhood	Good Outcomes	Radical
Empowering	Autonomy & Choice	Multi-faceted practical

To develop the three scenarios I returned to the Delphi study data and grouped concepts which the respondents had proposed as evidence of midwifery knowledge. I then considered what aspects of antenatal, intrapartum and postnatal care the medical students would be exposed to which might relate to these concepts. It is not easy to describe how PBL scenarios are developed as it is a creative process and a skill which has been honed through years of practice.

However, for the first scenario I considered labour and using the grouped terms, I considered pain and how a midwifery interpretation of pain might differ from a medical one by seeing pain as a normal, transformative and empowering part of labour. I imagined a midwifery and a medical student discussing their interpretations of pain and how seeing women in pain made them feel. The script for this scenario did not indicate which part of the dialogue was spoken by which student to avoid any stereotyping of supposed medical or midwifery perspectives.

The development of the second scenario followed the same process and while considering the grouped terms in light of the students' antenatal experience I thought of discussions around induction of labour. I considered communication issues, the woman's autonomy and choice and how all parties would be concerned with a good outcome. The scenario in which a medical student is asked to discuss induction of labour with a woman who does not wish a medical induction grew out of these concepts.

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For the final scenario I again considered my grouped terms in relation to post natal care. The respondents in the Delphi survey had discussed how midwives might use medical knowledge or scientific evidence to create their knowledge. I thought of the radical knowledge of midwives, in the sense of getting back to the root of midwifery knowledge and considered how midwives have passed on knowledge to women to help them give birth and care for their infants over the centuries. To me this also embodied the concept of knowledge which is multi-faceted and practical. A scenario about breastfeeding combined these concepts.

3.1 Scenario 1

The first scenario (Appendix 2) describes two students discussing their feelings about seeing women experiencing pain in labour. They wonder whether the discomfort of caregivers ever results in women being offered analgesia and question whether women's fear of pain could be a factor in the rising caesarean section rate. One of them recounts a cultural saying about the pain of labour increasing a woman's love for her baby and asks what that might mean. This scenario was presented to the medical students at the first interview and was then re-presented at each of the following interviews. The justification for this was that students received more exposure to intrapartum care than to either antenatal or postnatal care. They were allocated more time working on the labour ward than on the antenatal/postnatal wards, both at the Teaching Hospital and at the District General Hospitals (DGH) where they spent part of their placements.

3.2 Scenario 2

The second scenario (Appendix 2) describes the experiences of a student working in an antenatal clinic with a midwife where he meets a woman at 'term plus ten days' who refuses a medical induction of labour. In reality few students availed themselves of the opportunity to work in the community with midwives, yet most students did participate in hospital antenatal clinics. Several students reported experiencing this situation in practice. The scenario was presented to students at the second interview and again during the final interview.

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3.3 Scenario 3

The final scenario (Appendix 2) revolved around new parents experiencing breast feeding problems on the sixth postnatal day. The new mother worries about her infant’s ‘lack of routine’ while her partner tries to help her rest by giving the baby a bottle at night. This scenario was one that students would not have encountered unless they had worked with a community midwife. However NETH has received Baby Friendly certification from the World Health Organization (WHO) and extensive information about breast feeding is displayed on the walls of the maternity unit. Therefore, students who did not experience postnatal care in a home setting would still have had some exposure to the topic of breast feeding.

3.4 From learning themes to interview prompts

For each of the scenarios, I developed a table of learning themes (Figure 9-2). These would be analogous with the ‘learning outcomes’ which are developed as part of the PBL process during educational group sessions.

Figure 9-2: PBL Scenarios/Learning Themes

Scenario 1	Scenario 2	Scenario 3
“Overheard in the Coffee Room”	“So What Do I Say Now?”	“Infant Feeding: Does it Really Matter?”
Professionals’attitudes toward pain in labour	Reasons for IOL	BFI Standards
Causes of labour pain/ reactions to pain	Placental function	Adjusting to parenthood
Physiology of labour/ hormones involved	Determining gestational age	Physiology of lactation
Vocalisation in labour	Consequences of post-maturity	‘Latching on’
Cultural beliefs about pain in labour	Natural methods of uterine stimulation	Nipple Confusion
Support in labour	The midwife’s role	Infant sleep/ behaviour patterns
Reasons for rising caesarean section rate	Informed choice	Supporting new parents

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This is congruent with established practice during curriculum development when PBL is used as a teaching and learning methodology (Wood 2003). The ‘learning outcomes’ or themes represent expectations for students’ knowledge acquisition on the part of the educator(s) developing the scenarios. This is usually done as a joint exercise and as such, I presented the three scenarios to a panel of four educators experienced in designing PBL scenarios and facilitating PBL groups, asking them to describe the ‘learning outcomes’ or themes they would associate with each scenario. This served as validation for the scenarios and confirmed that the students might realistically discuss some or all of these themes during the data collection. However, the purpose of the scenarios was to explore how medical students constructed their knowledge about pregnancy, birth and postnatal care rather than to test knowledge. In other words, there were no correct or incorrect responses to the scenarios; they were useful starting points for discussion on the themes of antenatal, postnatal and intrapartum care and the students’ own experiences and construction of knowledge in relation to these. Because of this, the learning outcomes/themes were not directly used as interview prompts. Rather an awareness of the areas available for exploration served as a focus during the interviews which in turn provided clues about where I, as the interviewer, might wish to provide prompts to clarify or extend the discussion with students. These took the form of open questions such as “Can you tell me more about that?”; “Have you heard any other advice given to women ?”; “How did that make you feel?”; “Why do you think that might happen?”. This type of prompting is congruent with the effective interviewing skills (Gilham 2000) which are discussed further on in this chapter.

4. Sampling

Once I had completed the development of my data collection tool for the longitudinal study and negotiated the shoals of ethical approval, my next task was to select a sample of participants for the data collection process.

Choice of sample is an important aspect of research as an adequate and appropriate sample affects both the quality and successful outcome of the investigation (Morse 1991; Coyne 1996). While some qualitative studies adopt quantitative sampling techniques, Bluff (2006) points out that this is an inappropriate strategy. Although it may be done in an attempt to

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increase the validity of qualitative research by demonstrating applicability across a population, such strategies only point to a lack of understanding about the objectives of qualitative research. Kvale (1996) suggests that sampling is an imprecise science in qualitative research as the researcher must make decisions based on the needs of each individual research project.

4.1 Sampling techniques for qualitative research

There are several methods of sampling that are appropriate for qualitative research. These include the purposeful or purposive (Morse 1991) sample where the research participants are chosen because they match in some essential way the criteria for the research purpose. The purposive sample should seek, not only participants typical of the requirements, but also those who are atypical to ensure that the sample covers a range of possible views. This was one aspect of the sampling strategy used for the Delphi survey into midwifery knowledge.

Another qualitative sampling technique, snow ball sampling (Morse2007), alternately known as snowballing or chaining (Mertens 2005; Bluff and Cluett 2006) was also employed in both phases of the study. This technique uses selected participants to recommend or recruit further informants for the study. Its application to the Delphi Study has been discussed in Chapter 7. In several instances, during the Case Study research, I was able to recruit further participants due to a student whom I had previously recruited suggesting that a colleague might agree to participate in the research.

Other methods used in qualitative research to select a sample are cluster sampling, multi-stage sampling, volunteer sampling, non-probability sampling, theoretical sampling and convenience sampling (Denscombe 1998). Non-probability sampling means that the sample is not a subset of a general population and therefore encompasses most methods of qualitative sampling. As qualitative research does not make claims of generalizability for a particular population this is normally not a problem for qualitative researchers.

Multi-stage sampling is a technique whereby a sample is chosen and then a further sample selected from within the larger group (Babbie 2010). For instance, a cohort of students might

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be chosen to participate in a particular research study, but within that cohort the researchers might want to select those students having particular characteristics (a purposive sample) or may just wish to reduce the sample size.

Cluster sampling involves choosing research participants because they are together in one place while theoretical sampling is a technique largely restricted to grounded theory (Morse 2007). This involves choosing new research sites or research participants to compare with previous samples. Volunteer sampling is a component of all sampling methods as no participants should ever be coerced into participation and convenience or incidental sampling refers to a choice of sample simply because it is available (Mertens 2005). While Denscombe (1998) advises that convenience sampling is a method which has certain weaknesses, he concedes that some aspect of convenience probably influence most choice of samples.

4.2 Selection of the case study sample

My choice of a sample for the longitudinal case study aspect of this project involved several sampling methods. The sample was partially purposive as I intentionally elected to elicit the views of medical students in a unit where I knew that they were given opportunities to work with midwives. However, I had no opportunity to extend the selection to medical students with particular characteristics as the students self-selected whether or not to participate. The sample could also be said to be a convenience, or non-probability sample (Morse 2007) as I recruited from groups of students who were available during the time allocated for the data collection stage of the research. The students were given the opportunity to volunteer individually following a short presentation about the research project to the entire student cohort.

Fortuitously, this self-selection resulted in a mixture of both gender and ethnicity. However, regardless of race, cultural background or gender, I perceived the students as quite homogeneous in some respects. These were all bright young people, very self-assured, with good academic backgrounds and from supportive, educated families. They all had high expectations of achievement. There were no mature students or students from disadvantaged socio-economic circumstances within the sample.

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While Speziale and Carpenter (2007) insist that samples should, where possible, include members of ethnic minorities, it is important that the researcher avoids tokenism (Reich and Reich 2006). While it is valuable to gain different perspectives, and a participant's perspective is gained from his or her life experiences including gender, class and culture, research participants cannot be said to be representative of the cultural or racial background from which they originate (Jones 2006).

While it is accepted that the right sample is essential to obtain the best data and therefore arrive at the most interesting, revealing, or useful findings (Mertens 2005), Curtis et al (2000) note that methodological discussions often focus more on data collection and analysis than on sampling. This echoes the assertion by Morse (1991) that there is little concrete guidance available for qualitative researchers. However, far from being detrimental, this ensures that the researcher thinks carefully about the individual project and the sampling requirements. The necessity of having to work things out in practice is an essential skill for the qualitative researcher and is congruent with the fluidity of this category of research (Johnson et al 2001). As each study undertaken is a possible learning experience, lessons learned can and should be incorporated into subsequent research projects. The uncertainty of sampling, together with other aspects of qualitative research, only serve to develop the reflexivity so essential to the qualitative researcher. My reflections on this process will be discussed at the end of this chapter.

4.3 A sample of thirteen medical students

The thirteen students who volunteered to participate were all fourth year medical students doing specialist clinical rotations and spending approximately six weeks in each area. Eight of the students were female, two from British Asian backgrounds and six from white British backgrounds. Five of the students were male, one of these was from a British mixed cultural background, two were overseas students and the other two were from white British backgrounds. The student names have been anonymized to protect their privacy. I have called the male students: Al, Ben, Carl, Danny and Edward. The names I have assigned to the female students are: Frances, Grace, Helen, Isobel, Jasmine, Karen, Linda and Marie. The

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names do not relate to an individual's ethnicity or culture and were simply allocated alphabetically to assist me in developing a narrative of their collective experience.

5. The Interviews

The next stage of the research process was to interview the medical student participants. My research protocol specified interviewing each student three times following the pattern of clinical interviews recommended by the Assessment of Competence in Nursing and Midwifery (ACE) Report (Schostak et al 1994). While this report's recommendations concerned assessment of education in practice, the premise that knowledge and skills in practice can be assessed as they develop over time is also applicable to research interviewing. By interviewing each student on subsequent occasions, and by re-visiting topics discussed previously I was able to observe knowledge construction and with it, changes in attitudes about the topics under discussion. As all students spent part of their placements in District General Hospitals (DGH) I made every effort to visit the students at the DGH as well as at their base hospital which I have identified only as a 'northern English teaching hospital' (NETH). In a few instances distance made this impractical or it was not possible to arrange a mutually convenient time for a visit. Therefore while all medical students completed two rounds of the interview process, six did not have a third interview. However, to ensure all students had the opportunity to thoroughly discuss each topic area, I compensated by arranging extended final interviews for those students I was unable to meet during the mid-point of their placements. Therefore, all participants were interviewed at the beginning and end of their obstetric placements, while seven out of thirteen students also participated in midpoint interviews. The six remaining students had extended final interviews to facilitate adequate discussion about the second and third scenario.

5.1 The art of interviewing

While the participants brought their experiences and their reflections on those experiences to the interview process, I considered that my most important contribution was a quality of active listening. Active listening engages the researcher in a process focusing attention on the research participant in which the researcher confirms understanding through the use of techniques such as repetition or clarification to confirm meaning (Stewart and Thomas 1995;

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Scarnati 1998). By listening actively, the researcher is able to truly focus on the research participants, facilitating an enhanced understanding of the meaning behind the words (Fredriksson 1999). To be able to recount the narratives of the informants both accurately and sensitively while at the same time extracting meaning from the dialogue, the researcher must differentiate between passive hearing and active listening.

Although qualitative data can be gathered through the use of all five senses, listening is arguably the qualitative researcher's most important skill and is also a requisite for effective clinical care (Razavi and Delvaux 1997; Chambers-Evans et al 1999; Trumble et al 2006). The qualitative research interview encourages sharing or story telling and thus enables the researcher to gain a more authentic picture than the typical clinical interview, which focuses on fact-finding (Chambers-Evans et al 1999). However, Kvale (1996) counters this view of the research interview as being a more open and informative conversation than the interview which occurs between clinician and client, suggesting that researchers have a limited amount of time to establish an atmosphere in which informants feel safe enough to talk freely and disclose their authentic thoughts and experiences. Alternately, there is a danger that the line between attentive listening and therapeutic listening may be crossed by interviewers without either the time or training to deal with issues that may arise (Kvale 1996).

Scarnati (1998), writing from a leadership perspective, points out that active listening involves certain identifiable learned behaviours. These include acute attention to detail and using senses other than hearing such as sight and feelings in the process of listening. Practical advice includes: maintaining eye contact, allowing the person to whom one is listening to talk without interruption, being patient and listening for the 'meaning beyond the spoken words' (Scarnati 1998 p.80). Scarnati also advises watching for non-verbal cues such as eye and hand movements and recommends occasional summary feedback to clarify accurate meaning.

Denscombe (1998, p.127) advises of the importance of non-verbal communication and the ability to 'read between the lines' of the interview transcript. Researchers rarely receive training in these areas and are left to discover such skills in practice, either as clinicians or as

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qualitative researchers. I found an exercise advised by Denscombe (1998) very helpful to me: that of reading the interview transcripts, or listening directly to the audio-taped dialogue, and changing the focus from the informants' words to my own. This enabled me to evaluate my interview techniques against standards of good practice such as those of Scarnati (1998), May (1991) or Denscombe (1998).

May (1991) calls research interviewing a dynamic process requiring on-going adjustment during and between interviews when the process becomes increasingly more focused as the researcher learns more about the social world of the participants. This is part of the reflexivity required by the qualitative researcher and should be made explicit when writing up the research report or disseminating findings. If this is not done, May warns, the credibility of the research may be questioned. May proposes that the three standards against which interview skills can be evaluated are: 1) establishing rapport; 2) eliciting information without excessive control over either the flow or the nature of that information; 3) accurately recording information.

Denscombe (1998) suggests a number of essential components of effective interviewing. These include: sensitivity, attentiveness, toleration of silences, effective use of probes, prompts and checks, a nonjudgemental attitude and respecting the rights of informants.

While I found both May's and Denscombe's advice about effective interviewing helpful and strove to incorporate these into my interviewing, I would agree with Kvale's (1996) assertion that developing effective interviewing skills is an experiential activity where a significant amount of learning takes place in the process of doing. I viewed the opportunity to interview medical students as part of my learning journey and used the experience to review and improve my own interview technique. This was not always an easy task as it was sometimes humbling to reflect back on an interview or to review interview transcripts and find that I could identify areas for improvement. However over the period of the interviews I learned to feel more comfortable with prolonged silences; I taught myself to resist the temptation to assist a participant struggling to complete a thought; and I became more consciously aware of the non-verbal cues which sometimes indicated differing layers of meaning. This promoted a

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richer narrative interpretation than would have been possible by just reading the words of the participants as they appeared following transcription in isolation from the social interaction of the interview itself.

5.2 Reflecting on the interviews

Reviewing my own participation in the research interviews required both reflection in action and reflection on action (Schon 1987). By going back over an interview following its completion I was able to identify areas to be aware of or to work on in subsequent interviews. I could then use reflection-in-action to check my technique during the following interview, thus continually reviewing my interview skills and striving to improve the quality of listening which I brought to the interview process.

5.3 Awareness of positionality

I also became aware of the issue of positionality (Rose 1997) and how this might affect my interactions with the medical students, influencing both what they said to me and how I interpreted those words or statements. Positionality refers to the way in which the researcher is perceived by research participants due to: power, gender, class, culture or occupation and how, in return these things shape her perception of the social world under investigation. Awareness of positionality encourages reflexivity in the research process as the researcher must surrender any pretence to be a neutral and value-free observer and instead acknowledge the specific circumstances influencing the construction of knowledge.

Roberts (2001) warns that the researcher and the research participants' ideas about the position of the researcher may differ, leading to alternative interpretations of the research interview. In practice I developed an awareness of how my gender, my academic position, my age, my background in midwifery and even my American accent might alter the way that students related to me. As this awareness developed, I was guided by Herod's assertion that:

the research process is a social one in which both interviewer and interviewee participate in knowledge creation, and consequently, although the "outsider" and the "insider" may shape the process in different ways, it makes little sense to assume that one version of this knowledge is necessarily "truer" in some absolute and "objective" sense. (Herod 1999, p.315)

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This gave me the confidence to engage with the process of research dialogue using a heightened awareness and sensitivity concerning positionality. I was encouraged to consider the medical students' reaction to myself as an interviewer, but also as a midwife, an academic, an older woman and someone originating from a particular national culture which might lead the students to make certain assumptions about my beliefs or values. I was also able to reflect on how my responses to the students might be influenced by the power and position inherent in their role as students, as future doctors, and as individuals with the ability to greatly influence the outcome of my research. All of these factors had a potential impact on the power relationship between myself and the research participants. As Henry observes: "Depending on the many positionalities that either actor inhabits, power shifts both temporally and spatially throughout the research process" (Henry 2007, p.72) This increased awareness facilitated the development of enhanced listening skills enabling me not only to hear, but also to interpret the narratives which the students shared with me during a series of interviews. I strove to carry this sensitivity through the listening stage of the research interviews to the processes of data management and data analysis.

6. Field Notes

Interview skills were a crucial aspect of data collection. However, it was the use of field notes which enabled me to develop enhanced insight into the interview process, serving as an important adjunct to the interview tapes and written transcripts. The use of field notes is a topic that seems to be somewhat overlooked by many contemporary writers discussing qualitative research. It may be that in an age of electronic communication they are no longer considered important or it may be that recording field notes seems so self-evident, researchers do not bother to recount their use. In a review of over twenty research articles and texts, chosen because of their relevance to other aspects of my research, only six authors discussed field notes.

In a further electronic search using the terms 'field notes' and 'research' the results were equally limited. Out of ninety-four hits, only a small number actually mentioned field notes, and most of these discussed them in the most cursory manner. In a perverse way, this

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illustrated the importance of including a discussion about the use of field notes in the research management section of my thesis. I used field notes and found them valuable; in one instance when tape recorded data was accidentally damaged, they proved more than just valuable, in effect, a life-line that allowed me to retrieve my lost data.

At times I found writing field notes tedious. After having completed one or more interviews at the end of a long academic day I wanted to put my tape recorder and research folder away and not look at them until the next time they were needed. However, by making notes about each interview, or by jotting down the major points of each interview as it took place, I seemed much more able to retain salient facts about the data. The contexts were clearer and that greater clarity was of untold benefit when I began the long process of data analysis.

Groenewald (2004) supports the importance of field notes, calling them an alternative data storage facility. He classifies field notes into four categories: “observational, theoretical, methodological and analytical” (Groenewald 2004, p.69) but warns that researchers must retain a balance between descriptive and reflective notes. Too much reflection, according to Groenewald, serves to illuminate the researcher rather than the research participants.

Speziale and Carpenter (2007) describe eight dimensions relating to field notes as: “actors, activities, objects, acts, events, time, goals, feelings” (Speziale and Carpenter 2007, p.214). In other words, the authors are suggesting that these are the areas around which a researcher might wish to keep field notes. The actors relate to the researcher and the research participants, while the other areas are self-explanatory. If there is an activity taking place which seems significant, the researcher should write about it. Feelings elicited during the research should be described, and perhaps later analysed. Goals identified during interviews should be recorded. The dimensions relating to field notes help researchers decide what to record, but how to record field notes is also important. Speziale and Carpenter (2007) suggest that field notes can be divided into descriptive, focused or selective accounts. Conway (2003) values the use of field notes as a way to maintain the researcher’s reflexivity and help to identify significant narratives within the data. Polit and Beck (2006) divide field notes up into what they describe as field diaries or logs, and field notes. Logs, they suggest, are more

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descriptive while field notes are more interpretive and analytical. However, this is a somewhat artificial distinction as other authors describe field notes as being both analytical and descriptive, depending upon how they are used. Polit and Beck themselves seem a bit unsure of this distinction as they say that field notes can be: “descriptive, theoretical, methodological or personal” (Polit and Beck 2006, p.307). Denscombe (1998 p.151) calls field notes “urgent business” and advises researchers to complete field notes as soon after, if not during, data collection to ensure nothing significant is forgotten. This time should, ideally, be built into the research schedule. However in the real world most researchers combine research with other academic or clinical responsibilities. Creating protected time for the researcher to complete all the various tasks that contribute to the research process may not mirror the reality of academic or health professional life.

In the first phase of my doctoral work, the Delphi Survey, field notes were unnecessary as no face-to-face contact with informants was involved. The study took place using a selected sample of experts and all communication was by e-mail with one exception where postal correspondence was used. In the second phase of research, the longitudinal case study, field notes were a very useful adjunct to the research process. Written field notes, in addition to recorded and then transcribed data, enabled me to gain a greater sense of both the context of the research and the importance of issues raised during the research dialogue. When I later started the process of analysis I listened to the audio-tapes of the interviews, read the transcripts and reviewed my field notes. Taken together, these three activities gave me a clear impression of my informants and allowed me to interpret patterns and trends arising from the data. In effect, this became a form of triangulation (Cluett and Bluff 2006) which improved the rigour of my work. At times, while re-reading my field notes and listening to the interview tapes, the informants seemed more vivid to me than they had at our actual encounters. This was aided by the use of what Speziale and Carpenter (2007 p.212) call the “verbatim principle”, recording the actual words of the informants, rather than an interpretation of those words which makes the data come alive when it is re-visited. Therefore, for me field notes were a necessary and very useful adjunct to research tapes and transcripts. Indeed, as Groenewald points out, field notes: “are already a step toward data analysis” (Groenewald 2004 p.5).

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7. Data analysis

Indeed, field notes were an important first step in the process of data analysis as they were an initial opportunity to revisit both the data and their context. Data analysis, as is true of other aspects of qualitative research, is a creative process requiring reflexivity on the part of the researcher. While arguments can be advanced for using a structured method of qualitative analysis of which Burnard's (1991) fourteen-stage process is an example, these are, in reality simply guides to assist the researcher in putting the data into some form of structural framework. What is important for the researcher is to develop a deep sense of the meaning within the data. This is manifested because the researcher collected certain data using particular data collection techniques and then organized it and thought about it in a unique way.

7.1 Constructing the story

Thorne et al (2004) suggest that findings can not be said to emerge from the data and that participants do not have an independent voice. Instead, they propose that it is the researcher who creates the findings and decides which words of the research participants merit closer scrutiny. A constructivist perspective while conceding that knowledge is constructed, not found or discovered, views this process as a collaboration between the researcher and the research participants (Finlay 2002). However, the ultimate responsibility rests with the researcher as the instrument through which knowledge is filtered. Therefore, according to Rodriguez (2002) the qualitative researcher has a responsibility to create a compelling narrative from the data. In fact, Rodriguez goes so far as to describe a vigorous pursuit of objective truth as delusional or dangerous and advises against computer assisted data analysis as this may give a false sense of objectivity and limit creativity. This confirms Mauthner and Doucett's (1998) warning that computer aided analysis confers a false sense of scientific objectivity to what should be a creative and highly reflective process. Kelle (1998) however suggests that arguments about the dangers of methodological bias arising from computer analysis of data have been over-emphasized as software's primary function is the organization and retrieval of data. The researcher's creative interpretation of the data remains the most important component of qualitative analysis (Kelle 1998; King 1998; Mauthner and Doucett 1998; Rodriguez 2002).

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7.2 Organizing the data

King (1998) confirms that much of what is termed data analysis is primarily organization of data in preparation for the authentic creative work of qualitative analysis. He concedes that computer packages have advantages in the ease with which they can do this. While I did find the deep immersion in the data necessitated by manual analysis beneficial, failure to identify an appropriate software tool, which would work easily across platforms and mastering its use within a limited time frame was the biggest constraint to my use of a software analysis package.

Perhaps the most poetic observation about truth in qualitative research comes from Doyle (1997) who says that:

truth is a floating value, akin to a swirl, that lies somewhere among the vectors of observation (direct experience), rigorous conceptualization (evidentiary argument), and communal understanding, ...the truth we are seeking is not unlike the truth of a story: A truth that taps into our shared comprehension of a phenomenon. Each rendering provides insight, expands understandings, and pushes credibility, but none settles it for once and for all. (Doyle 1997, p.96)

To me, this resonates as an excellent description of the aims of qualitative research: to be able to develop a story or narrative that illuminates a particular phenomenon, to provide insight that is perhaps not the only possible insight but that nevertheless spurs the listener on toward some type of action or response.

7.3 Analysis and crazy quilts

Ausbon (2006) also uses creative metaphor in her depiction relating the process of qualitative research to quilting, saying that careful selection and piecing together of the data will result in something beautiful but perhaps with some surprises when seen in its totality. She does however advocate the use of a pattern both for piecing a quilt top and for conducting qualitative analysis. This made me wonder whether she had ever attempted making a crazy quilt. The fabrication of a crazy quilt can be described. It is a skilled and skillful endeavour but the quilter is the instrument, piecing fabric together and comparing each stage of the

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process to the vision in her head. Crazy quilting would seem to me, to be a better metaphor for qualitative data analysis. A detailed pattern formula may be a useful learning stage for the novice researcher, just as a traditional quilt top pattern is for the beginner seamstress. Both may graduate to working more creatively and intuitively as their knowledge and skills develop. Indeed, this has been my experience as I have progressed beyond research undertaken at Master's level.

7.4 The how, what & why of qualitative analysis

To understand the 'how' of doing qualitative analysis, first it is essential to understand the 'what' and the 'why' of qualitative data analysis. Roberts (2002) critiques the common assumption that it is the use of numbers against the use of words that differentiates quantitative and qualitative analysis and points out that qualitative researchers often indicate that they are in fact counting occurrences by their use of words such as: frequently, often or seldom. Instead, Roberts offers the advice that qualitative researchers need to think carefully about what they are trying to describe. King (2008) proposes that it is not the frequency with which it appears that signifies the importance of a theme, although he agrees that repetition may signal a need to further investigate the pattern of occurrence. A theme which illuminates a core narrative or expresses deep emotion can be crucial to the analysis of a data set even if it appears infrequently or in a single instance, according to King. The process of reflexivity enables the researcher to engage deeply with the data and thus comprehend the significance of a particular theme (Finlay 2002). This deep engagement can be a very personal process and may leave the researcher open to criticism of presenting a biased interpretation of the data (Mauthner and Doucet 2003).

7.5 Subjectivity and ambiguity

Riley (1990) suggests that there are two inherent limitations in qualitative data analysis: first that the researcher can offer only her own interpretation, and secondly that the possibility always exists for other interpretations. However Finlay (2002) argues that reflexivity transforms this very subjectivity from a problem into an opportunity. This view of subjectivity as opportunity confirms Denscombe's (1998) assertion that in the richness and detail of qualitative data there is room for a tolerance of ambiguity and the possibility of

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alternate explanations. Qualitative analysis is a way of making sense of a social world that has been observed, discussed, read about, listened to. It uses the five natural senses of the researcher as well as the sixth sense of intuition in order to comprehend a phenomenon. There are many reasons why qualitative analysis is used. Qualitative analysis enables a rich and multi-layered portrayal of the phenomenon being studied. It can reveal a more complete picture of a particular phenomenon than a numerical interpretation, and should act as a catalyst either to the development of new hypotheses or novel theoretical insights and ultimately should result in action being taken. Qualitative research provides interpretations about how the world is, but also creates signposts for change (Roberts 2002).

7.6 Themes, coding and chaos

Qualitative analysis starts with an attempt to organize the data so that themes can be identified. This involves some form of coding or attaching labels to portions of data (King 1998). Thorne et al (2004) warn against coding too early or too extensively, suggesting that a degree of chaos is a necessary adjunct to qualitative analysis and an aspect with which researchers must learn to cope. McAuliffe (2003 p.62) calls this 'drowning in data' and this foreshadowed my experience in the second phase of my study when I developed a real awareness that the authentic task of analysis lies not in how the data is organized but how the researcher thinks about the data. Riley (1990) suggests that many researchers find it hard to stop collecting, re-reading or listening to the data and actually commence the creative work of interpretation, that is, exploring the data intellectually. She points out that an extreme emotion of anxiety is typical at this point, as researchers feel inadequate and unsure of whether they will be able to find the right interpretation or even any interpretation of the data. As comforting as it is not to feel alone in one's isolation and panic, Riley (1990) offers further reassurance by insisting that these feelings will be tempered by other emotions such as excitement about discovering new knowledge and joy in the simple creativity of analyzing the data and preparing the research report.

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8. Using template analysis

In the second phase of my research, I faced the much larger and more complex data set of the case studies. Prompted by a recommendation from one of my supervisors, I chose to utilize Template Analysis (King 1998) and therefore an early stage of my data organization was to create a priori or tentative templates which I could then employ to code the data. Templates can be interpreted as temporary themes which can be developed or changed during the process of data analysis. During the data collection and transcription, the researcher begins to engage with the data, developing a preliminary sense of the important issues that can be constructed through this process of engagement. These early impressions can be used to develop templates and indeed, King (1998) suggests that template development can not be seen as a completely separate stage to the analysis of data. However, my earliest stage of data organization was grouping data according to the PBL scenarios used in their collection and in so doing I engaged in some preliminary discussion and analysis. I recorded this early stage of engagement with the data in my research diary and have used material from this to develop Chapter 10 in which data from the case study research is presented and discussed. My next stage in the organization and analysis of the data was to code the data under the headings of my a priori templates (Figure 9-3).

King (2008) recommends that researchers using constructivist methodologies should limit the number of a priori templates. One of his suggestions is to use interview questions or prompts as a starting point for template development. However, my use of the data from the Delphi Study to create a priori templates helped to link the two phases of the research together more coherently. The concepts describing midwifery knowledge which I had used to construct my data collection scenarios provided a firm foundation for the data analysis. Being mindful of King's (2008) advice that researchers using constructivist methodologies should limit the number of templates I selected five topic areas as my templates (Figure 9-3). I was aware that these might alter as I engaged in the process of analysis.

Figure 9-3: Preliminary or a priori templates

NORMALITY	GOOD OUTCOMES
AUTONOMY & CHOICE	EVIDENCE BASED PRACTICE
COMMUNICATION	WORKING WITH MIDWIVES

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The sixth template : WORKING WITH MIDWIVES was added as this underpinned the entire study. I wanted to discover what medical students’ experiences of working with midwives were and whether this experience influenced their construction of knowledge about birth.

8.1 Coding within the templates

Once templates have been developed, data categories can be organized or coded within the templates. I therefore used the templates developed from the Delphi data to code the entire case study data set. During this process some of my original templates altered as my analysis gained more depth. In some instances this meant that a template was replaced as I developed a new understanding of the students’ narratives, while at other stages this involved lower order coding to refine and explain categories. King (1998) advises that what he terms broad, or higher order codes can be used to provide an overview while lower order codes can refine distinctions within and between categories. Some examples of how templates changed during the interview process are shown in Figure 9-4 while figure 9-5 shows the templates in their final format.

Figure 9-4 Evolving templates

NORMALITY	WORKING WITH MIDWIVES	COMMUNICATION	EVIDENCE BASED PRACTICE
<p><i>“Having a vaginal birth is such a special thing”</i></p> <p><i>“An epidural complicates labour”</i></p>	<p><i>“Very scary, you know, witchy woo” (laughter)</i></p> <p><i>“The midwives were always willing to teach”</i></p>	<p><i>“They build up a supportive and trusting relationship”</i></p> <p><i>“You have to be quite forceful”</i></p>	<p><i>“You can understand why normal women can’t breastfeed”</i></p> <p><i>“All the women I was looking after had CTGs”</i></p>
<p>Valuing Normality</p>	<p>Witches or Wise Women</p>	<ul style="list-style-type: none"> • Communication to Develop Rapport • Communication for Persuasion 	<p>Authoritative Knowledge/Medical Hegemony</p>

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Figure 9-5: Final Themes

Witches or Wise Women	Communication for Persuasion
Valuing Normality	Authoritative Knowledge
Communication to Develop Rapport	

8.2 Beginning the analysis

I continued the coding process revisiting previously coded data each time I altered a category or template to ensure that I had not missed anything in previously coded data. This stage was primarily concerned with data organization although organization and analysis start to meld as the researcher delves deeply into the data and begins to form impressions of what is interesting or important. Nebulous patterns are created in the interface between researcher and data and thus the data begins to make sense. At this stage I re-read each interview transcript and listened again to the recorded interviews which helped me to gain a clear feeling for the narratives of the individual participants. Rodriguez (2002) describes narratives as compelling reminders of our humanity; thus reviewing the participants' narratives assisted my recollection of them as individuals and reminded me about the life events and educational experiences which contributed to the way in which they constructed their knowledge about childbirth.

8.3 Reflexivity and right-brain thinking

This process of submersion in the participants' narratives helped to incorporate reflexivity into the analytical process. If I became tired or began to feel that my coding was becoming superficial, I employed structured reflection as well as a variety of creative techniques (Riley 1990, Stern 1991). These included: creating artwork which told the story of my thought processes; writing poetry, stories or Haiku about the data (Green and Freed 2005) or brainstorming using a mind-mapping approach (Buzan 2006). While these might be seen as lacking in serious intent, they actually were extremely productive techniques to allow 'right brain' thinking to take over (Edwards 2008). This helped me to see the data and emerging

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themes in a different way. If these were not fruitful I stopped and returned to the data at a later time.

8.4 Playing with the data

Thorne et al (2004) advise the use of a disciplined reflexivity to work through periods when data analysis seems dry or chaotic. This echoes Finlay's (2002) suggestion that reflection is the ideal tool to deal with times of ambivalence during data analysis. She urges researchers not to give up when they can not see connections, when they feel bored by the data or just don't know which way to turn. Reflecting at these junctures can provide fresh and insightful perspectives. Riley (1990) advises that researchers use creativity as part of the reflexive process of analysis and suggests playing with the data. There are unlimited ways of engaging in this play but Riley offers suggestions such as drawing pictures or diagrams, writing letters to friends, looking for 'missing' categories, asking hypothetical questions or engaging in 'brainstorming'.

Stern (1991) supports similar strategies during data analysis although she stops short of calling it play. Diagrams, drawing, mapping are all strategies she suggests to assist the researcher in making sense of the data. All of these techniques involve stepping out of one's logical brain and allowing the pleasure seeking, intuitive and imaginative 'right brain' to take over, often resulting in exciting and surprising new insights or interpretations (Flaherty 2005; Edwards 2008). I felt comfortable with these techniques during the process of data analysis as they are ones I often use in teaching, particularly the use of artistic media to enable students to gain new perspectives (Powley and Higson 2005). This reflects an increasing use of art in medical education to assist students in the development of skills which are difficult to situate within the traditional science based medical curriculum such as sensitivity, empathy and awareness (Weller 2002; Reilly et al 2005). The arts are also being developed as a teaching methodology in midwifery education (Jackson and Sullivan 1999; Walker 2007; Davies and Wickham 2007) and art has recently been proposed as a creative method of reflection which enables students to explore their authentic reactions to situations from practice (Whitney 2010). This introduction of creativity adds another dimension to research as it does to teaching.

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8.5 Synthesis

The final stage of data interpretation was the synthesis that occurred while writing about my findings. While templates and codes provided clear patterns of data analysis, the creative art of writing revealed a richer and more vibrant interpretation of the data. For myself, writing is part of the process of analysis, a method of engaging with data in an artistic dance, which creates patterns and shadows and ultimately reveals the heart of the research story. Clare and Hamilton (2003) support this stance in their discussion of post-modern research in which they suggest that the analysis of multiple perspectives can only be fully revealed in: “ the writing up of the research as a final story. The writing itself is therefore vital to such work” (Clare and Hamilton 2003, p.163)

Rolfe (2000) also describes writing as synthesis and suggests that knowledge is constructed through the creative process of writing. He describes the experience, familiar to most writers, of being surprised at what is revealed on the completed page and suggests that researchers don't always know what they know until they write it down. In partially incorporating the analysis within the writing, I was able to take the advice of Thorne et al (2004) and move:

beyond the theoretical framework from which the investigation was launched in order to advance the initial descriptive claims toward abstracted interpretations that will illuminate the phenomenon under investigation in a new and meaningful manner
(Thorne et al 2004, p.3)

9. Conclusion

Thus the management of qualitative data is a complex endeavour that is both experimental and experiential. Researchers experience a range of emotions from despair to elation with confusion, boredom and fatigue filling some of the middle ground between those two extremes (Riley 1990). Much of what is commonly described as analysis is actually organization of the data (King 1998) and there are no right or wrong ways to do this. Some researchers prefer to follow a well sign-posted path, gaining security from explicit directions. Others may choose to experiment, creating unique paths through the complexity of qualitative analysis. The authentic and most demanding part of analysis is the creative interpretation of the data (Rodriguez 2002). The researcher must balance her own need for

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reflexivity with the requirement to tell the research participants' narratives both faithfully and interpretively (Finlay 2002). Taking a playful or creative approach to data interpretation is one way to stimulate right brain thinking increasing intuitive interpretation and becoming open to surprise (Riley 1990; Flaherty 2004; Edwards 2008). It is possible to use both intellectual and intuitive thought processes in the analysis of qualitative data. The very best summary of the experience of qualitative data analysis comes from Thorne et al (2004) who suggests that: " Like the taste of a good wine, qualitative data analysis is best understood in the doing; it is inherently experiential rather than technical" (Thorne et al 2004, p.4).

Chapter 10

Case Study Data Presentation and Initial Discussion

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1. Introduction

This chapter presents data from the case study research together with some initial discussion. The first sections of the chapter focus on data derived from open questioning. This was used in getting to know the medical student participants initially and then to provide space for them to discuss their experiences as I met with them on subsequent occasions. The later sections of this chapter present the data from the three PBL scenarios which focused specifically on the provision of support or guidance to women in the antepartum, intrapartum and postpartum periods.

2. Medical Student attachment to midwives

In the maternity unit where this study was conducted, medical student attachment to midwives was managed on a day to day basis. While the students were encouraged to spend one or more full shifts with a midwife on the labour ward, there were no set requirements for how this experience should be organized. The students themselves arranged midwife attachments around gaps in their personal schedules. Allocation of midwife mentors depended on which midwife was acting as coordinator and on the midwives available during the shift on which the medical student wished to work. Despite these ad hoc arrangements observing and participating in normal birth under the tutelage of midwives remained one of the competencies the medical students were required to achieve during this placement (personal communication, Nesbitt 2008) and was clearly stated in the clinical workbook given to the medical students at the start of their obstetric and gynaecology rotation.

2.1 Understanding normality and the midwife's role

The students I interviewed appreciated time spent with midwives and felt it was important that doctors understood normal labour and the role of the midwife as the following data illustrate:

Edward: I'm so glad I've done a lot with the midwives, It's really been valuable. When on labour ward as an SHO you have to do the doctor things. You might not really understand what the other teams (midwives) do.

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Other participants focused on the importance of observing normal birth as this data illustrate:

Grace: Well I just think because we are never going to witness it ever ever again. So for instance if I choose to go into obstetrics, which I'm quite keen to do, I probably won't be involved in any of the so-called normal births. I'll be involved in the more complicated births and I think it's just really important to see a natural, normal delivery so you don't get completely biased into thinking that all deliveries are long and complicated and dangerous.

Some medical students valued the opportunity to observe holistic care:

Isobel: (Working with midwives is valuable for medical students) in terms of dealing with the patient as a whole and not just someone who has come into hospital to deliver a baby, the holistic point of view.

2.2 Valuing learning from midwives

The students indicated that they acknowledged the value of learning from midwives. The value of participating in the midwifery model of care (Rooks 1999) is recognized by the medical school at Brown University (USA), where students are required to care for five to ten women in labour from admission through to postnatal care, under the supervision of a Certified Nurse Midwife (CNM) (Afriat 1993). Non-interventionist techniques are taught to all medical students and residents within a culture which nurtures respect for others (Angelini et al 1996). McConaughy and Howard (2009), in their study exploring the role of midwives in medical education across the USA, assert that the the most significant benefit of involving midwives in medical education is exposure to the midwifery philosophy of normality.

The concepts of normality and holism were both mentioned by another participant when he talked about why he found it valuable to learn from midwives:

Ben: In terms of the midwives on the labour ward. I'm of the perception that they are better to teach us than the doctors themselves in the sense if you want to learn about the holistic, the whole treatment, the whole approach to women then midwives are probably better because they see them on a day to day basis and doctors only come in if complications appear so the only thing the doctor can really tell you is the abnormal. He can learn the normal but he won't have experienced it as much. So I would probably say midwives can teach you more than a doctor. It's always best to know the normal than the abnormal.

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2.3 Medical students' impressions of midwives

When I interviewed medical students at the beginning of their obstetric rotations, they expressed mixed feelings about the prospect of working with midwives. They talked about having heard stories about midwives, although some were quick to stress that these stories were about other midwives, not those working at the teaching hospital where they had been placed. This type of negative stereotyping is a well-known phenomenon (Fraser et al 2000); however, the students in my study were reluctant to repeat negative gossip about local maternity units and this may have been related to the issue of positionality (Roberts 2001) rather than the fact that they noted genuine differences between midwives and maternity units.

While I attempted to overcome the students' possible reluctance to speak frankly by reiterating the confidential nature of the research interview, students continued to tell me that the tales they had heard about midwives related to different midwives in other settings.

Students had very similar things to say:

Edward : There are these stories passed down by medical students about how scary midwives are. (Laughs) Very scary, you know, 'witchy-woo'.

Jasmine: You hear a lot of stories about midwives, but that's at (another) hospital

Frances: There is probably a preconception of medical students passed down the years about how scary some midwives can be. But I don't tend to listen to that kind of stereotype anyway. I know that if you're nice to someone, there's no reason why they shouldn't be nice to you.

Carl: I know there's loads and loads of stories about midwives and obviously every consultant has told us that those stories are basically wrong. Every consultant says the stories are wrong.

Danny: I don't know if other people have told you but midwives have got quite a fierce reputation amongst medical students.

Karen: Midwives have got this stigma that they're really scary and don't want you involved.

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Helen: *I was thinking “Oh No” cos you hear stories, don’t you, but she (midwife) couldn’t have been nicer, she was lovely.*

Ben: *There are stories about midwives, but all the consultants told us they were absolutely not true.*

The above data was typical of the statements made by students when asked about their expectations of working with midwives. The students’ words were usually supplemented by laughter but accompanying non-verbal cues seemed to express a genuine anxiety about working on the labour ward with midwives.

The medical students in this study also demonstrated insight into why midwives might not always respond positively to the presence of medical students, particularly on the delivery suite.

Edward: *Sometimes I think medical students often come across as being like “I’m here to see someone give birth” and I think that irritates people quite a lot.... medical students have got a really bad name for being bolshie and just walking in and saying “show me a birth” and I think we’re all suffering a bit from that.*

Jasmine: *I think medical students just try to pack a lot of experience in. Sometimes that can make us appear arrogant, like ‘let me do that!’ We don’t mean....um, it’s only enthusiasm...*

Danny: *Perhaps you have these preconceptions that they are not going to be the friendliest bunch and also there’s that sense of competition cos they’ve got their student midwives and you’re medical students so you are always very apprehensive*

However, the fears students expressed about working with midwives the first time I interviewed them were not upheld by their experiences and most students judged that the working relationship between qualified doctors and midwives was generally good with mutual respect on both sides. As one student said:

Ben: *I don’t think there’s an intrinsic problem between midwives and doctors. I think if they work together they can work well together and have respect.*

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However, another student suggested that midwives felt threatened by medical students particularly when the students asked questions:

Helen: Some midwives have been really helpful, some not. I wonder if the midwives know how much we need them. I think, we're not there to judge, to judge their medical knowledge, and ask them lots of technical questions, we just want to see them do their job and help them do their job so we can see normal deliveries and how they happen. And I think sometimes there is a communication problem between midwives and medical students because it is such a different profession. I don't know if they feel threatened because we ask a lot of questions, or think we try to judge how they do their job. But really we just think they are wonderful and do a brilliant job and we want to know how they do it

This observation interested me as most of the midwives employed in the local maternity unit, and certainly those mentoring medical students are now graduates, in line with current European and North American trends (Benoit et al 2001). Many have or are working toward Master's level qualifications. If Engel and Gursky (2003) are correct in their assertion that university based education alters professional status to the point that professional roles are no longer fixed in health care, then it would seem that midwives, who are all qualified mentors for midwifery students, should have no anxieties about teaching medical students. However, in obstetric medicine, there still appears to be a clear divide between the knowledge and decision-making role of the midwife and the more authoritative knowledge (Jordan 1997) of the obstetrician as ultimate arbiter of decisions about the care of women whose labours deviate from a medically-defined norm. This is reinforced by differences in status and potential income between midwives and doctors which has historical and gender-based roots (Fahy 2007).

2.4 Comparing midwives and nurses

A minor theme that recurred during the interviews was that midwives were perceived to be different in some way from nurses. Considering the issue of positionality once more, it is possible that students may have been aware of the common dictum that midwives dislike being called by the title: nurse, and were therefore telling me what they thought I, as a

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midwife, would like to hear. In fact, one student began a discussion of midwives by saying she knew midwives didn't like being compared to nurses:

Marie: I know midwives don't like being compared with nurses but we are so new to this and they are so valuable because they're the ones that do the jobs, the doctors just sit at the top and dictate and you learn more from a midwife than from a consultant who's got no time for you

On the other hand, the following data illustrate what seemed to be a common impression that midwives play an active role in clinical decision-making and therefore hold some mid-point position between doctors and nurses:

Carl: Midwives get more respect than nurses. They seem more experienced, they have more responsibility, they put themselves in vulnerable positions. Like doctors are incredibly vulnerable, they have to be the decision makers. Midwives are more than half way there, they've got a lot of responsibility. They have to deal with things, like the doctor might not get there in time. I think nurses pass things on to the doctor, but midwives will deal with a lot of the complications and things themselves. So that's why they get more respect, because of their position.

The student did not elaborate on whose respect counted in this instance, although presumably he was referring to doctors. Traditionally, it has been medical opinion that counts in the technocratic setting of the maternity unit (Davis Floyd 1992) just as it has been medical knowledge which was seen as the authoritative knowledge (Jordan 1997) on the hospital labour ward. While these authorities are now somewhat dated, there is little evidence that significant change has occurred in the balance of power in obstetric units (Keating and Fleming 2009).

The technology-dependent modern labour ward is a world far removed from the dark, quiet retreat usually chosen for mammalian parturition (Anderson 2002). Instead, childbirth occurs in an unnaturally bright noisy environment where medical protocols dictate the timings of normal labour (Simonds 2002; Kitzinger 2006) and where normality is assessed in retrospect, rather than being assumed in the absence of any threat to maternal or fetal well-

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being (Sargent 2002). However, there are signs that the midwifery model of childbirth is gaining increased respect both in the UK and elsewhere (Benoit et al 2001). One of the indicators is the increasing involvement of midwives in medical education which is providing not only a commitment to normality but also a model of maternity care which is both woman-centred and collaborative. (Loveridge and Fiander 2007; McConaughy and Howard 2009; Angelini 2009; Angelini et al 2009).

2.4 Positive experiences while working with midwives

None of the students reported having overtly negative experiences while working with midwives. The only data expressing dissatisfaction came from an interview with Helen who commented: '*I wonder if the midwives know how much we need them*'. She went on to describe some midwives as helpful, but others as not helpful. Helen recounted being gently laughed at by midwives for expressing panic when the CTG tracing on the continuous electronic fetal monitor to which the woman she was caring for was attached showed an unresponsive fetal heart rate, commonly referred to as a flat trace. The midwives' response could, in some circumstances be viewed as a manifestation of horizontal violence, or bullying (Ball et al 2002; Hastie 2006) but although it made Helen uncomfortable, she interpreted it as a rite of passage, which would act to trigger the memory that a fetus can manifest sleep periods during labour.

No other student disclosed an overtly negative encounter with midwives although Al seemed to capture the group's feelings about working with midwives when he said:

Al: Most of the midwives were very good....didn't mind when I asked a lot of questions and didn't make me feel stupid because of some of the things I didn't know. It's like in any clinical placement. Some of the staff have a lot of time for students, others are OK but don't volunteer to teach you much. There were more midwives in the former category.

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2.4 Valuing midwives' knowledge

Overall, students valued midwives' knowledge and the fact that they were willing to take the time to teach the medical students, actively seeking out opportunities for the students to participate in care:

Edward: The midwives were very welcoming to us. They tried to get us ones that came in and were delivering but no one came in.

Ben: The midwives had a good relation with the students. They were always willing to teach.

Grace: If we asked midwives questions then they talked us through things.

Karen: The midwives were always willing to teach, to help us, to talk about things they'd done and to talk us through things.

Carl: The midwives were really different than I expected. They tried to treat me as a member of the team and involve me a bit.

Linda: The midwife I was working with was really really good and she got me involved doing observations and chatting with the woman

What students learned from midwives provoked considerable reflection on my part, as I was interested in exploring whether or not medical students assimilated midwifery knowledge, of the type identified by the Delphi study, into their construction of knowledge during the medical student/midwife encounter. While students recognized midwives as experts in the normal, they also indicated that midwives had an important role to play in the management of situations that deviated from the normal, and the on-going care of women experiencing such difficulties. Some students indicated that they did not feel that there was much difference in what they could learn from midwives or medical staff:

Danny: Pretty much the same stuff. I'd like to learn everything from either of them and there's not really any difference in my opinion in what they know, probably midwives know more cos they're doing it day in, day out, they know more about the management of the actual labour.

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3. Medical students' learning styles

Much of what medical students reported learning from midwives was concerned with the technical aspects of care. Participants demonstrated an active learning style (Prince 2004; Felder and Brent 2009) characterized by the desire to participate rather than just observe as the following data illustrate:

Edward: *One of the senior sisters was teaching me how to suture*

Helen: *I've managed to see the care of a labouring woman from start to finish. I've booked a lady in, taken all the details. I've learned how to write things in the books, how to do a partogramme and how to read a CTG, basically everything a midwife does, I've experienced at some point.*

Jasmine: *I've learned things like about the induction of labour. I was looking after a lady who wanted to go to the toilet, the midwife was taking care of someone else, I had to take her off the CTG and unplugged her from the syntocinon infusion. It's surprisingly difficult when you don't know what you are doing but I fathomed it all out and got the midwife to check it was OK. I got to do cannulations and things. I held a baby.*

Grace: *I learned how to interpret CTGs from the midwives. All the ladies I was with had CTGs*

Ben: *There's loads I have learned from the midwives. I've learned that they don't just work in the labour ward, I've learned the basic history taking from them, I've learned what you do in clinic, how you measure, how you palpate, where you listen to the heart, I've learned about urine sampling, taking blood pressure, what's normal, what's not, how to plot graphs, And then on the delivery suite it's just endless, like what is supposed to happen in labour, how you deliver the baby, what you do before, what you do after, how you care for the mum, how you care for the baby. There's loads of stuff.*

Mankoff et al (1994) suggest that the positivist medical educational culture encourages denial of uncertainty; while within midwifery education recognition of one's own limitations is an important precept for ensuring students practice safely (Pyne 1998). I recognized this

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attitude of certainty during the final interview with one participant who had witnessed two births: one in which the woman used only the nitrous oxide and oxygen mixture commonly referred to as ‘gas and air’ for pain relief and one where the woman had epidural pain relief. On the basis of this experience, the student, whose attitude mirrored that of the student in Scenario 1 (Chapter 9) who thought it was archaic to suffer pain, declared that she would now recommend epidural analgesia wholeheartedly. The student’s description of observing a woman with an epidural in situ was:

Grace: She was really calm and even though she had had decelerations and all that she didn’t seem a bit worried and it was an instrumental delivery, so you’d think it would be a bit more painful, but no, she was fine all the way through, didn’t really express any sort of, only when she was having a vaginal examination, having to insert his fingers quite far in, she was a bit uncomfortable, but not really during the labour. She didn’t know when to push. The midwife had to put her hand on her tummy and tell her when the contractions were. I think (epidural) pain relief all the way!

3.1 A techno-medical orientation

That students did not learn to relinquish their techno-medical orientation through working with midwives was also evident in the words they used. They talked about *doing cervical scores, delivering, monitoring, measuring and failure*.

The failure might be a failed induction of labour, failure to progress in labour or a failed instrumental delivery but the concept of failure seemed to occupy a prominent position in the vocabulary of medical students. The following data with its stream-of-consciousness description is illustrative of how participants viewed their learning experiences on the labour ward:

*Ben: Just basically one **patient** I was primarily looking after today. It was a lady who was a **multip** and she’s still not had it. She’s **failed to go into labour**, so she came this morning for **induction**, sorry, **augmentation** and she’s had **one dose of prostin** and we’re just **monitoring** her basically and she’s **due at five o’clock** to have another, second **cervix scoring** and see how things go. I haven’t seen a **delivery** yet ...she’s been in and out quite a bit to have her **CTG done**, I’ve learnt about **interpreting a CTG** so that’s useful.*

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Discourse analysis, which: “focuses on talk and text as social practices” (Potter 1996, p.217) can be applied to gain a greater understanding of the contextual meaning of the student’s words. In one six line paragraph, the student uses twelve words or phrases which express a bio-medical interpretation of childbirth as a potentially pathological event. The woman is objectified in a Cartesian (Rogers 2005) model, which interprets the body as machinery that may function inefficiently or break down (failure to go into labour). The humanistic interpretation that would incorporate a social, psychological, cultural and spiritual understanding of the woman (Davis Floyd and Mather 2002) is absent from this discourse. In addition, a journey toward motherhood beginning with the concept of failure may have profound implications for the way in which a woman sees herself as a parent, and therefore the way in which she responds to her child’s needs (Kitzinger 2006).

3.2 The use of language

The use of language reflects the process of professional socialization to which students are exposed and the participants’ use of language provides a good example of this discourse. How the students used language was striking to me as it indicated a particular professional ideology around birth. As the students aspired to be part of that ideology, they were quick to adopt the language. The language of obstetrics is also used extensively by midwives, which may be interpreted as a symptom of the professionalization of midwifery, that is, an attempt to demonstrate midwifery’s right to the same professional status enjoyed by medicine. As Friere (1972) points out, it is not uncommon for an oppressed group to take on the characteristics, including the language, of their oppressors, particularly as the oppressed group’s status begins to change through education or increasing economic stability.

4. Understanding an holistic social model of birth

Thus, language has meaning over and above mere semantics. The words we choose are powerful and can influence not only how we view the world, but also how we cause others to see it (Potter 1996; Locke 2004). However, a few students seemed able to relinquish their professional identities for a short time and observe childbirth as a meaningful and emotional social event rather than as a medical procedure. One student admitted that he cried when he

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saw a baby born. (Danny): *“It brought tears to my eyes. I didn’t expect that, but it was such moving experience”*.

Some students recognized different aspects of birth, such as the student who referred to birth as a spiritual event:

Isobel: *I thought it was a spiritually really amazing thing, you see the head crowning and it gets bigger and bigger and suddenly it’s there and the baby pops out and it’s amazing. I mean you knew the baby was there but...*

4.1 The importance of the midwife-woman relationship

Other students focused on the importance of the rapport that can develop between a midwife and a woman in labour. One medical student was able to model this behaviour by engaging in the provision of care and expressed satisfaction at feeling like a participant rather than just an observer during the woman’s labour and birth:

Helen: *You see the rapport develop (between the midwife and the woman) because at first it is sort of formal and then it gets more friendly, and I know one of the women was asking if the midwife would be on all night because she wanted that midwife to stay and deliver her baby. They build up a supportive and trusting relationship. I was able to do that because I was going into the room separately from the midwife and talking to the woman and her mum. When she gave birth. I felt part of it cos I’d built up that rapport.*

Recognition of the relational and spiritual aspects of birth is congruent with the humanistic or holistic interpretation of birth reflected in the midwifery model (Davis-Floyd 2001; Gaskin 2003). While these students had only a very small taster of this model of birth, it seemed enough to convince them that aspects of ‘being’ were as important as the aspects of ‘doing’ upon which most of the students focused. This is quite a significant departure for medical students who are enmeshed in a positivist, scientific educational culture that values the accumulation of facts (Mankoff et al 1994).

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4.2 Experiential learning

For some students the experiential nature of their time was important because the things that they observed reinforced facts already learned from lectures and textbooks. One student's description of the first birth that he witnessed encapsulates this precisely:

Carl: The first one, I came on at eight and it happened at five past eight so it was like oooh, but it was really strange cos I've read about how the head turns but you don't think 'til it appears... Cos I'd read all about it but you don't think it happens like that, but it really did happen like that

5. Witches or wise women?

The medical students who participated in this study expressed concerns at the commencement of their obstetric rotations, about working with midwives. They joked that they had heard that midwives were scary although several tempered this second-hand knowledge by stating that they did not listen to stereotyping, or that the scary midwives existed in other maternity units, or even that the obstetricians had told them not to worry as such rumours were categorically untrue. However, for the most part, the students' experiences did not conform to their fears. In one interview, a student described feeling like an outsider because he was in a new environment but that the midwife with whom he was working had taken the time to involve the student in the care of a woman, and had explained everything as they went along. This was typical of how mild anxiety dissolved when students found that midwives were welcoming and willing share their knowledge and skills.

5.1 Midwives as teachers

Most of the medical students felt welcomed by midwives with whom they worked, and commented on the midwives' willingness to teach. The students felt that they learned a great deal in a short space of time. While some of this could be attributed to the over-confidence inculcated by the medical education programme with its emphasis on the rapid accumulation of facts, what I found interesting was the emphasis placed on doing rather than being. Students acknowledged that working with midwives might be the only opportunity they had to witness normal labour and birth, yet instead of using their time to become familiar with the concept of normality, much time was spent pursuing technical skills. These included:

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suturing, CTG interpretation, putting up or taking down intravenous giving sets, attaching women to monitors, recording incidents of care on partogrammes and taking admission histories.

5.2 Midwifery knowledge: being or doing?

According to the respondents of the Delphi survey which launched my research study, these are valid aspects of midwifery, yet they do not adequately express the range or scope of midwifery knowledge. The construct of being, unique to midwifery within maternity care, was described by a respondent in an American Delphi study (Powell Kennedy 2000) as a specialist skill that midwives learn and develop rather than just the absence of doing something. Kennedy contrasted the skill of *being* with the busy propensity of obstetricians to act, rather than to watch, wait and listen.

Some students discussed more humanistic or holistic aspects of care such as the rapport that developed between a woman and the midwife caring for her, or the sense of birth as a spiritual event. One student expressed the conflict between being and doing eloquently when she said:

Isobel: Sometimes you don't know what to do though. It's difficult and I think your instinct as an empathetic human being takes over I guess, rather than (the attitude) "I'm a medical student, I should know what to do".

Midwives were regarded as skilled professionals with similar skills to obstetricians, although as one student pointed out:

Danny: Midwives don't do caesareans do they?

This particular student felt that it would be beneficial if midwives did do caesarean section operations as he felt that this would free-up the obstetrician. What exactly the participant considered that the obstetrician would do in this additional free time was not clear.

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5.3 Midwives' total focus on maternity care

The student who commented about empathy (above) expressed the opinion that authentic learning came from midwives because of their total focus on maternity care. When asked if she felt there was any value to medical students from working with midwives she responded with an emphatic yes:

Isobel: Yes definitely! A lot of midwives, well obstetrics is probably all they did (trained for). I know some come from a nursing background. They're a huge resource aren't they, their knowledge and skills. That's what they have been doing, and they're almost the people that have been on the ground really compared with the doctors.

When asked what the doctors did, Isobel continued:

Isobel: Sloping around! That's what we tend to do. I think doctors are useful for teaching in a seminar, a more formal point of view, but if you want hands on, on the floor as it were, I think definitely midwives have a more important role in my opinion from an obstetric teaching point of view. So, yes, (midwives are) hugely important.

5.4 The missing MK

While students all expressed satisfaction with what they had learned from midwives many of the aspects of midwifery knowledge identified by the Delphi study were missing such as the intuitive, autonomous and creative aspects of midwifery. One student did speak about the spiritual nature of birth, which was congruent with the spiritual aspect of midwifery knowledge identified by some respondents to the Delphi survey; however this understanding of birth was not widespread among the students. This may be due to the fact that students only observed birth in the hospital setting and may have interpreted it differently, or observed different aspects of midwifery had they had the opportunity to participate in the care of women giving birth at home. Working with midwives who practice autonomously in a community setting may foster respect for the role of the midwife and enhanced future working relations. This seemed to be the case before routine hospitalization of childbirth, at a time when midwives and doctors had clearly defined realms of expertise and spheres of practice (Allison 1996).

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6. Medical students' clinical allocations

Students gained labour ward experience through attachments to midwives at both their base hospital and different district general hospitals (DGH) to which they were assigned. Differing patterns of midwifery practice were observed between these DGH, where students spent part of the rotation, and their base hospital. This varied between localities. Some students felt that the levels of midwifery-led care, that is care of women in normal labour where midwives are the lead carer and women do not see an obstetrician unless a complication requiring referral occurs, were higher in the DGH. Other students reported that they had observed care that was registrar-led, where even the smallest clinical decision was referred to a doctor and little midwifery autonomy was apparent.

The students' labour ward experience represented the majority of the time spent with midwives although they were aware of the role of the midwife in other areas such as the day assessment unit, the delivery suite assessment unit, the wards and the antenatal clinics. In addition, one of the practice educators, employed to teach medical students clinical skills, was a midwife.

As their midwifery attachments were self arranged, different students spent various lengths of time on the labour ward, with one student declaring that she had achieved a sufficient personal quota after observing one birth and planned to spend the balance of the allocation completing project work. Other students appeared to value the experience and made sacrifices in order to spend additional time on the labour ward. One student's comment summed up this attitude when she said:

Karen: I think the midwives are wonderful. I want to be a midwife now!

7. Data from the PBL Scenarios

While the data presented in the previous section of this chapter was collected during the unstructured, introductory portion of the research interviews, the data informing this section of the chapter was gathered through the data collection tool of the three PBL scenarios. The scenarios were presented to the medical students at each research interview. Thus potentially

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a participant would be exposed to the first scenario, on the topic of pain in labour three times, the second scenario, about a woman's refusal to consent to a medical induction of labour twice and the final scenario, on the topic of breastfeeding only once.

7.1 PBL scenarios: order of presentation

The order of the PBL scenarios was deliberate as the first scenario represented a labour ward situation, the second either a hospital or community antenatal clinic and the third, a situation which would only be encountered while visiting a family at home in the post natal period. Because the majority of the time spent with midwives, was on the labour ward, the students had an enhanced opportunity for knowledge development and for attitudes or opinions to change in regard to the first scenario. This was observed in the way in which students reflected on their experiences to develop their understanding of birth. Revisiting this scenario enabled students the maximum time to construct their knowledge about pain in labour, based on a breadth of experience during the six week obstetric rotation. Therefore, the richest data was obtained from discussion around the first scenario.

The second scenario portrayed a situation that might be encountered while working either with midwives or with the medical team. Thus, several potential opportunities for developing knowledge around induction of labour and informed choice existed.

The final scenario, although concerned with an important area of midwifery knowledge and practice, was one that only students spending time with a community midwife would encounter, although all students had the opportunity to glean some information about breastfeeding, if only from the posters displayed on the walls of the maternity unit. Consequently, the order in which the scenarios were presented to participants reflected the opportunity to gain experience relating to each topic area.

7.2 constructing knowledge

The order and manner of the scenario presentation was congruent with the theoretical framework of constructivism underlying PBL that supports a subjective view of reality in which knowledge is constructed by the learner (Boud and Feletti 1997). Therefore, as

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discussed previously in Chapter 9, the table of learning themes (figure 9-2) was neither used to test the students nor to record achievement of the learning outcomes during individual interviews. Instead it provided a guide or a prompt to enable the exploration of issues that had not been raised spontaneously, or to stimulate a student's thinking when no further data seemed to be forthcoming. For instance, in the scenario about induction of labour, I prompted students by asking: "have you heard of any methods a woman might use herself to help start labour?" In the scenario in which students discuss labour pain some prompts I used were: "have you had any experiences of hearing women vocalize during labour?" "How did it make you feel?" and "Do you attribute any meaning to women's vocalizations during labour?" While discussing breastfeeding, if any prompts were needed, I would ask a question concerning what the student thought about the help given by the father in the scenario.

7.2 "Overheard in the Coffee Room"

The first scenario (appendix 2) invites consideration of pain in labour. The pain associated with childbirth is a very complex phenomenon and may be quite different than the pain encountered by medical students in other areas of medicine where pain is the physical manifestation of illness or injury. Such pain initially acts as an aid to diagnosis before the focus shifts to the relief of pain, both through treating the underlying cause and by administering appropriate analgesia commensurate with the type and severity of the discomfort or pain. In such cases the medical response is always an active one with pain interpreted as something with which to do battle and ultimately defeat (Illich 1976).

This reinforces the Cartesian duality (Mander 2000; Rogers 2005) for which modern obstetric medicine has been criticized (Trevathan 1997; Davis Floyd 1998). Teaching about pain in medical education tends to focus on combating under-treatment of both chronic and acute pain (Pöyhiä and Kalso 1999) rather than on developing an understanding of the meaning of pain from the personal, cultural, social, psychological or spiritual perspective of the individual experiencing pain. Because of this, some students found their first encounter with labour pain disturbing. At times, this discomfort centred on the noises made by women during labour, which the students interpreted as expressions of severe pain while at other

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times students expressed the accepted medical interpretation of pain as an indication of trauma or tissue damage (Seitz 1993):

Edward: You're on delivery suite and you hear shouts and screams coming from some of the rooms. You feel uncomfortable. I do find that off putting.

Marie: It frightens me, childbirth, it's such a big and painful event.

Carl: If there's more pain, like severe pain, surely that means there's something wrong with the labour.

Students became insulated from the noise of labour as they gained further experience:

Al: I think at first I agreed with this feeling of being uncomfortable when they started shouting and screaming but I think I've kind of got over that as I've got more used to it and been around it more and to be honest most of the people I was with, most of them didn't go for gung-ho shouting, not so loud.

Another participant felt that both a woman's individual interpretation of pain and the size of the maternity unit contributed to women's response to labour pain, with women giving birth in a small DGH maternity unit perhaps feeling more constrained than women accessing a large inner city unit where labour noise was a common occurrence:

Helen: Obviously different women deal with pain in different ways. Some have higher pain thresholds than others, and also if it's her first baby she doesn't know what to expect so I don't think it's... certainly women in (Base Hospital) do have different ways of dealing with it than, say in (small rural DGH), compared to up there on the basis that it's a smaller unit there, perhaps you'd be a bit more self conscious if you were screaming whereas here there are so many rooms that you feel, well, everyone else is doing it, why can't I? So, yes, it varies from woman to woman but I certainly don't think women should be denied pain relief.

The differences in women's responses to pain in the two maternity units in which this student gained obstetric experience could also be ascribed to very different populations: around half

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of all births are to Asian, mainly Pakistani, mothers at the student's base hospital while the DGH to which the student was allocated serves a more affluent, white, rural population. Different cultural responses to pain are well documented (Morris 1991; Waddie 1996; Trout 2004) and are discussed further in Chapter 11.

A common perception of the medical students was that labour pain might act in the opposite way to that described in the Egyptian proverb, and decrease a mother's love for her infant if the birth had caused her pain. Some students attributed this to the possible development of post-natal depression (PND) or post-traumatic stress disorder (PTSD).

Carl: Along the lines of post- traumatic stress, it seems to me that pain might lead to a woman having problems in terms of postnatal depression or issues around post traumatic stress. A lot of pain might cause a negative reaction. It's hard to measure pain but if the woman feels it was a terribly traumatic situation then it might breed resentment.

Goldstein et al (2005 p.193) reached the same conclusion in their research into the relationship between labour pain and PND. They suggest some women are guilty of 'catastrophizing' labour, which leads to poor postnatal adjustment. While they may have a valid point in relating women's perceptions about their experience of birth with post natal blues and more serious depressive incidents, their conclusions did not appear very woman-centred, with more than a suggestion of victim-blaming. However, Escott et al (2004 p.146) also discuss the concept of 'catastrophizing' the pain of labour, but in a much more empathetic way. They suggest that anxiety affects women's ability to cope with labour, therefore preparation for birth should include a wider range of coping strategies, particularly cognitive strategies.

Despite an initial emphasis equating labour pain with negative reactions in the mother, some students began to test out other possible explanations as they considered the scenario:

Ben: I think there's sort of, it's one of those... I don't know if it would increase her love for the baby. If anything it might decrease it, it might make her resent it because it had caused her so much pain. Perhaps it's a bonding experience, and it's something you're going to get, and it's like

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when you've been through something with someone else, camaraderie, as it were, You just associate the experience, you might not enjoy it at the time because of the pain but when you look at it with hindsight it might make it sort of a special occasion. So I guess that could be the case, but I don't think that is an indication for not having pain relief.

Helen: Could pain increase a mother's love? Well, I could see that, it's such a big and painful event and it's something the mother will remember throughout her life. It makes it more of an event, the actual birth. The pain heightens the spiritual side of it.

Jasmine: Just the relief. The more pain you go through, the more you're so fine when it is all over and maybe that's transferred into love, maybe...I can see why people think that cos there's this pain it could be an expression of something. If you think that pain's expressing something, then the more pain you're in, the more you're willing to go through for your baby perhaps, so if you're willing to go through childbirth that shows how dedicated (you are)... I don't think that a lady who's had an epidural would appreciate someone saying that means you don't love your baby as much.

Following a standard lecture for medical students by the Bereavement Specialist Midwife, one student considered a woman's pain in labour and love for her baby in relation to a stillbirth. While this student was one of the few who mentioned endorphins, this may have been gleaned from the lecture given by a specialist midwife:

Danny: I've been thinking about this quite a lot. I guess one thing we were talking about quite a lot in our midwife sessions was the grief process where someone loses a baby or goes through a stillbirth. We were talking about the fact that it is better to go through labour, to begin the grief process than to go for a caesarean section. So that came into my head, whether it is good for the mother to go through pain for a stillbirth. Then I was thinking about the mother in labour, I guess pain releases things like endorphins and that's obviously beneficial for, in terms of the pain and adrenaline released so they're all good reasons why pain might be beneficial in labour.

Other students introduced the idea of cultural sensitivity, feeling that if a woman's culture encouraged her to bear the pain of labour, then the health professionals should not interfere:

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Isobel: You have to be culturally sensitive, and the people I'm dealing with, it might be their cultural belief and you have to respect that even if you don't agree with it. If that's what they believe and she wants to be in more pain, fine, it should always be down to the woman and what she wants so I guess I believe that it should always be down to the woman. She should make the decision about pain relief but with adequate counselling. The midwife or other health professional should always be able to say what they think, to give their opinion as long as they are not overwhelming or make the woman feel under pressure to take drug relief or not have drug relief if that's what she wants.

As suggested by the above data, students did concede that a midwife or doctor could have an influence on whether or not a woman accepted pain relief in labour. In the scenario, the two fictional students worry that women may be offered pain relief because their pain upset, not the women themselves, but the professionals involved in their care. Having already demonstrated that expressions of pain made some of them uneasy, some students could understand how midwives or doctors might try to influence women to accept pharmacological pain relief in order to ease their own, rather than the women's discomfort. However, this was not borne out by their experience and most of the students observed labours where no medication was used by the labouring woman except for the almost ubiquitous gas and air:

Al: I think pain is quite a scary thing when you see it, and the initial response is to want to do something about it, so then you've got to be careful not to over medicalize it into something....It's quite a shocking experience seeing someone in so much pain. Your immediate reaction is to want to make it better and take all the pain away, because that's what you do in healthcare professions, you make everything better for the person going through it and I think when you see these woman really screaming and in so much agony, you just want to do something to try to help them and I think maybe you work through the stages of analgesia and not go too far, so if they can manage on gas and air, great stuff.

Linda: On the midwife led unit (DGH) they weren't allowed, well, not weren't allowed but couldn't have an epidural and be midwife led, and I suppose some people have a really bad experience like this one woman did (with a previous labour using epidural pain relief), well that might be a reason just to go for gas and air.

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Karen: She was gasping on the entonox and they kept threatening to take it away from her, cos she wasn't pushing, she was just too busy sucking on the entonox and she was like no no no and holding onto it so tight and she was like, you could tell she was in a lot of pain and they were saying the sooner you push, the sooner it will be over.

Edward: The last two I was with didn't have any, just entonox and they were quite happy with that. I think I've noticed that if you have an epidural, it complicates, makes quite a difference to the labour. You're stuck in this bed, you have to be monitored all the time, you can't move around much. A lot more medicalized than if you just go for it.

Even in the short time they worked on the labour ward, some students began to identify that epidural analgesia could have certain disadvantages. One student indicated that while caring for a woman with an epidural, the midwife stated that she thought the labour had been unnecessarily delayed by this method of analgesia:

Frances: Likewise, another delivery I had, she had an epidural in and obviously she was a picture of comfort throughout the whole ordeal, but when we were outside the room the midwife said "well, basically that baby would have been out hours ago had she not had an epidural" so in that respect you think for a little bit of pain she should just grin and bear it

While the student who reported this encounter was beginning to recognize a connection between types of analgesia and length of labour, there was little connection made to the relevant physiology. No student described how epidural analgesia or anaesthesia affects the natural hormonal responses of labour and inhibits catecholamine release, possibly associated with the fetal ejection reflex (Buckley 2004). Another student spoke of the tremendous sense of accomplishment the mother felt after an unmedicated labour and contrasted this with a birth using an epidural, which to the student's eyes did not seem to have the same sense of being a momentous occasion. This echoed the perception of a woman contrasting her two births, one using epidural analgesia and the second using only inhaled nitrous oxide and

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oxygen mixture. A student observed the woman's unmedicated second labour and recognized that an epidural might effect, not only the woman's experience, but also the length of the actual labour:

Marie: She didn't have any kind (of analgesia). She was in so much pain and she was just on all fours with the gas and air and the baby came out very very quickly. So, I think she had an epidural for her first and I was talking to her after she had the baby and she was saying she actually regrets having the epidural (during the birth of her first child) cos she didn't feel the baby being born, and she didn't feel the head, the midwife had to tell her that the head was out. She said she does slightly regret having the epidural because it did take away a lot of sensation from the actual birth whereas with this (labour) it was a lot, lot shorter but she managed on just gas and air and I think she felt a little bit... she said (speaking of previous labour) "Oh I kind of regret it a little bit, whether it slowed up the labour or whatever happened we just don't know"

As McCrea and Wright (1999) point out, it is not necessarily either the experience of pain or the elimination of pain that is important to women in labour, but instead, the feeling of being in control. Paradoxically, this may mean having the freedom to relinquish control to the strong sensations of labour, just letting it happen. This seemed to be the case in the labour described above where the woman contrasted her first labour with an epidural to her second labour which was much more painful but also extremely satisfying to the woman.

Two students observed that women might request an epidural, more to relieve their husband's anxiety than for their own needs:

Edward: Women get offered pain relief because the midwife or doctor is uncomfortable? I don't think I have enough experience to notice that really. I don't know if we assume women want complete relief of their pain. The woman I was looking after started out with entonox and then she had an epidural. She asked for that. It was her husband, in fact who was probably more relieved that the epidural was working because he was very distressed so I think he was relieved when it kicked in. I'm sure she was as well but it was more noticeable with her husband, the look of relief on his face. I can see how this would influence the woman, I don't know how much of your surroundings you take in. If you're so absorbed in the pain that you are not noticing

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your surroundings, if you're so absorbed in the pain then it doesn't matter that your husband is distressed cos I'm the one in pain, whereas if you are more aware of your surroundings then I could see that it would be a big factor. If the husband was very distressed, then I could see that making the woman more distressed as well.

Helen: I don't think it is true that people just jump in and give them an epidural just to ease their own...I think an experienced midwife will think, well, you are OK, the baby is OK. But this morning I found the biggest reason for that woman to have an epidural was her partner's discomfort. I mean the husband, he was just freaking out. He didn't know what to do at all. The midwife was saying 'why don't you go out and get some air' because he was like: 'I can't cope with this, I can't cope seeing her in so much pain'. The thing was, when we mentioned the word epidural, he was like 'yes, yes, yes!'

The discomfort of male partners during childbirth has been described by Gaskin (2002) who recounts how early in her midwifery career she became aware that male energy could block the birth process to the extent that at times she needed to send men out of the birth room in order for labour to progress effectively. Other midwives have also questioned the modern orthodoxy that a woman's husband or male partner is the best person to act as a labour supporter (Draper 1997) and French obstetrician, Michel Odent is well known for sharing this view (Odent 1999).

The dynamic relationship between a woman and a man can, however, make a positive contribution to the process of labour if they are able to express their sexuality during labour (Gaskin 2002; 2003). This is often impossible in the setting of the hospital based maternity unit, which does not afford the necessary privacy and autonomy required to encourage intimacy during childbirth.

Participants all discussed aspects of caesarean section birth and none of them considered it the easy option although some felt that women might overlook aspects such as postnatal pain, recovery time or neonatal implications of caesarean birth in their interpretation of a caesarean section as an 'easy' option. However, women may not be overlooking neonatal implications when choosing a caesarean section but rather making the choice that they interpret as best for

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their baby. In a three-year study of caesarean section and the issue of choice, Weaver (2000) discovered that while many women would have preferred to experience vaginal birth themselves, they considered the choice of caesarean section as a worthwhile sacrifice to ensure the health of their babies. Evidently an understanding of the physical benefits of vaginal birth on the neonate or the potential iatrogenic complications resulting from caesarean section (Hook 1997; Buckley 2004; Shallow 2004) is not something which has permeated the public's beliefs around childbirth.

One student reported witnessing discussions with two women, one of whom had had a previous caesarean section, while the other had experienced a traumatic vaginal birth. The first woman chose to have a repeat operative delivery rather than to attempt a VBAC while the second chose to have a caesarean section in response to the fear engendered by her previous traumatic birth experience. While in the UK, VBAC is considered the preferable method of giving birth after one previous caesarean (Meddings et al 2007), maternal choice plays an important part in the decision-making process around subsequent methods of delivery. The student's opinion, presumably modelled on that of the obstetricians with whom she worked was that these planned operative deliveries were more for psychosocial than for medical reasons:

Marie: In clinic I saw two women who chose to have a caesarean section because they'd had them before, they didn't need them. One had had failure to progress, the other had a vaginal delivery but it was traumatic, she couldn't walk for a fortnight so she didn't want another vaginal delivery. You can see that it's, it's too easy isn't it? They just cut and the baby's there, especially if it's an elective and they've not felt the pain. If it's an emergency and all that.... but if it's elective there's none of that so it would be a bit strange, like it hadn't really happened.

Other participants empathized with women who fear the pain of labour and one suggested that the example of certain celebrities might encourage women to choose caesarean birth:

Edward: I think women are really frightened about pain, about how they will cope. Maybe it causes a rise in caesarean sections, especially with celebrities and things, you know this 'too posh to push'

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sort of thing. That is, that is a factor but I think doctors and midwives should educate women antenatally about the risks and benefits, that would stop people thinking 'oh I'll just have a caesarean and they'll sew me up afterwards' I think if they know the risks, the risk of anaesthesia, the risk of bleeding, the risk of infection then it might help. I suppose at one time caesarean was an emergency. a high-risk procedure. Now they can do it quite easily, it's a straight-forward procedure.

Carl: In the society we live in, the fact that we do have analgesics, I guess they should be used, although not used willy nilly. You obviously need a bit of pain, like they give you a bit of relief, like the women, it's more about the women because I agree with the fact that it's incredibly frightening, the idea that you're going to go through so much pain when you are going through labour and maybe it does raise caesarean section rates, I mean, women requesting caesareans, whether that raises the rate or not. I don't necessarily think, I think a lot of doctors and midwives will come forth, have time talking with women about caesarean sections and the actual dangers of caesareans. I don't think there are that many elective caesareans for women just because they are frightened of the pain, but I think it must be an incredibly frightening experience, the fact that you are going to be in so much pain, so I guess you think 'just give me the drugs' to try to keep the pain at a minimum. I guess it's more the fact that you want the mother to feel as empowered as possible, but then that also has to come with education, so you can't just say 'give me an elective c-section or give me as much drugs as humanely possible', without knowing the effects it will have on the actual pregnancy and I guess it's best if women can manage on just gas and air. But if women don't want to manage on gas and air then they shouldn't have to just because people feel that women have to go through pain because it's good for childbirth.

The above data concerning caesarean birth demonstrates the conflict faced by many doctors. On the one hand they understand the maternal and fetal reasons why vaginal birth should be the delivery method of choice. At the same time, skilled surgeons now view a caesarean section as a routine procedure with very little risk. In addition the whole issue of maternal choice has been skewed at times, to include caesarean section in the shopping list of choices woman can make about childbirth (Bewley and Cockburn 2002). Perhaps this is because an operative delivery is an easier option than providing for the more difficult choices which would actually empower women in childbirth such as a real choice over place of delivery, the support of a known midwife and the recognition of birth as much more than a physical event

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(Edwards 2005), but as a life transition closely bound up with the individual woman's culture, spiritual beliefs, family and other social and psychological factors.

7.3 Women's choice around induction of labour

The second scenario (appendix 2) presented to the medical students was a scenario about a woman whose pregnancy has continued past the expected date of delivery (EDD) and has come to either a community or hospital clinic to discuss induction of labour. This procedure can involve the repeated insertion of prostin gel to ripen the cervix, amniotomy, and an intravenous infusion of syntocinon, the artificial oxytocic used to stimulate uterine contractions. It is normally carried out between ten and fourteen days following the EDD calculated by ultrasound scan, referred to as the dating scan or the booking scan, which is done between week 10-13 of the pregnancy. In the scenario, the woman states that she does not want to have a medical induction of labour but will agree to a 'stretch and sweep'. This is an internal, manual examination where the operator attempts to gently stretch the cervix and separate the membranes from the cervix, thus causing the release of natural prostaglandins which work to 'ripen' the cervix in the same way as does the introduction of artificial prostaglandin in the form of prostin (Keirse 1994).

There has been some controversy around this procedure as it was once a tool in the midwife's bag of tricks that was frowned upon by medical practitioners. However, it is now recommended in NICE Guideline # 70 (NICE 2008) and therefore has been assimilated into many maternity units' medical protocols either to stimulate labour at term, or to provide a first step in the induction process which may, if effective, prevent the next, artificial, processes from being carried out.

The two major learning outcomes or themes associated with this scenario were around induction of labour and informed choice. When first introduced to the scenario, the medical students seemed to view induction of labour as a routine, safe procedure that women would welcome if pregnancy continued past the estimated date of delivery (EDD):

Al: I think if she's really frustrated she'll probably say yes

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Danny: What happens when they don't agree to...I know stretch and sweep could put them into labour cos it naturally releases prostaglandins but what do you do if they don't agree? Everyone I've seen has always agreed. They've not always agreed to stretch and sweep but they've agreed to be induced because they want the baby out and "can you just get it out please"

Another participant suggested that refusal of induction might lead to legal sanctions to coerce a woman into accepting the procedure. Although the medical student says she isn't raising it as a child protection issue, the spoken words belie that statement. These data expose the common obstetric perception that the obstetrician has responsibility for two patients (Lupton 2003), rather than a responsibility to the woman, who herself has full responsibility for her unborn child. While in the USA the fetus has different legal rights, depending on individual State law, in the UK the fetus has no independent legal rights until birth has occurred (Nuffield Council on Bioethics 2004). Very few mothers wish to make decisions that will harm their child; however fear of harm is often used as a lever to prise women out of a position of autonomy into one of dependence on the attending physician's more rational, scientific medical knowledge. That too can be seen in the data below as the participant describes pregnant women as 'emotional and scared':

Helen: Most women have been quite compliant cos I think that it's an area that they're not, people read different amounts, but in general I think women trust the medical profession when it comes to labour. I think they are quite emotional, quite scared and just want what's best for their baby but if she was adamant that she didn't want induction then there are certain issues there, I wouldn't say it's child protection, but it's more you need to think of the fetus and the fact that even though you are dealing with one life and the consent of one person, that baby is alive as well and that baby doesn't have the ability to consent and weigh up the risk of leaving it longer. Because I'm not so sure how the legalities work but I would have thought that if a lady would not be inducted (sic) and it would put the child in danger then we'd be able to go ahead and do it. It depends how long it was. I would have thought there'd be something, maybe not legal but ethically, cos as a doctor you've got to try to weigh up the benefits to the lady and the benefits to the fetus.

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Other medical students, while not being quite as interventionist, demonstrated an acceptance of the authority of medical knowledge. The focus, when they imagined what they would say to women who did not want her labour to be medically induced, was mainly on persuasion rather than genuine dialogue:

Ben: I would try to convince her and say it is very safe for her and her baby. I'd ask her reasons, get right down to the bottom of it and try to dispel any myths.

Edward: I think at the end of the day you have to respect patient choice, but it has to be informed decision by the patient, so if she is saying she does not want an induction because she is hell bent on having a natural birth I think you need to explain the risks of a post date baby. I think you have to spend quite a lot of time counseling her as to the risks and potential risks.

While discussing the situation from the perspective of risk, the student overlooked any risks associated with the process of induction itself and only considered risks associated with post maturity. Another medical student suggested that if a patient wouldn't agree to an induction, she shouldn't be allowed to leave the hospital:

Grace: You could admit her to an antenatal ward for CTG monitoring, you could measure her blood pressure, make sure she's not getting hypertensive, check her urine, check her blood, check everything, do vital signs every four hours, make sure nothing is going wrong, check her cervix. Keep her in hospital, but not on the labour ward

This participant seems to have overlooked the fact that a woman who refuses an induction of labour seems to be attempting to avoid medical intervention and might prefer to be at home until labour was established. However, another participant seemed to have more empathy with the woman, admitting uncertainty about what the safety issues actually were:

Jasmine: So she's happy to have a stretch and sweep but no ARM, What do I say now? I would ask her the reasons why she didn't want the prostin and ARM and I suppose you have to consider patient choice and they can say no but I would try to explain the benefits and explain that the stretch and sweep doesn't really, well it sort of initiates it but it's not as forceful as the other methods,

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the ARM would rupture the membranes and get things going and the prostin would just soften everything up and get things going within a few hours. So I would tell her she is getting toward the end of the safe period and it's a risk/benefit, weighing everything up and see what she says after that. If she still says no, then we'll just have to wait, I guess. But I don't really know what the safe limits are, about two weeks I suppose.

Students had heard about some natural methods that could be used by the woman at home.

The advice when given by doctors, focused more on the physical effects than on the emotional aspects:

Helen: She could try sex, maybe positions she could sit in, curry, I've heard, I don't know if they are proven or myths.

Edward: Sex is almost the same thing as a stretch and sweep, a bit of action there. Curry, I have no idea. I suppose it might stimulate (something).

Isobel : I think you'd have to be quite forceful in saying that if we don't do anything something could happen to your baby, but try not to make it into an emotionally emotive conversation where you are saying 'if you don't do this your baby will die'. It's got to be more open, you've got to see what her thinking is. You can say 'we'll do a stretch and sweep and then we'll reassess'. And then have a chat because if that works, fantastic! But maybe you'd have to bring her in and have a discussion. I presume she must have some reason for not wanting a medical induction.

One student suggested that the only alternative was a caesarean section:

Ben: If it was me in this situation, I think I'd really want to get down to the nitty gritty of why she was so against having an induction. Maybe she'd had a problem in the past or had family members who'd had problems. Just try to get a little bit of a conversation going about why she was having difficulty and maybe not get to the point where she agrees to a full induction but maybe you'd have a better idea why she doesn't. Just try to talk her around to it because there aren't a lot of other options unless she has a section, I suppose.

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However, another medical student expressed a more woman-centred view when she said:

Frances: Well, the biggest thing that I see, is that for some women, having a vaginal birth is such a special thing and you don't want anything to spoil it, like medical intervention. You just want to have your baby naturally...it's difficult because what is post term? My mother told me that I was two weeks late but dates weren't so accurate then. Women are all so different. Why should they go into labour on a specific date? And from a natural point of view you'd be thinking: just give it a little longer, see if she becomes ready to go into labour and I guess we medicalize pregnancy so much. In some ways it's good, we save mothers and babies but it could also have a negative effect on people who feel pushed into medical interventions to bring on labour. So just advise women of some natural ways, whether they work or not. She might be doing some already if she's clued up about that kind of thing: raspberry leaf tea, walking, trying to keep moving, there's a variety of things, natural things that might increase the chance of spontaneous labour. I guess it depends, like whether the head is engaged or not engaged or if she just needs to try to get the head more engaged. She's having some input into it, not feeling entirely helpless in the situation so I think that's quite important.

Because the scenario concerning induction of labour was introduced at the second interview most students had already had some experience with induction of labour, either having encountered women discussing induction in the clinics or undergoing the procedure on the labour ward. However, while almost all of the students thought that women would agree to induction of labour the first time they were interviewed using the scenario as a topic guide, by the final interview some students had met women very similar to the one portrayed in the scenario:

Linda: I've seen a few of these this morning. I hadn't realized, but everyone said no about an induction. Two ladies this morning were adamant they didn't want to be induced...I don't know, I found it really...the doctor explained like how your placenta must be getting old and it won't be as efficient and the baby could really grow better outside the uterus, but one of the ladies, it was more because she disputed her dates, she wanted to go with her LMP but they wanted to go with the scan dates, so then you have to explain about why they might be different but how the scan is really more accurate. One lady came 'round but said she might cancel her appointment. The other

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was just adamant that she wasn't, so they had to, she'd been booked in for loads of morning clinics cos she had to come in and check the placenta's still functioning. So they said she's got to come in for a CTG, I think every couple of days and she was having a scan as well before all that started, just check everything was still OK and I think that could have been it, the CTG. They said about the stretch and sweep. One of the ladies eventually agreed to it but then the cervix was too posterior and he (doctor) couldn't do it in the end. The other lady, no, she didn't want the stretch and sweep. But I saw somebody else have one. It looked quite painful.... they said it might be a bit uncomfortable and she was writhing around. It (cervix) was tightly closed and posterior.

The two things I found most notable in the discussions around the induction of labour scenario was the apparent lack of evidence based knowledge exhibited by the students and the almost complete absence of choice they would afford to a woman who presented with a similar request to the woman in the scenario. This was combined with confidence about the advice they said they would give. The only exception was one medical student who said that she would want to know that 75% of the information she was giving to a woman was correct before discussing induction of labour. This statement may represent an understanding that medicine cannot provide all the answers, or a belief that 75% of the total available information is sufficient to approach the topic in a confident manner. No student suggested that the woman's knowledge was equally valid to medical knowledge. This is congruent with the hierarchy of authoritative knowledge (Jordan 1997) within most healthcare environments.

The majority of the discussion around induction of labour centred on overcoming women's fears so that they would be compliant. This included giving advice that was not evidence based, characteristically, around the safety for mother and baby of the induction procedure. While it did not seem that students knowingly wished to provide information that was inaccurate, they seemed to be modelling their imagined responses on those they had heard and seen doctors use in antenatal clinics without, however, investigating the topic further for themselves.

Royston (1997) in her study of how medical students learn to communicate with patients found that the concept of role modelling was key to the way in which students learned to

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communicate in clinical settings. Fourth year medical students she interviewed were very dismissive of the idea that communication could be taught in an academic setting, with one student stating that it came down to 90% personality and 10% role modelling. Other students indicated that they learned to communicate with patients by watching qualified medical staff and following what they did.

This seemed also to be the way in which participants in the current study learned to communicate with women in the antenatal clinic. There was little reference to evidence based medical practice (Sackett et al 2000) as no student indicated that they would wish to interrogate the evidence to construct a balanced, evidence-based understanding in preparation for the situation described in the scenario if they were to meet it in clinical practice.

Modelling clinical consultations on the behaviour of senior medical staff and poor use of evidence based practice was predicted by Awonuga et al (2000) who demonstrated that despite the emerging importance of evidence based practice, doctors continued to rely on authoritative opinion for knowledge and information. The authors found that while doctors acknowledged the importance of evidence based medicine, they did not demonstrate an understanding of how to put it into practice. As this study was published ten years ago, it is possible that evidence has now superseded authoritative knowledge in current medical thinking. In the case of the students I interviewed, at least in the particular situation of their obstetric rotation, this does not appear to be the case.

As in their preliminary discussions about their experiences, failure was a prominent concept. Women failed to initiate labour, natural methods might fail to work, the placenta could fail, thereby depriving the fetus of life-giving oxygen and nutrients, women would fail to fulfil their duty as patients and comply with medical advice. Almost all of the dialogue focused on persuasion or even coercion by using scare tactics emphasizing the risks of continuing the pregnancy.

7.3 Does breastfeeding matter?

The third scenario (appendix 2) presented to the medical students concerns breastfeeding. As the students' base hospital has achieved UNICEF's Baby Friendly Award (1992) and has a

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great deal of information about breastfeeding displayed within the maternity unit, all students potentially received some exposure to issues around breastfeeding. However, the scenario focuses on an encounter in a woman's home in the early postnatal period. Only students who took advantage of the opportunity to work with a community midwife would have had the opportunity to visit women at home. Although a community midwife attachment was available to all students, few seemed to actually think it was an integral part of their obstetric experience.

This could be significant following qualification as the interface between community and hospital is essential if women are to receive optimum care and support in pregnancy. In order for this to occur, staff working in each area, community and hospital, must understand the philosophy and the capabilities of the other. As all community-based midwives have worked as hospital midwives, or at the very least, spent much of their midwifery education in hospital maternity units, they understand hospital maternity care. An obstetrician with no understanding of how midwives work in the community may hold outdated, unrealistic or condescending views of their role. This can be dangerous. A community midwife caring for a woman labouring at home needs to know that if an emergency situation occurs, she can phone the maternity unit, advise them of an imminent transfer by ambulance and ask the theatre team to have the theatre prepared for an emergency caesarean section, with the confidence that hospital staff trust her judgement and comply with her request.

If obstetricians and midwives truly worked together as professional colleagues rather than in a hierarchical system where medical knowledge is valued over midwifery knowledge (Jordan 1997), the experience of maternity care would be much improved for women and job satisfaction would increase for midwives. It might also improve for obstetricians who could focus on their own area of expertise, dealing with pregnancy and birth outside of the parameters of normality.

The few medical students who spent a day with community midwives valued the experience. These may have been students who already possessed a strong community focus such as those planning careers as GPs or perhaps they were just students who wished to have a day

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away from the hospital environment. The reasons why they, and not other students, chose to spend time with a community midwife were not evident from the data but perhaps could have been explored more explicitly. Since the students I interviewed completed their obstetric experience, requirements for practical experience have been altered. Students are now required to shadow a community midwife for part of their placement.

Students had only one opportunity to see and comment on the breastfeeding scenario. This reflected the reality that such experience would not feature prominently in their obstetric rotation. Nevertheless, it was felt to be an important aspect of maternity care and one of which medical students should gain some understanding. The fact that the base hospital where the students received their obstetric training had achieved Baby Friendly status (UNICEF 1992) made this even more relevant

The scenario was designed to encompass both the bio-physiological and psycho-social aspects of the situation pictured: that of a mother who was breastfeeding on discharge from hospital but is now having second thoughts. Her helpful partner is attempting to relieve her fatigue by bottle feeding the baby at night and the parents seem anxious that the child has not yet, at six days old, settled into a routine. The mother is wondering whether breastfeeding is worthwhile and if, in fact, it makes any difference how she feeds her child.

There are numerous issues contained within the brief paragraph which describes the situation in the scenario, all of them related to knowledge about breast feeding which can be categorized as midwifery knowledge. Of course knowledge about breastfeeding does not belong to midwives. It is primarily the knowledge of women and infants; knowledge learned as two people begin to know each other and work out their reliance on each other. The infant relies on the mother for nourishment and comfort, the mother relies on the infant to relieve her aching breasts, to help her experience the deep peace and relaxation that comes with oxytocin release, and to gain the satisfaction of fulfilling her own infant's needs.

The medicalization of this knowledge, of which both midwives and doctors have been guilty, almost destroyed British and American women's communal knowledge about breastfeeding

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that is so important in traditional societies (Vincent 1999). Poor advice such as limiting initial feeds, switching from one breast to another after a limited time on the first breast and timing feeds and the period of time between feeds, caused many women to discontinue breastfeeding and choose what they perceived as the easier and more scientific formulas and equipment necessary to use them. Instructions such as these demonstrate a lack of knowledge about the anatomy and physiology of lactation, misinformation which was propagated by the very people that women trusted to have the most accurate scientific knowledge: their doctors and midwives. Interestingly, although breastfeeding problems are often constructed as a Western problem (Dykes 2002) other European countries do not seem to have adopted the bottle-feeding model seen in the UK and the USA. Notably, the Scandinavian countries such as Sweden with a more relaxed attitude to nudity and sexuality have very high breastfeeding rates where breastfeeding is the expected norm (New 2004).

One student brought up the cultural aspects of breastfeeding, commenting that women here are given a choice, while in Africa and Asia there is no choice, it is the expected role of women to feed their babies. In such countries there is no stigma about breastfeeding and people are not shocked at seeing a woman breastfeeding her child. This is in contrast with British and American cultures where the breast has become highly sexualized which denigrates breasts' biological function and leads women to believe that breasts are for men, not for babies (Battersby 2007).

Ben: Women have a choice here. In some countries they don't. It's expected, it's what women do, they just get on and do it. No-one is upset by the sight of a woman feeding her baby. It's an accepted part of the culture. I know some problems have occurred when baby milk manufacturers have tried to persuade women that they don't need to breastfeed, that it is modern or western to bottle feed. It becomes a status symbol. Families don't want to be seen as too poor to bottle feed their babies but by and large it's still considered normal, it's what breasts are for. I'm thinking about parts of Asia and Africa particularly.

The same student also acknowledged problems with baby milk substitute marketing, which still occurs, despite WHO guidelines (WHO 1981). An article in the UK newspaper the

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Guardian exposed just how prevalent this infant formula promotion is and how the biggest company, Nestlé, seems able to exploit any loopholes in WHO guidelines or national laws (Moorhead 2007). The US paper, the Washington Post published a similar article on the 23 July 2007, which drew corresponding conclusions and again implicated Nestlé (Timberg 2007).

Other medical students demonstrated an awareness of the physical benefits of breast milk, particularly from the perspective of prevention of infection in the neonate. One participant suggested that praise and support should be the predominant tactic adopted by the midwife and noted that a baby of only six days should not be expected to have established a set routine of sleeping and feeding. This student suggested regular expression to maintain the mother's milk supply and wondered whether there were issues between the woman and her partner, perhaps he was not really encouraging breastfeeding, or perhaps the mother herself did not really want to breastfeed and was looking for an excuse to stop.

Linda: Do you think maybe the husband is not really enthusiastic about breastfeeding? Maybe the woman doesn't want to and wants an excuse to stop. The baby isn't a week old yet, she can't really expect it to have gotten into any routine yet, can she? If she can say 'Oh, the baby doesn't seem to take to it'.... But if she wants the baby to get her milk, could she just keep expressing it every few hours?

Another medical student focused on the difficulties of breastfeeding and how women shouldn't feel they must breastfeed. This student's attitude was strongly influenced by a discussion with a consultant paediatrician in another hospital who had disclosed that although she had very much wanted to breastfeed her infants, she had been unable so to do:

Isobel: Yes, it's a difficult one isn't it, breastfeeding? I think there's a lot of pressure on women to breast feed because it is so beneficial for the baby and I guess you almost forget that it's not right for everybody and women do have difficulties in doing it so I think it is important to remember that even though it is incredibly beneficial women shouldn't be forced to do it when it could be detrimental trying and trying and trying cos you feel like it's the best thing to do. I guess, from a nutritional point of view you could express the milk anyway so they can still be bottle fed with breast milk so you're kind if getting the best of both. It can obviously cause problems between the mum and dad in terms of their relationship, if he's being able to feed the baby

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brilliantly, she's thinking 'what's wrong with me?' and it brings out all these doubts and worries. It's a stressful period anyway when a new baby's in the house, especially when it's the first time. So I think probably if I were the midwife in this situation I'd make it apparent that she doesn't have to carry on breastfeeding if she feels it's not comfortable for her, and make sure she knows anyway that she has not failed as a mother not to breastfeed. I'm trying to think of a reason why the baby's not sucking as well as it could do, there might be some sort of reason why.

After a short discussion about latching on and nipple confusion I then asked the student if she had observed the community midwife giving advice about breastfeeding. Isobel continued:

Isobel: We were more doing booking visits so, but they were discussing it, but I didn't go out once the baby had been born. But it was discussed as in 'how do you feel about breastfeeding, do you know the literature about it?' that type of side but not necessarily 'what are you going to do?' It was more just putting the information in the forum and letting the women decide. But the community midwife I went out with, it was actually up in (wealthy market town) so it was quite a different population group. A lot of the mothers had all the literature and were very keen breastfeeders, because they'd read all the literature and were technically clued up. Whether they managed to do it or not, I'm not sure. I think it was when I was at home and I was doing a project with one of the paediatricians at (local hospital). I was chatting to her and we got onto breastfeeding and she said 'you wouldn't believe it, I haven't been able to breastfeed any of my kids, and I desperately wanted to but I really struggled and just couldn't get it to work at all'. I thought, well, this is a top paediatrician who struggled so hard with all the knowledge she has, you can understand why normal women can't, why they struggle to breastfeed. And I don't think it's necessarily anything wrong with the technical abilities, it's just that it just won't work. So I found that quite interesting.

This data seemed to again illustrate a medical student accepting the words of a senior doctor as authoritative knowledge rather than using the experience as a springboard to investigate the topic more thoroughly. If in the future this student ever has a discussion with a woman concerning breastfeeding, any advice given may well be coloured by the accepted tenet that if senior doctors with lots of information cannot breastfeed, then it must be almost impossible for women lacking such professional knowledge.

Other medical students focused on the psychological issues. One wondered whether the woman would be jealous of her partner's ability to feed and settle the baby, while another emphasized the importance of stress reduction. The third student was surprised that there was

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not as much promotion of breastfeeding as she had expected despite the posters designed to appeal to different social groups:

Helen: The thing that is going through my head when I read this is Catherine's emotions because she seems to be having a lot of trouble with this but it all seems to go perfectly well when dad feeds him with the bottle and I can imagine that some women feel rejected by that and wonder does the baby love dad more than me or is the baby not bonding with me well enough. I don't know what the midwife could do, I don't know a lot but aren't there manoeuvres like putting the baby in the right place and manoeuvring the breast in the right places, but apart from that I'm not really sure.

Al: I'm guessing here but making sure it is all calm, because I imagine the more it doesn't happen the more worked up you get and fidgety and the baby might sense that and it might impede it a bit. The dad giving the baby an artificial feed, well it gives the mum a rest, making sure that the baby gets something but it also means that the mum is not likely to carry on with the breastfeeding if she knows that there is another option that's a lot better. Also, I know breast is best and it's nice to keep up with the breast milk. It's best for immunity.

Grace: Doesn't it lower the risk of bowel problems later in life? I think there're quite a few things. Best for baby's health. Helped with mummy and baby bonding as well,

Karen: Mostly when I went out with the midwife I only saw postnatal women and the midwife's saying 'oh, so you're breastfeeding or bottle-feeding. I never actually witnessed a discussion about the benefits of breastfeeding. It seems that the parents have already made up their minds by the time the baby is born. I thought there'd be a lot more pushing for breastfeeding. I've noticed the posters up all around, the one with the big tattooed man with the bare chest so it's like they're trying to appeal to all social groups so that's definitely input. There's all the research. Breastfeeding is best for bonding and for the baby's health but at the end of the day not everyone does breastfeed and they're OK, and then there are situations where breastfeeding's not possible. Like the baby is poorly and breastfeeding's just not possible.

Students demonstrated some knowledge about breastfeeding although attitudes to it seemed somewhat ambivalent, as if they were voicing the accepted rhetoric about 'breast is best' but without strong feelings about breastfeeding as a health issue. This may be because the students regarded breastfeeding as something that was part of the role of the midwife and not something about which they would need to advise women. However, midwives too are part of the culture from which they come and may have their own attitudes about breastfeeding,

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which can hinder the provision of information and support to their clients (Battersby 2002; Finigan 2004). Breastfeeding is an important public health topic and one about which all health professionals involved in women's and infants' health should be fully aware. However, the risk climate which permeates maternity care does not seem to extend to the dangers of artificial feeding which Minchin (2003) suggests is every bit as risky to a child's future health as maternal alcohol and tobacco use in pregnancy. Furthermore, she points out that the financial savings for the health service would be phenomenal if all babies were to be breastfed. Many of the diseases which have a high profile today such as allergies, diabetes, obesity, asthma and orthodontic problems are much rarer in children who have been breastfed according to WHO (2003) guidelines.

A local research study, done when the author was herself a medical student found that women who bottle feed, overwhelmingly agree with a survey statement that formula milk is as healthy for the baby as breast milk (Simmie 2006). While this author will undoubtedly carry her knowledge about the benefits of breastfeeding into her future medical practice, accurate information about the health benefits of breastfeeding for both mothers and babies is urgently required by all health professionals involved in maternal and infant health as well as by all women who are currently pregnant or planning future pregnancies.

8. Conclusion

The three PBL scenarios were, I felt, a very useful data collection tool, encouraging discussion around topics in an interesting way. Their use also enabled the introduction of midwifery knowledge in a non-confrontational manner. Students were reminded that the scenarios were not designed to test their knowledge, only to stimulate discussion. Use of the scenarios allowed me to collect a significant amount of thought-provoking and relevant data. Various changes were observed over time in students feelings about labour pain, in knowledge about normal birth and in attitudes toward the induction of labour, all of which served as building blocks in their construction of knowledge. It was not possible to explore changes in attitude toward breastfeeding as this scenario was presented at the end of the students' placement. However views expressed at this time could be interpreted as a summary of their knowledge construction over the six weeks of clinical experience. The presentation

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and discussion of data in this chapter represents the initial stage of data analysis where I initially grouped and explored the data under the headings of the three scenarios comprising my data collection tool. Chapter 11 takes the analysis of the data to the next stage using the six templates described in Chapter 9 (figure 9-5).

Chapter 11

Analysis & Discussion

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The analysis and discussion in this chapter are organized around the five major themes which were extracted from the interview data. These, as presented in chapter 9 (figure 9-5), are as follows:

- Witches or wise women: medical students' experience of working with midwives
- Valuing the concept of normality
- Communication for persuasion
- Communication to develop rapport
- Authoritative knowledge & medical hegemony

Theme 1: Witches or Wise Women

In the UK there is a long history of midwifery involvement in medical education during medical students' obstetric rotation onto labour and delivery suites. While medical students observe and participate in medical obstetrics under the supervision of the consultant obstetrician and his or her team, working with midwives is arguably students' only opportunity to observe a non-interventionist approach to birth and to participate in the care of women experiencing normal vaginal deliveries. This experience of the 'normal' forms an integral part of the medical curriculum (Hanson et al 2005; Cooper 2009) and is mandated in the workbook given to the medical students by their university.

1.2 Students' perception of midwives as clinical teachers

While the American literature documenting medical students' experiences of working with midwives indicates the successful outcomes of such initiatives (Afriat 1993; Hanson et al 2005; McConaughy and Howard 2009), there is a dearth of information from the UK specifically concerning medical students' perceptions of being taught peripartum care skills by midwives. UK literature focuses more on interprofessional education, which is defined as an interactive educational initiative designed to promote collaborative practice involving two or more professional groups (Fraser et al 2000; Furber et al 2004). Issues of interprofessional and interdisciplinary education have been explored in chapter 2 and are discussed further in chapter 12 where recommendations are made for collaborative initiatives within medical and midwifery curricula.

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1.2 Competing ideologies

There is plentiful evidence that the relationship between doctors and midwives is affected by competing professional ideologies (Fleming 1998; Cahill 2000; Hunter 2001; Pollard 2003; Kennedy et al 2004; Hyde and Roche-Reid 2004). In the case of medical students, this may be particularly pertinent during labour ward allocations as this is the environment in which disagreements between midwives and obstetricians most often arise (Hyde and Roche Reid 2004; Bull 2008; Keating 2009). One obstetrician I approached before commencing the data collection stage told me that the medical students for whom he was responsible ‘hated’ midwives and he was no longer planning to allocate students to the labour ward to work with them. Understandably, I did not pursue the possibility of conducting part of my research at this location, although it might have been interesting had I wished to explicitly examine the concept of professional conflict. Instead I chose a clinical location where midwives and obstetricians appeared to have a mutually respectful professional relationship. However, a good working relationship does not guarantee that no significant areas of professional conflict and power imbalances exist (Pollard 2007).

1.3 Truth or myth: stories of the midwife as witch

It was noteworthy that the word scary came up repeatedly in my initial discussions with medical students (Chapter 10). The laughing comment of one medical student: (Edward) *“There are these stories passed down by medical students about how scary midwives are. (Laughs) Very scary, you know, witchy-woo”* invoked Halloween images of witches; indeed feminist historians have associated midwives with witchcraft and proposed that midwives were perceived as dangerously powerful due to their knowledge about sexuality and birth (Ehrenreich and English 1973; Achterberg 1990; Hartt 2002). However, Harley (1990) claims that the association of midwives with witchcraft has become a literary myth and that careful examination of documentation around witch trials in England, America and Europe indicates that few midwives were actually prosecuted. Catholic theologian Ranke-Heinemann’s (1991) research into Church historical archives challenges this view as she discovered that one in three women executed for witchcraft in Cologne between 1627 and 1630 was a midwife. This almost eradicated midwives (Ranke-Heinemann 1991) which may have been a factor in medical appropriation of childbirth. However, whichever view is factually and historically

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correct, the association between midwives and witches has become embedded within popular consciousness. In this context it seemed that conjuring up such exaggerated images might also act as an antidote to the power of midwives, portraying them as somewhat comical figures whose traditional knowledge has been surpassed by the scientific rationality of medical obstetrics. This implicit humour was deduced from the intonation and facial expressions of the students when they talked about ‘scary’ midwives. The comment that the consultants had denied the truth of such tales seemed to indicate that scary midwives had been a topic raised in more than one consultant obstetrician’s discussion with the medical students. One participant who made such a comment seemed so affected by it that he raised the topic at a subsequent interview. While from a modern medical student’s perspective, midwifery knowledge may not appear as a threat, the power of midwives on the labour ward is inherent in their role of gatekeepers. Midwives can hinder or facilitate medical students’ access to women in labour.

Bull (2008) writing about midwives teaching medical students at an Australian teaching hospital recounts that in a 1999 evaluation medical students reported difficulties in gaining access to women on the delivery suite and attributed this in part to hostility on the part of midwives. One participant in my research study seemed to be reflecting this when he said:

(Danny) Perhaps you have these preconceptions that they are not going to be the friendliest bunch and also there’s that sense of competition cos they’ve got their student midwives and you’re medical students so you are always very apprehensive.

1.4 Midwives’ views of medical students

However participants in the current study were willing to acknowledge behaviour on the part of medical students which might contribute to this perceived hostility from midwives as the following data illustrate: (Edward)“*Sometimes I think medical students often come across as being like ‘I’m here to see someone give birth’ and I think that irritates people quite a lot*”. Some students spoke of the difficulties in accessing instruction from midwives when there were also large numbers of midwifery students on the labour ward while others worried that enthusiasm on the part of medical students could be misinterpreted as aggression: (Jasmine)

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“I think medical students just try to pack a lot of experience in. Sometimes that can make us appear arrogant, like ‘let me do that’”

Midwives with whom I have worked have had conflicting views of medical students and these seem to relate to how fully the students have been willing to engage in the midwifery model of care, characterized by Raisler (2000, p.31) as ‘low tech, high touch’. A medical student expecting to gain entry to a labour room for the purpose of conducting a delivery when a midwife has provided all the care during labour is viewed very differently from a student who participates in the care of a woman from admission to the labour ward through to birth and early postnatal care. This may be one reason that medical students experience difficulty in gaining access to women in labour (Mires 2001, Grasby and Quinlivan 2001). Participants discussed this difficulty and revealed differences between the DGH and their base hospital, NETH:

(Frances) “ Here (at the DGH) the midwives always come and get us (medical students) if there’s going to be a birth. They don’t mind if we just go in to deliver a baby. I guess maybe it’s to do with the fact they don’t have many (medical) students here. At NETH the midwives are fussier. They want you to participate throughout the labour. I can understand it really, but as medical students, we don’t have a lot of time. We just want to see and do as much as we can.”

While Mires (2001) attributes medical students’ difficulties in seeing normal births to the fact that women do not wish to have medical students involved in their care, the gate-keeping function of the midwife may provide an alternative explanation. A midwife who feels that it would not be in a woman’s interest to be cared for by a medical student may phrase the request to participate in her care in a way which will almost certainly elicit a negative response. While protecting a labouring woman is a legitimate reason to restrict the number of carers she has, it is unfortunate for medical students who have only a limited time to gain any experience of the midwifery model of care. This may have future ramifications about how they perceive midwives, or childbirth, and affect their willingness to participate in collaborative care (Afriat 1993).

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Nicum and Karoo (1998) and Grasby and Quinlivan (2001) postulate that the solution is educating women about the role of medical students so decisions made in the fulcrum between self-interest and altruism tip in favour of the medical student. Such a recommendation however seems to consider the importance of a woman's labour from the perspective of an educational experience rather than acknowledging birth as a profound life event for a woman and her family. While conceding that it is valuable for medical students to gain experiences around birth, I suggest that any educational intervention might be directed toward helping the students to understand birth within an holistic or humanistic model (Davies-Floyd and Mathers 2002). This could help students to gain respect for the emotional, social and spiritual side of birth, encouraging them to value the birthing woman's autonomy. Some of the participants began to recognize these aspects of childbirth as illustrated by the following data: (Danny) "*It brought tears to my eyes. I didn't expect that, but it was such a moving experience.*" (Isobel) "*I thought it was a spiritually really amazing thing.*" Within such a framework, a woman's refusal to allow students to attend her birth might be accepted with empathy and consideration rather than disappointment or frustration. Paradoxically, women may be more willing to invite medical students exhibiting such understanding to participate in their labours.

1.5 The midwife as wise, brilliant, amazing woman

However, following experience of working with midwives all the students expressed positive feelings about working with midwives. Jasmine's experience was typical :

Jasmine: (describing her first labour ward shift) *I got there about half seven. The coordinating midwife was just allocating the jobs so she said she would allocate me to a midwife who was most likely to have a delivery. So I was assigned to a midwife and she was amazing, she was really really brilliant and I just followed her and she had two patients. One was a primigravida, the other had had a caesarean before, but had never had a vaginal delivery. I just managed to follow them right from when they came into the hospital and the midwife really involved me. Like in all aspects of their care. I was able to listen to the (fetal) heartbeat and stuff.*

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As in the case of Jasmine, the data presented in Chapter 10 indicated that medical students appreciated being involved in the care of women. They valued both the expertise of the midwives and the fact that the midwives to whom they were assigned were welcoming and interested in helping the students to gain necessary experience. Other students valued midwifery's holistic approach:

(Ben) "In terms of the midwives on the labour ward. I'm of the perception that they are better to teach us than the doctors themselves in the sense if you want to learn about the holistic, the whole treatment, the whole approach to women". (Sarah) "in terms of dealing with the patient as a whole and not just someone who has come into hospital to deliver a baby, the holistic point of view".

While this holistic approach was one of the characteristics of MK identified by the Delphi survey there was no general recognition on the part of medical students of midwifery knowledge as autonomous from obstetric knowledge. One student quoted in Chapter 10 joked that the only real difference between midwives and obstetricians was that the doctors performed caesarean sections: (Danny) "*Midwives don't do caesareans do they?*" This student's interpretation of midwives' similarity to obstetricians formed part of the data contributing to the theme of midwife as 'sage-femme'.

Sage-femme is the French word for midwife and the term's literal translation is 'wise woman'. French, particularly Parisian midwives were notable during the late Middle Ages and Renaissance periods in their acceptance by physicians and many of them were well educated, socially prominent women who came from medical families and worked alongside brothers or fathers who were surgeons (Harley 1990). Even today, French midwives are considered as part of the medical profession and they assert that this supports their claim to autonomy (Mead 2010). The medical students seemed to embrace this view of midwifery following their experience of working with midwives. Data supporting this included one participant's assertion that midwives are more like doctors than nurses both because of their ability to make decisions about patient care and because of their vulnerability which stemmed from their responsibility for such decisions: (Carl) "*Midwives get more respect than nurses. They seem more experienced, they have more responsibility, they put themselves in vulnerable positions. Like doctors are incredibly vulnerable, they have to be the decision makers*".

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While the students recognized the midwife as being a wise woman in the sense of being knowledgeable, this knowledge was largely contained within the medical model. Wisdom conflicting with the medical model because it pushed the boundaries of normality (Downe 2004c) or was derived from intuitive sources (Hardy 2008; Jefford et al 2010) or even that which was based on research challenging the medical hegemony (Johnson and Davis 2005) was largely unrecognized or unacknowledged.

However, other students pictured a hierarchy with doctors at the top dictating care and midwives doing the work which seemed to place midwives in a more traditional nursing role: (Marie) *“I know midwives don’t like being compared with nurses but we are so new to this and they are so valuable because they’re the ones that do the jobs, the doctors just sit at the top and dictate.”* Other students spoke about experiences at DGH where the care was *“Registrar-led”* where even seemingly small decisions were referred to the registrar: (Grace) *“the registrar is where it all stops, the real responsibility stops, for obvious reasons.”* This belies the ‘plasticity’ which Lane (2006) described as pushing back the boundaries between obstetricians and midwives in a post-modern health service controlled by discourses such as consumerism and managerialism. However, in her case study of midwives and obstetricians working together in an Australian public hospital, Lane discovered limits to this plasticity arising from conflicts between midwives and obstetricians in the assessment of risk and the interpretation of how women’s bodies function. The ultimate barrier proved to be obstetricians’ veto power in the maternity unit. Similarly, Keating and Fleming (2009) found that a culture of medical dominance still prevails in modern maternity units.

In only one instance did any of the research participants disclose an awareness of similar conflicts between obstetricians and midwives during my period of data collection: (Marie) *“You say ‘that midwife was particularly good or nice and she seemed like she really knew what she was doing’ this that and the other, then you’ll hear one of the obstetricians, the consultant, talking about the same midwife saying ‘she’s...’ and they’ll all say ‘she’s batty’ or ‘what does she know.’”* Whether the reason more students did not discuss conflict between midwives and doctors was that they were not aware of any, or due to the issue of positionality discussed in Chapter 9 was not revealed by the data from this study.

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As the medical students gained experience in working with midwives they began to demonstrate an awareness of the midwife's expertise in normality. This became the second of the four themes.

Theme 2: Valuing the concept of normality

Participants expressed interest in learning about normal birth:

(Ben) *"The only thing the doctor can really tell you is the abnormal. He can learn the normal but he won't have experienced it as much. So I would probably say midwives can teach you more than a doctor. It's always best to know the normal than the abnormal"*.

(Grace) *"I think it's just really important to see a natural, normal delivery so you don't get completely biased into thinking that all deliveries are long and complicated and dangerous."*

While students recognized and valued the midwives' expertise in the 'normal' there seemed to be little understanding that differing definitions of normality might characterize midwifery and obstetric practice. Downe (2004c) suggests that midwives' expertise in the 'normal' includes an ability to define the outer limits of normality. Similarly, McCourt and Pearce (2000) argue that midwifery care should not be restricted by medical criteria of normality as these are determined by population averages rather than by consideration of an individual woman and her circumstances.

2.1 The normality/risk debate

The opposing views of childbirth as a medically assisted, potentially risky event or as a normal physiological process that celebrates both sexuality and spirituality are at the heart of the philosophical differences between midwifery and obstetrics. The medical focus on risk may serve to increase the possibility of pathology through raising women's fears about childbirth. Edwards discusses women's perceptions of this in her study into home birth:

While an obstetric model of birth relies on relentlessly searching out signs of risk, the women believed that focusing on risk during pregnancy and birth generates

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unsubstantiated fear that undermines their confidence and paradoxically increases risk. (Edwards 2005 p.112)

Midwives whose education and practice have occurred completely within a medical health care setting may also find the concept of birth as part of a sexual continuum disturbing, as they may be integrated into an obstetric nursing rather than an holistic midwifery practice model (Thomas 2002).

It was apparent in discussions around all three of the data collection scenarios that the medical dogma surrounding birth informed the medical students' understanding of pregnancy and childbirth. However some students showed evidence of thinking beyond this ideology to try to gain a deeper understanding of the scenarios. This was particularly evident when the participants discussed the issue of labour pain and therefore this topic has been used to illustrate the theme of *valuing the concept of normality*. The first time participants discussed the PBL scenario about labour, many of them viewed pain from the perspective of the medical model in which pain is identified with pathology (Wilkinson 1996). Another understanding of pain related the experience of severe pain to psychological distress: (Carl) *"If there's more pain, like severe pain, surely that means there's something wrong with the labour.....A lot of pain might cause a negative reaction. It's hard to measure pain but if the woman feels it was a terribly traumatic situation then it might breed resentment"*. The medical students' own reactions to seeing women shaped their initial construction of knowledge about pain as a normal/abnormal component of labour: (Edward) *"You're on delivery suite and you hear shouts and screams coming from some of the rooms. You feel uncomfortable"*. (Marie) *"It frightens me, childbirth, it's such a big and painful event"*. Some participants' first impulse was to do something to relieve the pain they witnessed: (Al) *"I think when you see these woman really screaming and in so much agony, you just want to do something to try to help them."* Later the medical students were able to use their developing understanding gained through repeated observations of women experiencing pain to construct their knowledge about normality:

(Al) *"I agreed with this feeling of being uncomfortable when they started shouting and screaming but I think I've kind of got over that as I've got more used to it and been around it more"*.

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(Marie) *“She was in so much pain and she was just on all fours with the gas and air and the baby came out very very quickly”*.

(Karen) *“I’ve seen different responses to childbirth. Some women are really quiet and look almost upset with the pain and other women are more aggressive with it, they just want to get the baby out. I’ve heard some fantastical shouts and screams. It just strikes a chord that that people deal with things in different ways”*

Some students observed the way in which women’s choices about pain relief could interfere with normality. This was particularly evident in discussions about epidural analgesia:

(Marie) *She said she does slightly regret having the epidural because it did take away a lot of sensation from the actual birth whereas with this (labour) it was a lot, lot shorter but she managed on just gas and air”*.

(Edward) *“I’ve noticed that if you have an epidural, it complicates, makes quite a difference to the labour. You’re stuck in this bed, you have to be monitored all the time, you can’t move around much. A lot more medicalized than if you just go for it”*.

Another participant observed how epidural analgesia seemed to detract from the sense of birth being a major life event:

(Helen) *This is interesting cos my views may have changed on that, not changed, but this week I saw a lady that had had an epidural and didn't seem to have any kind of discomfort whatsoever, and when she was, for want of a better phrase, when she was giving birth it was like she was having a really big poo, she was just straining and she was tired, but it wasn't distressing and it was completely, completely different to a delivery without an epidural*

Researcher: In a good way or bad way?

In a good way because the lady wasn't in pain, but in a bad way cos her husband was sat in a chair just watching, sat back, she was calm and it was quite quiet really and it sort of just popped out, but whereas I think that's awful because obviously the lady's going to feel a lot better that she's not in pain, but if the lady's in pain, she's screaming and she's working hard and she's sweating and screaming and her husband's there egging her, or her partner's there egging her on, you know, there's a lot of emotion caught up into that moment, just simply because of the pain and the hard work, I think that was missing, it was still a magical thing, but it wasn't as emotive as if she hadn't had the epidural

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As the students continued to construct their understanding of normality in relation to the pain of labour, other participants, like Helen, explored the concept that pain might have a positive role in childbirth: (Jasmine) *“Just the relief. The more pain you go through, the more you’re so fine when it is all over and maybe that’s transferred into love...”* The students talked about their perceptions that pain might be associated with assisting bonding, preventing iatrogenic complications or facilitating a quicker birth: (Ben) *“Perhaps it’s a bonding experience, and it’s something you’re going to get, and it’s like when you’ve been through something with someone else, camaraderie, as it were...”* (Frances) *“when we were outside the room the midwife said ‘well, basically that baby would have been out hours ago had she not had an epidural’ so in that respect you think for a little bit of pain she should just grin and bear it”*. One student associated the painful experience of childbirth with spirituality: (Helen) *“It makes it more of an event, the actual birth. The pain heightens the spiritual side of it”*.

Some participants wondered about the cultural contribution to women’s tolerance of pain: (Isobel) *“You have to be culturally sensitive, and the people I’m dealing with, it might be their cultural belief and you have to respect that even if you don’t agree with it.”* Waddie (1996) highlights the relationship between culture and the experience or expression of pain, an important topic which has been widely studied and discussed in relation to how women from differing cultural groups either experience or express labour pain.

In a classic study on cultural expectations in childbirth, True (1953) discovered that Native American women from the Mojave tribe avoided expressing pain during labour for fear of social ridicule. Srivastava (2007) discussed similar attitudes to pain among Chinese women, suggesting that these were culturally determined and based on Confucian spirituality which proscribes the expression of physical or emotional pain to others. Other cultural groups such as Arab or South Asian Muslim women typically express labour pain vocally (Vangen et al 1996; Green 2007; Simpson and Creehan 2007). However, different strategies of coping with pain in labour do not necessarily equate to divergent experiences of pain. In his seminal study into ethnicity and pain Zborowski (1952) discovered that patients from different ethnic backgrounds expressed pain differently, while Meehan et al (1954) demonstrated that culturally mediated reactions to pain do not relate to differing experiences of pain. A more

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recent study using the McGill Pain Questionnaire (Calvillo and Flaskerud 1993) found no differences in how women of differing ethnic groups perceived the pain of labour. However, Calvillo and Flaskerud's research demonstrated that care-givers such as nurses interpret women's pain according to their responses and this can lead to stereotyping. These findings are confirmed by several other studies (Vangen et al 1996; Schott and Henley 1996; Sheiner et al 1999; Ernst 2000; Callister et al 2003; Trout 2004). Vangen et al's findings are highly relevant to the ethnic minority population which my research participants worked as they indicate that Pakistani women receive less pain relief in labour than white ethnic women. Schott and Henley (1996) found that this is due to nurses' or midwives' perceptions of South Asian women as having a low pain tolerance or vocalizing pain freely during labour. In Sheiner et al's (1999) study, the findings indicated that contrary to the beliefs of hospital staff, culturally influenced responses to pain do not indicate differences in the way women experience pain. The finding relating most closely to the data collection tool from my research is from Callister et al's (2003) secondary analysis of studies into culturally diverse women's experience of labour pain. In this study women from all ethnic groups described labour pain as a 'bitter-sweet' experience that was challenging but rewarding and brought with it feelings of love.

Participants acknowledged cultural differences and how these might inform a woman's childbirth experiences. Sensitivity of women's individual needs seemed to be heightened if these could be explained with reference to cultural norms:

(Isobel) *"If that's what they believe and she wants to be in more pain, fine, it should always be down to the woman and what she wants so I guess I believe that it should always be down to the woman. She should make the decision about pain relief"*.

This student seems to be moving toward an acknowledgement of informed choice but does not demonstrate an awareness of how persuasive a health professional's opinion can be when she says: *"the health professional should always be able to say what they think, to give their opinion"*. The topic of informed choice will be explored further in the section of this chapter

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dealing with the theme of communication for persuasion. In this case the student indicated the importance of providing women with care that was culturally sensitive.

While childbirth is undoubtedly painful, this pain is seen by some women as both sexual, in that childbirth is part of a sexual continuum of which childbirth forms only a part, and spiritual, in that it signposts a profound life event (Gaskin 2002). Therefore childbirth becomes both an intensely primitive physical function, and at the same time, a transformative spiritual event in a woman's life. Descriptions of labour as both painful and empowering is congruent with the meaning of the Egyptian proverb in the data collection scenario about pain and love.

This pain/love connection is related to the complex hormonal control of labour which Buckley (2004) suggests has developed over the whole span of human existence and thus the tampering that occurs in the practice of modern obstetrics may have implications of which science is not yet aware. While some research participants began to explore ways in which the pain of labour might be empowering or related to the love felt by a mother for her infant, only one student explicitly mentioned the hormonal influences on labour: (Danny) *“Then I was thinking about the mother in labour, I guess pain releases things like endorphins and that's obviously beneficial for, in terms of the pain”* .

While participants seemed willing to provide women with choices about pain relief in childbirth, when they discussed the PBL scenario about a woman refusing a medical induction of labour they advocated a more authoritative model of communication. Data from the discussions about the induction of labour contributed to the theme of communication for persuasion .

Theme 3: Communication for Persuasion

This theme was most evident during discussions about the second PBL scenario in which a woman refuses a medical induction of labour. The majority of the discussion around induction of labour centred on overcoming women's fears so that they would be compliant. This included giving advice that was not evidence based, characteristically, around the safety

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for mother and baby of the induction procedure. While it did not seem that students knowingly wished to provide information that was inaccurate, they seemed to be modeling their imagined responses on those they had heard and seen doctors use in antenatal clinics without, however, investigating the topic further for themselves.

Information giving was not therefore used to create a partnership with women and to provide the best evidence to enable them to make choices about their care but rather to ensure that they were directed toward compliance with medical advice.

While some women feel most comfortable relinquishing their right to make informed decisions about their care in favour of what they see as the expert advice of medical professionals, this is more prevalent within certain cultural groups (Rashad et al 2003). One student suggested that this was generational: (Carl) *“My gran wouldn’t want to be given choices. To her the doctor is the expert. She wants him to tell her what treatment she needs or what medicine to take.”*

Other women might like to make choices but are swayed by the culture of health care into accepting opinion as fact if voiced by a health professional. A doctor, or for that matter a midwife, with a strong positive bias toward epidural analgesia in labour for instance, might easily influence women to request such intervention without their having any real understanding of the evidence for or against such a choice. Although there is increasing rhetoric about informed choice in maternity care (O’Cathain et al 2002; Goldberg 2009), health professionals wishing to provide comprehensive information to women often find it challenging because of time constraints (House of Commons Health Committee 2003). The consequence is informed consent rather than informed choice, where women make the decisions that health professionals wish them to make, or choose from a limited list of medically approved items, rather than making individual choices based on a careful consideration of all options (Stapleton 2002).

Another student suggested that refusal of induction might lead to legal sanctions to coerce a woman into accepting the procedure:

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(Helen) *I wouldn't say it's child protection, but it's more, you need to think of the fetus and the fact that even though you are dealing with one life and the consent of one person, that baby is alive as well and that baby doesn't have the ability to consent and weigh up the risk of leaving it longer. Because I'm not so sure how the legalities work but I would have thought that if a lady would not be inducted (sic) and it would put the child in danger then we'd be able to go ahead and do it.*

Although the student says she isn't raising it as a child protection issue, the spoken words belie that statement. This data is interesting as it highlights the common obstetric perception that the obstetrician has responsibility for two patients (Arney 1982; Lupton 2003), rather than a responsibility to the woman, who herself has full responsibility for her unborn child. While in the USA the fetus has different legal rights, depending on individual State law, in the UK the fetus has no independent legal rights until birth has occurred (Nuffield Council on Bioethics 2004). Very few mothers wish to make decisions that will harm their child; however fear of harm is often used as a lever to prise women out of a position of autonomy into one of dependence on the attending physician's more rational, scientific medical knowledge. That too can be seen in the data below as the student describes pregnant women as 'emotional and scared': (Helen) *"I think women trust the medical profession when it comes to labour. I think they are quite emotional, quite scared and just want what's best for their baby."*

Almost all of the dialogue focused on persuasion or even coercion by using scare tactics emphasizing the risks of continuing the pregnancy: (Edward) *"I think you have to spend quite a lot of time counselling her as to the risks and potential risks"*. (Isobel) : *"I think you'd have to be quite forceful in saying that if we don't do anything something could happen to your baby, but try not to make it into an emotionally emotive conversation where you are saying 'if you don't do this your baby will die.'"*

Risk is a pertinent issue when considered in relation to pregnancy and birth. The function of over-emphasizing risk in pregnancy may be to ensure compliance with the medically determined norm. Thus, during the last century, women have been persuaded to accept many

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unnecessary and potentially harmful interventions for the sake of avoiding risk (Murphy-Lawless 1998). Edwards (2005) points out that in other situations, usually activities in which men are the protagonists, risk is seen as heroic, while in pregnancy a woman is considered selfish if she does not seek to avoid risks by complying with medical advice. This reflects the social construction of motherhood which emphasizes selflessness rather than personal achievement (Ussher 1986). The risks inherent in this very compliance are rarely considered either in the physical realm of increased likelihood of multiple interventions during labour (Kitzinger 2006), or from the perspective of psychological damage when a sense of failure and loss of control may mar a woman's initiation into motherhood.

Indeed, the risk culture itself poses risk where the very fact of worrying about risks, and the anxiety induced by such worry may have adverse affects on the pregnancy (Teixeira et al 1999; Edwards 2005). Emerging research is beginning to consider not only the effects of anxiety antenatally and around the time of birth, but also the long term harm which may be done to a child's psychological functioning if her mother was exposed to extreme stress and anxiety in pregnancy (Canals et al 2001; Austen et al 2004.;Glover et al 2004; Van den Bergh et al 2004). Of great concern is the ubiquitous nature of worry which Walsh (2007) has highlighted as the predominant feature of modern pregnancy.

Women interviewed by Edwards (2005) talked about the vulnerability of women during pregnancy and the cruelty of health professionals using the concept of risk to bully women into compliance with medical recommendations. Thomas (2003) also identified the concept of risk as being extremely disempowering to women during the antenatal period and suggested that:

Women deserve complete information so that they are not frightened into complying but are able to decide for themselves which option best suits their individual and 'special' situation (Thomas 2003 p.5).

Harris (2001) points out that informed choice is a fairly new concept in medicine, having become prominent only during the latter half of the 20th century. Before that, doctors often perceived their role as that of the patient's protector. While professional ethics dictated that

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doctors should do no harm, this was often interpreted as making decisions for the patient or withholding distressing information. Furthermore, Gafni et al (1998 p. 347) suggest that the model of the 'physician as a perfect agent for the patient' was still current at the time their paper was written and was seen by some physicians as a valid alternative to the model of informed decision-making. If this model was current as recently as 1998, it is possible that traces of similar thinking still linger in the medical establishments of today.

While remnants of the traditional doctor knows best attitude might still exist, the current emphasis on evidence based practice (EBP) may serve to reduce such paternalistic thinking in the interface between clinician and client. One way to achieve this is to incorporate valid informed choice into all medical consultations. Ford et al (2003) argue that the best available evidence must inform any discussion around choice. They suggest that taking an approach known as EBPC (evidence based patient choice): "places a strong emphasis on patient participation in clinical decision-making by taking into account the patient's needs and preferences" (Ford et al 2003, p.590). However, Murray Davis (2008) suggests that EBP can be disempowering to women during their maternity experience. Findings of her qualitative study in Canada supports the concept of EBP subjugating a woman's own embodied knowledge because of the high value it places on knowledge derived from research.

This dichotomy about EBP was reflected in a qualitative study into the concept of EBPC, where the informants consisted of GPs, Consultants, Practice Nurses, academics and service-users. Informants expressed differing interpretations of what EBPC should entail. Medical practitioners working in hospitals expressed the opinion that doctors should advise patients on the best course of action rather than providing them with all the relevant information needed to make the final decision on treatment options. Service-users, however, felt that doctors should value patients' previous knowledge and consider the patient holistically as someone with their own individual hopes, fears and anxieties (Ford et al 2003). Therefore, providing informed choice requires more than just the transfer of knowledge but should include recognition of the patient's personal attitudes and values as well as a consideration of how choice and attitude are related (Michie et al 2002).

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Weston and Brown (2003) suggest that medical students progress through distinct stages in knowledge acquisition. The first of these is authoritative knowledge where students accept the word of more senior clinicians. Development then occurs so that students are able to interrogate knowledge and finally they construct their own world-view signalling maturity and consistency. Based on a consideration of this model, research participants did not appear to have moved beyond the initial reliance on authoritative knowledge in this particular clinical setting, and yet these were fourth year medical students with only one year left before qualification. Had the students mentioned hospital guidelines, they might have been able to argue that these were evidence based; however participants did not raise this point in the interviews. Furthermore, discussion of evidence demonstrates a more comprehensive understanding when practitioners regularly review and challenge the information which they contain (Rolfe 1999).

In their review of evidence relating to guidelines and practice around informed choice, Marteau and Dormandy (2001) found that tape recorded consultations from both the USA and the UK demonstrate medical consultations where doctors provide limited, insufficient or inaccurate information in discussions about prenatal care. They suggest that this may be due to time constraints, inadequate understanding of information on the part of the doctors, poor counselling skills, or even a medical culture which does not value true information-sharing with patients.

However, these problems are not limited to consultations with doctors, as midwives have also been implicated in substandard provision of information-giving, resulting in women feeling that they have been pressurized into accepting particular care choices which do not accurately reflect their own needs or preferences (Levy 1999; Kirkham and Stapleton 2004; Davies 2004). Indeed Stapleton et al (2002) suggest that midwives are under the same pressures during antenatal consultations that Marteau and Dormandy (2001) discussed in relation to medical staff. One of the results is that midwives fail to disclose the full limitations of technological interventions, thereby preventing women from making true informed choices about their care (Levy 1999; Stapleton et al 2002). This was reflected in the medical students' discussions around induction of labour where they suggested they would inform women

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about the dangers of prolonged pregnancy: (Linda) “*like how your placenta must be getting old and it won't be as efficient and the baby could really grow better outside the uterus*”.

However participants rarely mentioned dangers associated with the process of induction of labour or the cascade of intervention that this might initiate.

Levy (1999) observed midwives operating what she termed ‘protective steering’ (p.105) where they attempted to balance the ideal of informed choice with the realities of limited antenatal consultation time and medically mandated protocols which restrict alternatives. Controlling information in this way is also used to protect the midwife from medical or managerial censure or to steer women toward choices reflecting the midwife’s beliefs about the most appropriate decision or action (Levy 1999). Hyde and Roche-Reid (2004) and Hindley and Thomson (2005) also identified this problem in their studies exploring midwives’ perceptions of their role in the health service . Hyde and Roche-Reid (2004) found that although midwives expressed the belief that communication is an important factor in the provision of information to facilitate women’s autonomous choices, a closer examination of their dialogue indicated that in reality, midwives exercised power in the midwife/client interaction in order to elicit compliance with pre-determined solutions or choices decided by the midwife. Hindley and Thomson’s (2005) research, in which fifty-eight midwives in two northern English hospitals were interviewed about their attitudes and beliefs about intrapartum fetal heart monitoring, corroborated the findings of the two earlier studies. The major themes identified by Hindley and Thomson were *informed choice* and *the power of the midwife*. While all midwives purported to believe in supporting women to achieve an informed choice, they admitted that medical protocols often dictated care and that they too guided women toward midwife-determined choices.

The gap between the rhetoric around informed choice and the reality also seems to be an issue for many service-users. A large scale survey of women from twelve different Welsh maternity units indicated that a large minority of women felt that they were not able to exercise informed choice when asked about eight different decision points pertaining to maternity care (O’Cathain et al 2002). Therefore, it appears that informed choice does not describe the reality of many women’s experiences. Furthermore, evidence such as the

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findings discussed above (Levy 1999; O’Cathain et al 2002; Kirkham and Stapleton 2004; Hyde and Roche-Reid 2004; Hindley and Thomson 2005) raise the possibility that medical students may have patterned their information-giving styles on either or both medical and midwifery staff.

Theme 4: Communication to Develop Rapport

The area where the participants wanted to model themselves on midwives most closely was in the midwives’ ability to quickly develop rapport with clients. Medical students saw this as a valuable skill, not only in its efficacy in communicating with women but also in enabling them to participate in the emotional labour of childbirth (Hunter 2001). When the medical students were able to develop rapport with women they spoke of crying, of awe, of recognizing the powerful work involved in labour and in feeling that they had played a small part in the positive experiences of women and their partners: (Helen) *“When she gave birth I felt part of it ‘cause I’d built up that rapport”*. (Karen) *“I looked after a girl, she was with her mother. I stayed with her all during her labour. When the baby was born the girl gave me a hug”*

Other students spoke of moving out of their role as a medical student and developing empathy with a woman in labour: (Isobel) *Sometimes you don’t know what to do though. It’s difficult and I think your instinct as an empathetic human being takes over I guess rather than “I’m a medical student, I should know what to do.”* Sometimes participants learned the importance of ‘being there’ for a woman almost by accident as demonstrated by one medical student who was prevented from actively participating in providing technical care in labour by the fact that the woman was holding tightly to her hand and indicated that she did not want the student to move from her side. Initially this participant felt frustrated but during the birth recognized that the rapport she developed with the woman contributed to a successful normal birth: (Marie) *“I wanted to listen to the fetal heart, write on the partogramme, feel that I was contributing but she just held onto my hand...wouldn’t let go. I couldn’t do anything but sit there. Now I see I actually did a lot.”*

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Leach (2005) identified the ability to develop rapport as the key to effective care as patient satisfaction and client outcomes are both increased when practitioners develop a good relationship with patients or clients. Because of the clinical governance implications of effective communications, many healthcare providers are now implementing staff training in this field (Stein et al 2005). Participants indicated that communication formed part of their training: (Ben) *“Communication’s important, trying to say things in a different way...Patients can talk to the doctor now. We’re trained to respond to what the patient wants, not just tell them. It’s a better dynamic.”*

Theme 5: Authoritative Knowledge and Medical Hegemony

Participants valued observing normality, albeit with little discussion of the interpretation of normal, and participated in developing rapport with women through observation of midwives. However, it was clear from the data that the authoritative knowledge, in the consciousness of many of the medical students, remained medical knowledge. Participants appeared to accept what they were told by senior doctors without question and without examining the evidence for or against practice. One example that stood out for me occurred in the discussion about the third PBL scenario which was about breastfeeding. The participant recounted a conversation with a senior doctor who stated that she had wanted to breastfeed each of her three children but was unable to do so. The medical student who had this conversation constructed her knowledge about breastfeeding almost entirely from this encounter rather than using it as a stimulus for further research or study:

(Isobel) I was chatting to her and we got onto breastfeeding and she said ‘you wouldn’t believe it, I haven’t been able to breastfeed any of my kids, and I desperately wanted to but I really struggled and just couldn’t get it to work at all’. I thought, well, this is a top paediatrician who struggled so hard with all the knowledge she has, you can understand why normal women can’t, why they struggle to breastfeed. And I don’t think it’s necessarily anything wrong with the technical abilities, it’s just that it just won’t work.

The fact that medical students were already socialized into the medical role was evident in a number of ways. From their very first concerns about working with midwives and the stories they had heard: (Helen) *“you hear stories, don’t you”* to the modelling they demonstrated

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when describing how they would discuss induction of labour in an antenatal clinic: (Ben) “*I would try to convince her and say it is very safe for her and her baby*”, the participants put on the mantles of the medics they aspired to be. One participant expressed the consequences of professional socialization as not trusting an individual opinion about the knowledge and skill of the other but rather adopting the collective view of one’s own profession:

(Marie) You’re spending time with the obstetricians at the same time as the midwives and you’ll do a delivery with a midwife and think ‘Oh’...going back to what we were saying about the reputation and the relationship between medical students and midwives and you sort of change your perspective. You say ‘that midwife was particularly good or nice and she seemed like she really knew what she was doing’ this that and the other, then you’ll hear one of the obstetricians, the consultant, talking about the same midwife saying ‘she’s...’ and they’ll all say ‘she’s batty’ or ‘what does she know’ and sometimes it will be based on ‘of course she knew she was going to deliver’ and someone’s harping on about this and that. So, it didn’t put you in a difficult position so much, but made you feel hang on, what’s going on, everything she’s told me, is that right or have I got a very rose-tinted view of her and I think there’s that natural professional empathy that you almost side with. Which is probably not how it should be. You obviously should make up your own mind, but the at the same time perhaps they have worked with her for some time and they’ll know.

The specific situation that the student is talking about is when a midwife is urging more time before obstetric intervention takes place, saying she knows the woman will achieve a normal birth if given time. The words that the doctors use to denigrate the midwife are also interesting. They do not speak about the midwife as lacking skill or being incompetent but as being ‘batty’ and they ask each other ‘what does she know?’ This rhetorical question points to the superiority of the doctors’ knowledge and discredits the idea that a midwife may know something the doctors don’t (‘she {midwife} knew she {woman} was going to deliver’). This discourse echoes Oakley’s (1993) observations of how historically the medical profession advanced its own power, not by proving that medical knowledge was advantageous, but by denigrating midwifery knowledge as unscientific.

By describing her as ‘batty’ the doctors indicate that they do not take this midwife’s knowledge seriously. Her ideas do not conform to their understanding of obstetrics. In fact this ‘batty’ midwife who thinks she ‘knows’ when a normal outcome is possible, may be among the best examples that the student will have encountered of a midwife using

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midwifery knowledge to reject the techno-medical model of care in favour of one that is more holistic or humanistic (Davis Floyd and Mather 2002). The 'batty' midwife is able to share midwifery knowledge with the medical student, yet that very knowledge is quickly undermined by the attitude of the more senior doctors which make the student doubt the veracity of what she had considered a valuable learning opportunity.

Participants' discussions of how they would attempt to persuade a woman to accept an induction of labour also exemplified the way in which students modelled their behaviours upon that of the doctors they observed during their clinical rotation. Such modelling is an example of Bandura's (1986) social learning theory. Social or observational learning is comprised of four separate processes: attention, retention, production and motivation. The medical students interviewed in this study demonstrated these processes in their desire to emulate medical staff they identified as role models; their close attention to both technical tasks and methods of interaction with women; and their ability to discuss and replicate these learned behaviours. Clinical learning is a complex process in which students model professional skills, attitudes, thinking and behaviours on professionals they wish to emulate (Spencer 2003). Participants modelled their practice on both doctors and midwives in their construction of knowledge about childbirth, however, the medical knowledge was the more authoritative when different knowledge systems were in conflict. Coombs and Ersser (2004) describe a similar conflict between knowledge systems in their ethnographic study into nurses' decision-making in three intensive care units. Although nurses working in this environment were highly skilled in providing both techno-medical and holistic care, medical hegemony prevented them from having an equal voice in clinical decision-making. The authors warn that team dynamics are adversely affected by the failure to recognize and value nurses' role in clinical decision-making, thus creating a barrier to effective interprofessional collaboration. Filc (2004) interprets medical hegemony as a microcosm of contemporary society with its corresponding discourse of class, gender and ethnic dominance. These factors were also identified by Hall (2005) as having a negative impact upon collaboration between professional groups.

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Medical dominance was evident in the way participants described their desire to enter the profession. Many of the medical students had considered other health-related careers while still at school. However once they realized that their 'A' level grades would be high enough to apply to medical school, a medical career took precedence over any other occupation in health:

(Frances) Well it all changed for us, it was at AS level. I did maths, chemistry, physics, biology and then with my results from the AS results I could then go on to do medicine. I had thought I'd do physio or something else."

(Karen) ... my gran was really ill so I spent a lot of time around hospitals, in hospitals and I've always enjoyed health care as a little child so I've always been around first aid type of things. I've always been interested in that type of things and it wasn't until I actually got my grades at school that I realized I could go on to be a doctor."

(Al)... first of all I always knew from being, from when you start thinking about any kind of career, that I wanted to do something with people...I then started going through GCSEs and doing science in a bit more complex way. I really enjoyed anything to do with human biology, the way the body worked, and then when I started doing my 'A' levels I started thinking because I got good grades I might be bright enough, because I did really well at GCSE and I was getting good grades through my modules at 'A' level I thought 'hang on, I could really go for medicine if I wanted to' so I did a work experience in ophthalmology and I just loved it and I just thought 'this is what I want to do. I want to be around people and I want to help people and I'm interested in the basic science'. So it was just the perfect combination.

This was often reinforced by family members:

(Edward) I guess I've always wanted to go into some kind of health care profession. I've always been kind of brought up around a health care environment and I knew I wanted to do something where I would be helping people and combining science with trying to make people feel better I guess. And I thought about physio and I thought about nursing, midwifery and medicine as well and my mum sort of said 'the thought of physio's fantastic but if you can do better, do what you can with your 'A' levels. So I went on to medicine. I think one of the things my mum's always said is 'you can only go so high in physio' ... she says you still can't reach the level you can reach possibly if you've done medicine. I think more toward the decision making and that aspect.

While sociologists have postulated the reduction in medical hegemony due to movements such as EBP, consumerism, managerialism and competing professional discourses (Kelleher et al 1994; Turner 1995; Freidson 2001; Kenny 2004; Allsop 2006; Coburn 2006; Kemp

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2007), it was evident that given a choice between medicine and another career in a related field, there had been only one real choice for these medical students. The power of medicine in the 21st century may be limited by the above factors but doctors still perceive that they have more power and autonomy than other health professionals, and perhaps as importantly, receive remuneration congruent to their levels of responsibility (Coombs 2004). Responsibility which derives from professional accountability can result in vulnerability and this was recognized by one participant who observed: (Carl) “...doctors are incredibly vulnerable. They have to be the decision-makers.” In the current structure of most health services doctors are paid to be the decision-makers and therefore to take the blame when their decisions prove to be the wrong ones. Wanting to be a decision maker was one reason that Edward (above) chose a career in medicine over one in physiotherapy. The relationship between medicine and decision-making was evident in Coombs (2004) study where doctors complained about nurses wanting to be part of the decision-making process without being willing to take the responsibilities inherent in that role. In medicine knowledge, power, authority, status and higher financial reward are all inter-linked and supported by our current social construction of what it means to be a professional (Freidson 2001). Knowledge that has a higher remunerative value is considered more authoritative in our consumer society where materialism has more social credence than the search for spirituality or other alternative ways of seeing the world.

6. Conclusion

In the final chapter I reflect on these findings and explore ways of encouraging midwives and doctors or medical students and midwifery students to develop a more authentic understanding of each others' roles and perspectives in order to enable more effective and equitable interprofessional collaboration. A strong theme in this endeavour is the introduction of midwifery knowledge into medical education while at the same time strengthening its position in the midwifery curriculum. In terms of qualified staff, the inclusion of midwifery knowledge in the interprofessional CPD curriculum would enhance the learning opportunities for all classifications of staff involved in maternity care. If educators are able to find methods to achieve these tasks, the winners should be not only doctors and midwives but also the women who receive care from them during pregnancy, labour and the puerperium.

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The Journey's End



(MacVane family film clip 1949)

*One's destination is never a place but a new
way of seeing things³*

³ Henry Miller

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1. Introduction

This chapter represents an important end stage in my work. Within it, I endeavor to present the overall picture of my research and to describe the patterns which have been woven during this project. I will look forward and make recommendations for both educational practice and further research and I will look backward to reflect upon what the research has meant to me.

In Chapter 1 the aims of this research were stated to be to: a) define the constituents of midwifery knowledge and b) explore medical students' construction of knowledge while working with midwives during a specialist obstetric rotation, using PBL scenarios as the data collection tool. My research achieved these aims through focusing on two areas which have been central to my work as a midwife and an educationalist: midwifery knowledge and clinical education.

1.1 Midwifery Knowledge

The concept of midwifery knowledge (MK) is central to understanding how a social model of midwifery provides a differing perspective on childbirth than the medical model of obstetrics with its defining focus on risk (van Teijlingen 2005). The midwifery model works within a paradigm of maternal and child health, developing a deep understanding of the physiological and psychological processes of pregnancy and birth and maintaining safety by the assessment of maternal and fetal well-being (Rooks 1999). While understanding risk, the midwifery model of care can help to normalize the experience of birth, even for women with complex needs during pregnancy or childbirth (Berg 2005). In contrast, the obstetric medical model uses a risk perspective, asking 'what if?' and is able to recognize normality only retrospectively (Henley-Einoi 2009). The respondents of the Delphi study explored these and other areas enabling the identification of some key characteristics of midwifery knowledge. The three concepts which achieved the highest consensus among Delphi panel respondents were that : **midwifery knowledge is multifaceted and practical**; that **midwifery knowledge requires autonomy and creativity** and; that **midwifery knowledge focuses on a good outcome**. Other concepts which received high consensual ratings from the panel were that: **midwifery knowledge is a social construction**; **midwifery knowledge can provide**

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alternative and more gentle solutions to high risk situations; that **midwifery knowledge is complex and difficult to define** and: that **midwifery knowledge is becoming lost**. These areas of consensus are valuable in their own right as they reveal important constructs of midwifery knowledge, and in the case of midwifery knowledge becoming lost, highlight an area of particular concern. My proposals later in this chapter concerning the introduction of midwifery knowledge into interprofessional education initiatives arise, in part, from my commitment to ensure that midwifery knowledge does not become lost but instead is used to create a more woman-centred model of maternity care where doctors and midwives work collaboratively, recognizing and valuing each others' knowledge. While midwives may extend their practice into areas such as the conduct of ventouse or forceps deliveries (McConville et al 2007), medical practitioners can also understand and value midwifery knowledge (Wagner 1997).

1.2 Utilizing MK to understand medical students' construction of knowledge

During the study, these concepts were used both to develop the PBL scenarios which I employed as a data collection tool, and to create the a-priori templates which I used to start the coding and analysis of my data. How medical students construct their knowledge about childbirth was explored by collecting interview data arising from discussion around these scenarios as well as through open interviewing using prompts such as "Tell me about your experience". Five final themes were developed; these explored: medical/midwifery relationships (**witches or wise women**), learning about normal birth (**valuing normality**), and how communication is used to interact with women (**communication for persuasion** and **communication to develop rapport**). The final theme explored power relations and authority in a modern obstetric unit (**authoritative knowledge & medical hegemony**). The participants' construction of knowledge all took place within the context of clinical education which has been one of my key areas of interest during a career as a midwife and as an academic.

1.3 Clinical Education

Clinical education is the mechanism by which knowledge and skills are transferred from one generation of practitioners to another. The culture of clinical education depends on the

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educational philosophy which informs teaching and learning methodologies employed in the practice setting. Current practice can be passed on unchanged or students can be challenged to develop a deeper understanding of all the physiological, cultural and political factors influencing care. Because professions are largely responsible for educating their own members, clinical education has often followed an apprenticeship model (Marckmann 2001). However, today interprofessional team working has taken on a new importance as health professionals are increasingly learning to work together and where job titles no longer function to define strictly segregated roles. If education is one solution to the challenge of establishing a health service where practitioners from different professional backgrounds work together collaboratively to provide better care for service users, then one key to meeting that challenge may be creative curriculum development. In the two phases of the research that contributed to this thesis, and in the reading which has informed and enlightened these, there were many opportunities to identify areas where interdisciplinary or interprofessional education would be appropriate.

Following a brief review of IPE/IPL that builds on material from Chapter 2, I will explore issues highlighted by the findings from each phase of the research project. Ideas for curriculum development will include opportunities for students from medicine and midwifery to learn with, about and from each other. Given the time and funding, I would welcome the opportunity to incorporate some of these suggestions into a pilot project for medical and midwifery students and to evaluate their effectiveness by means of an action research project continuing into the students' early post qualification years. Such research could provide answers about whether interprofessional learning makes a difference to the way midwives and doctors understand each other and work together. The ultimate test however would be whether care received by women during the peripartum period improved and whether this improvement could be accredited to a collaborative approach to care between midwives and doctors. In the context of the medical syllabus, suggestions made about collaborative education between medical and midwifery students might apply equally to interprofessional learning between medical students and students from other related professions such as nursing, physiotherapy and radiography.

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2. Midwifery and medical education: time for a review ?

The end of the first decade of the 21st century is an excellent time to review both midwifery and medical education with a view toward identifying common themes that can be employed in a collaborative approach to learning. The NHS Plan (2000) promised a health service for the 21st century and described the health service as still operating in a 1940s mode unsuitable for a new century. One of the major reforms called for by the NHS Plan was an end to what the report described as old-fashioned demarcations between staff, and opportunities for staff from professions allied to medicine to extend their roles into areas that had previously been contained within the medical domain. This has implications for the way in which medical students and midwives can be helped to learn together. The General Medical Council's document *Tomorrow's Doctors* (GMC 2003) includes a clear endorsement of interprofessional education and collaborative practice as does a recent WHO report which makes claims for a strong relationship between interprofessional learning and collaborative working following qualification (Gilbert and Yan 2010).

2.1 NMC requirements for interprofessional learning and working

While the NMC (2004) standards for midwifery education did not refer specifically to interprofessional education the document states that midwifery students must be prepared to work collaboratively with other healthcare practitioners and to work effectively across professional boundaries (NMC 2004). Most universities have interpreted this as indicative of support for some element of interprofessional education in midwifery undergraduate programmes. However the NMC (2008) standards to support learning and assessment in practice specifically require that the practice teacher must work interprofessionally and the document *Delivering High Quality Midwifery Care* (DH 2009) calls for interprofessional collaboration in the statement: "Sharing clinical skills resources and training with other health professions (particularly obstetrics) will also improve team working and the ability to apply training into practice settings" (DH 2009, p.24).

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2.2 Grading practice and caseloading

Furthermore, a recent review of pre-registration midwifery education has set out requirements for significant changes in midwifery education. These include the requirement to grade practice on the same basis as academic work, to maintain or increase the balance between theory and practice so that practice comprises at least 50% and up to 60% of the educational provision and to provide the opportunity for students to care for a caseload of women from the antenatal period up through intrapartum and postnatal care. The strong recommendation was also made that students should care for women giving birth in a variety of environments including out-of hospital settings (NMC 2007). While many institutions have already initiated some of these recommendations, providing students with the opportunity to experience authentic caseload care of women will necessitate major changes in practice, as well as education in many places. It will take enthusiasm, thought and creative planning to integrate these changes with a commitment to interprofessional learning between midwifery and medical students.

2.3 Higher Education Academy commendation for good practice in IPL

The Higher Education Academy (HEA) commended the University of Dundee for an initiative bringing third year medical students and first year student midwives together to study reproductive physiology in a fortnight block. Teaching and learning methods include PBL using mixed medical/midwifery groups, and teaching is done jointly by medical and midwifery tutors. The initiative enables achievement of learning objectives derived from both educational programmes while increasing students' knowledge about the professional responsibilities of the opposite group. The initiative has been evaluated well by both students and lecturers (HEA 2007)

It seemed logical, that the Dundee programme chose to combine first year midwifery students and third year medical students because midwifery students require quite detailed knowledge about reproductive physiology at the start of their university education while medical students do not need this information until they are preparing for specialist rotations. Students from the case study part of my research however appeared to consider that only

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senior midwifery students would have the requisite levels of knowledge to study jointly with medical students. I found this puzzling as the participants in my study did not demonstrate the application of physiology-based knowledge that is expected of midwifery students by the end of the first year of a PBL curriculum. This may be due to different teaching and learning methods in the medical and midwifery curriculum or because the research participants were not being tested. Therefore, responses to PBL scenarios being used as a research tool may have been different to those encountered as part of an educational curriculum. However, from my experience of collecting data from medical students, Dundee's initiative seems to have accurately gauged the optimum timing of such shared teaching.

2.4 Learning together about birth physiology.

In any shared teaching on reproductive physiology detailed information about the complex hormonal interactions that occur during labour, birth and breastfeeding should be emphasized as a basis for interpreting normality. Student midwives often choose similar topics for poster presentation assessments as an opportunity to review and refine their understanding. Therefore requiring mixed student groups to complete poster presentations on similar topics could provide a beneficial opportunity to learn with and from each other. Students would have the opportunity to develop a shared understanding of the application of knowledge to practice as well as the opportunity to explore research relating to short and long term implications of disturbing the natural balance of hormones associated with parturition and breastfeeding (Odent 2001).

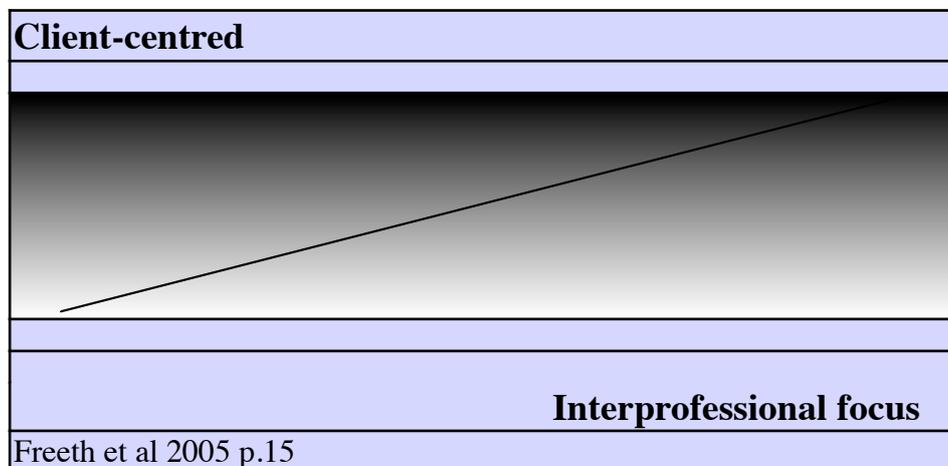
Such an initiative could assist students from both professions to understand the significance of normal birth, thereby enabling them to provide comprehensive information to future clients, facilitating real informed choice around childbirth and infant feeding. Participants in the case study research provided inaccurate information about the necessity or safety of some interventions, modelling their consultation skills on their experiences in clinical settings. Interprofessional learning between medical and midwifery students would enable students to explore some of these issues in greater depth, particularly where PBL is used as the educational medium through which learning occurs.

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3. Interprofessional education and collaborative working

Freeth et al (2005) suggest that interprofessional education exists in a spectrum of provision from that which is primarily focused on clients, policy and practice to that where the emphasis lies mainly in what the different professional groups learn from and about each other. The amount of interprofessional emphasis can range from being a very minor aspect of the learning to being its entire focus. All learning within this spectrum would be considered IPL. In other courses or programmes, with little explicit IPL informing the curriculum, it is possible that students may learn from and about each other simply by virtue of learning alongside each other in a multiprofessional model (Freeth et al 2005).

Figure 12-1



The top part of the diagram represents learning which is focused mainly on the client (the largest part of the wedge). However within this client focus, opportunities for interprofessional learning exist (where the triangle narrows). Participants in this research demonstrated an active learning style and indicated that they valued learning skills such as suturing, delivery techniques, fetal heart monitoring and documentation during labour from midwives. Therefore skills-based teaching sessions would be an appropriate method of introducing shared learning between medical students and midwives. A teaching session in which medical and midwifery students practiced skills required during an instrumental

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delivery could be used to illustrate this client focused care. While the emphasis would be caring for the woman, students would learn something about each others' roles and about working with each other. The bottom portion of the diagram illustrates IPE which is explicitly focused on interprofessional working. While this might involve some client care, the main concepts are learning from and about each other.

3.1 When the interprofessional agenda backfires

Australia has had a long history of interprofessional development in health and social care. Driven by economic pressures and an ageing population the Australian government followed a policy of cost containment in health and social services during the 1990s with an emphasis on finding new ways of working which crossed traditional professional barriers (Hugman 2003). A parallel can be seen with some of the changes in UK services. These include maternity care where midwives are increasingly adopting tasks that were previously designated to doctors (McConville et al 2007) and the emergence of the maternity support worker (Davies and Iredale 2006). Hugman (2003) warns that interprofessional working can backfire by causing professional groups to be more protective of their own professional roles and less likely to want to relinquish what they see as uniquely theirs, or to take on tasks perceived as moving health or social care away from their traditional areas of expertise.

Hugman's argument echoes some of the concerns that have been expressed by UK midwives both about extending their role to include obstetric skills such as assisted delivery, or losing their supportive role to unqualified maternity care workers (Davies and Iredale 2006). The answer to these concerns lies in handling change sensitively, enabling professionals to use their unique profession-specific knowledge and skills as a basis for collaboration rather than attempting to create a type of generic health and social care professional whom no one is happy to claim as their own (Hugman 2003). After all, students choose clinical degree programmes leading to professional registration because they want to become part of a particular profession. There is nothing inherently wrong in professional pride, it is detrimental only when one profession occupies a dominant space in the health hierarchy

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which provides a false sense of superiority, thereby encouraging its members to discount the knowledge of other professions.

4. The changing face of medical education

Internationally medical education has been undergoing a process of significant change during recent decades. From an explicitly science based approach, medical schools are introducing innovative ways of teaching and learning such as PBL (Leung 2002; Lobb et al 2004), the Patient-Centred Clinical Approach (Stewart et al 2003), Self-Directed Learning (Dunn and Chaput de Saintonge 1999), and the SPICES model which is Student-centred, Problem-based, Integrated, Community-based, Elective with a core and Systematic (O'Connell 2009). Other medical schools have introduced the humanities into the medical curriculum in the form of literature (Posen 2005) or art (Powley and Higson 2005) while some have chosen to introduce interprofessional learning into their programmes (Mires et al 1999). What these approaches have in common, perhaps with the exception of IPL, is an attempt to bring humanity into the medical curriculum and to place the patient at the centre of care. IPL or IPE while having as its primary focus bringing different professional groups together in greater understanding of each others role, often utilizes these other techniques or models to help students learn about people and how to care for them. This represents a change from the traditional scientific focus on medical conditions and their cures. According to the model developed by Freeth et al (2005 p.15) some interprofessional learning curricula focus more attention on the client than on the collaborative learning aspects of IPL. Another important development in medical education, as in other disciplines, is the advent of web-based or e-learning (Haag et al 1999; Harden and Hart 2002; Haigh 2004) and there are many ways that this can be incorporated into interprofessional education between medical and midwifery students from on-line discussion groups to using stories published on the internet to explore different perspectives on birth (Rashad and MacVane Phipps 2001).

4.1 Moving beyond the medical model

Weston and Brown (2003) explain this shift in medical education when they say that the traditional medical model encourages medical students to learn about illness from a very

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pathologically focused approach. Every little symptom, think the medical students, could be a sign of some obscure and serious illness. This approach can lead to over investigation, over medicating and a failure to listen actively to the patient or client in a holistic manner. One young doctor described the medical model as a form of security or ‘a teddy bear of sorts’ (Stewart et al 2003 p.192). Listening to the pain and fear of real patients, considering how their conditions might affect the patients’ own psychological, social or spiritual perspectives, or how it might affect their families is a much more demanding kind of medicine. In acknowledging a patient’s vulnerability, the doctor exposes her own humanity. This is very similar to the demands of emotion work in midwifery described by Hunter (2001). Some medical students in this research demonstrated a pathologizing consciousness. One example is the student who indicated that she considered the best course of action for a woman refusing a medical induction of labour was to admit her to the hospital and subject her to frequent monitoring and observations. Others began to understand the holistic, humanistic and spiritual aspects of pregnancy and welcomed participation in the emotion work of childbirth.

5. Topics for interprofessional education: Delphi study

Although at first glance it might seem that the findings from the Delphi study offered few opportunities for developing collaborative learning between medical students and midwives, in reality the focus on midwifery knowledge provides scope for one of the primary purposes of interprofessional education, that of different professional groups learning about each other. The concept of autonomy was an important aspect of midwifery knowledge and practice that emerged from the Delphi study. This could be incorporated into interprofessional learning by asking students to prepare and present a debate on the topic of autonomy. Debate teams should be comprised of a mixture of medical and midwifery students to encourage collaboration, not competition. I have found in my own teaching that students engage with debate most vigorously when given a controversial topic. In a debate on autonomy possible debate topics could be: ‘Medicine is the only autonomous profession’ or ‘Autonomy is an outdated precept in the modern NHS’.

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Another topic suitable for debate would be the concept of midwifery knowledge itself and the concerns that Delphi respondents had about this knowledge becoming lost. A debate topic might reflect the statement by one of the Delphi respondents that: ‘there is no such thing as midwifery knowledge’. In fact a number of statements about midwifery that were made by the Delphi respondents would make interesting debate topics. It may be necessary to reiterate the importance of having mixed profession teams in debates. Otherwise arguments could easily follow professional ideologies when the idea of debate is to encourage students to challenge their own preconceptions and prejudices.

5.1 Professional socialisation

The way in which medical students were socialized into the ‘doctor’ role and the existing conflicts between medicine and midwifery contributed to both the theme of ‘**communication for persuasion**’ and the theme of ‘**authoritative knowledge and medical hegemony**’ from the case study phase of the research. Chapter 3 explored some of the constructs of professional socialization and highlighted issues which could inform a thought-provoking topic for a literature-based IPL session or module. At an international conference several years ago⁴ I met an American Professor of Nursing who delivered an academic module as a book group. A small group of students met weekly to discuss a chapter of a novel, a short story or a poem. At the same time, they shared a simple meal making the evening class a social as well as educational occasion. This would seem to be an ideal and innovative method of encouraging social and educational interaction between students from different professional groups engaged in interprofessional learning.

Posen (2005) provides many examples of stories that would be appropriate for teaching in this way. Powley and Higson (2005) also recommend the book *The Woman Who Walked in to Doors* (Doyle 1996) that would be particularly interesting for medical and midwifery students considering the issue of domestic violence. I have used this in my own teaching with midwifery students and found it to be stimulating and challenging for the group.

⁴ Network-TUFH, Ho Chi Minh City 2005

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An appropriate text to explore differences between the medical model and the midwifery model might be *Baby Catcher* (Vincent 2003), especially the first three chapters chronicling the author's transformation from prim and proper student nurse, socialized into the obstetric nursing model and shocked by the raw power of birth to midwifery student with a firm belief in the transformative power of natural birth. This echoes the way in which participants in my research were initially disturbed by the noises made by women during childbirth but later became accustomed to them and understood that for some women, vocalization can be a coping mechanism.

5.2 Skills training

Chapter 10 presented data about medical students' expectations of working with midwives and their perceptions about the reality of such experience. Many of the basic midwifery skills that participants reported learning from midwives would be suitable for teaching to medical and midwifery students together in a skills lab setting. Skills training has become increasingly important in medical education over the past decade (Dent 2001). One of the factors in the increasing importance of skills training is the difficulty in locating enough willing patients on whom junior medical students can practice their skills. Two reasons for this, according to Dent (2001) are the rising numbers of medical students and the increasingly short hospital stays for patients today. Ethical issues around informed consent and patients' rights also play a part in medical tutors' reluctance to allow students to practice on real patients before they have been assessed as being competent at certain clinical skills (Bradley and Postlethwaite 2004).

However, skills training can be a multiprofessional learning experience where students learn beside each other but not from, with and about each other. Tucker et al (2003) suggest that there is little hard evidence that interprofessional teaching leads to partnership working, while acknowledging that ways must be found to facilitate this in today's health care environment. The authors report on a study done on 113 third year medical and nursing students to evaluate the effectiveness of interprofessional learning compared with uni-professional learning

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during skills training sessions. While there were no significant statistical differences between the two groups in terms of increased confidence in managing the taught skills, qualitative data indicated that the students showed preference for working in interprofessional groups.

Skills training requires careful planning to retain the benefits of true interprofessional learning. One way to increase the interprofessional content of skills training would be to organize students into mixed professional groups to practice skills-based scenarios (Fraser et al 2000). This would enable students to develop an understanding of professional roles while practicing clinical skills. There are many team building games or exercises which can be used to facilitate interprofessional working. An example would be to develop an obstacle course where mixed profession teams challenged each other to complete a series of skills correctly with the first team to complete, winning a prize. To encourage continuation of interprofessional bonding, this could be a voucher for a group social activity. A runners-up prize would also have to be allocated so that the losing team would not miss out on the opportunity to develop closer social ties. West et al (1999) discuss the importance of social networks for the diffusion of professional information. To facilitate social networking therefore, it is good practice to encourage students from differing professional groups to engage in social as well as educational interaction.

5.2 Clinical and social learning

Saxell et al (2009) report on a North American interprofessional education programme in maternity care designed to provide social as well as clinical learning opportunities. Funded by Health Canada, a multi-disciplinary group of educationalists from the University of British Columbia (UBC) designed a series of programmes for medical, midwifery and nursing students to learn together about maternity care. Activities include Doula support for socially and economically disadvantaged women where, following Doula training, teams consisting of a student from each of the three professional groups work together to provide Doula support to a named woman; a normal labour and birth workshop; and an annual maternity hands-on night where students practice a series of Objective Structured Clinical

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Examinations (OSCEs) in a relaxed setting. Pizzas and non-alcoholic drinks are available, providing the students with opportunities to socialize as well as work together. A previous normal labour workshop for medical students had not evaluated well. However, the interprofessional workshop received high satisfaction ratings from all the participating professional groups.

As the data from Chapter 10 indicated that the participants in the case study phase of my project focused on doing technical activities rather than learning the more subtle aspects of birth support, a similar type of interprofessional learning activity might help students understand the value of the watching and waiting approach to maternity care. This could include listening to birth stories, watching a film of a natural birth where the midwife plays a very low-key 'with woman' role or participating in drama-based or art-based activities. Jackson and Sullivan (1999) report on using art and literature to introduce students to some of the less tangible aspects of midwifery. Topic areas such as: love, suffering, and caring were explored by students using different media. Students were assessed on the production of a piece of art or literature which portrayed the creative aspects of midwifery together with a written critique of their work (Jackson and Sullivan 1999). Although this curriculum innovation took place over a period of time which might not be available for interprofessional learning, innovative teaching activities such as art workshops can be done in short periods of time (MacVane Phipps and Whitney 2006) and would be suitable for medical and midwifery students. Davies and Wickham (2007) have also written about the use of creative interactive teaching methods which would be beneficial in encouraging student engagement during IPE sessions between medical and midwifery students.

5.3 Art in interprofessional education

Weller (2002) writes about a project initiated jointly by artists and clinicians to bring a humanizing element back into clinical medicine, while Jackson and Sullivan (1999) describe a similar initiative in midwifery education to integrate the art and science aspects of midwifery. More recently Bass (2007) describes using art to encourage midwifery students to engage with the topic of spirituality and consider its meaning within the context of

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procreation. The fact that these types of learning activities have been used in both midwifery and medical education indicates their suitability for use in interprofessional learning involving these two groups of students.

6. Learning through PBL

Chapter 9 explained the use of PBL scenarios as a data collection tool. That the scenarios were an effective tool is demonstrated by the rich data they stimulated. The same scenarios could be used with a mixed group of students working together in an actual PBL group. A PBL group can achieve more than one individual using a scenario as a brainstorming technique because different individuals bring varied knowledge and experience to the group (Margetson 1997). This is an important aspect of using PBL as a teaching and learning methodology and students often do not realize how much they learn from each other until they have experienced PBL for themselves (Savin-Baden 2000). Almost any topic can be studied using PBL as long as the problem or enigma (MacVane Phipps 2010) is based in reality and well-written. One of the important aspects when using PBL for learning about clinical situations is to allow the messiness of real life to be reflected in the scenario. In other words it should not give too much away or be too prescriptive (Haith-Cooper et al 1999; Macvane Phipps 2010).

6.1 Clinical scenarios on the VLE

A clinical scenarios workbook might also be used as a tool of interprofessional education. An up-to-date way of using such a tool would be to put the scenarios on a web page or on whatever virtual learning environment (VLE) is used by the university with which the students are associated. Then small mixed-profession study groups could discuss the scenarios on line through a discussion group format. Using IT in IPE has been recommended as a way of overcoming scheduling problems to allow students following different curricula to work together (Pulman et al 2009). It is also something that feels familiar to 21st century students who are comfortable with different forms of electronic communication such as social networking sites (Haigh 2004).

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7. Reflection as a tool of IPE

Finally, reflection is an important aspect of clinical education (Lyons 1999) and would be very suitable as both a topic and a learning tool in an IPL group. Much of the rich data that was obtained in my research came from participants' reflections on practice. The provision of specific tools for reflection could enhance students ability to learn from such reflection.

Lyons (1999) recommends that students keep learning journals to record their experiences. An updated form of the learning journal would be to have students write web-logs (blogs) about their experiences, being mindful of areas of confidentiality and not writing anything that could identify a colleague or client. For educational purposes, particularly in consideration of the ethical issues involved, a password protected blog or on-line journal would be most appropriate and some universities have purchased packages for creating these as part of their VLE provision for teaching and learning. Recently Whitney (2010) has reported on the results of a study exploring the use of art as a tool of reflection in midwifery education. This method of reflection may enable students to connect with the deeper emotions triggered by observing birth or other aspects of maternity care and is arguably more authentic than the highly structured academic exercise that often comprises reflection in health professional education. Using art as a reflective tool in a mixed midwifery/medical student workshop could provide the basis for authentic dialogue and enhanced understanding of each others' professional and personal philosophies.

8. Dissemination strategies

Research, while an interesting activity, can not be useful unless it is shared. I have commenced my dissemination strategy in a presentation at the Collaboration Across Borders (CAB II) conference in Halifax Nova Scotia in May 2009. My presentation was attended by a UK professor who is a prominent member of the international IPE community. Her interest in my study gave me a great deal of encouragement during my final writing-up phase. I also presented a poster at my university's annual Learning and Teaching conference in 2009. As I prepare to submit this thesis I have just had an abstract accepted for the Towards Unity for Health (TUFH) conference in Nepal in November 2010. While conference presentations are an important venue for sharing research, greater impact arises from publication. For that

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purpose I have reflected on the articles which could be extracted from this thesis and have compiled a list of publications which I would like to submit to peer-reviewed publications for consideration during the first year or two following completion of my thesis. This list of titles and the journals to which I plan to submit can be found in appendix 4.

9. Future Research

My interest in midwifery knowledge and clinical education have not been exhausted by this research; in fact writing this thesis has stimulated my interest in and commitment to these fields. There are two follow-up pieces of research which I would like to do if I am able to source funding for these:

A. Medical Students' Construction of Knowledge about Birth

This international qualitative research project would collect data through the use of web log, video diary and on-line questionnaires. Midwives involved in teaching medical students would also participate but with data possibly collected by email rather than by blog and video diary. Discussion with midwives would start with a questionnaire about their teaching activities with medical students. 3-4 e-mail interactions would follow the survey until saturation was reached.

B. Action Research with longitudinal case studies

This action research project would encompass planning, implementing and evaluation of an IPE module studied by medical and midwifery students. Longitudinal case studies would be used to maintain contact with participants following their entry into professional practice. The primary research question would be: Does IPE encourage a more collaborative style of working following graduation?

I would expect to use data from the first phase of my current research to inform the construction both of these studies. As there is plentiful evidence supporting the use of midwifery knowledge or a midwifery model of care (Raisler 2000) whether medical students are exposed to this knowledge and how it is used in their construction of knowledge about birth will constitute an important facet of the first proposed study. Midwifery knowledge

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would also be an important construct in the second proposal as collaborative working requires members of different professions working together to value both midwifery and medical knowledge.

10. Final reflection

Concurrently with developing a greater understanding of clinical learning and how interprofessional aspects of this may be improved, I have developed a greater understanding of myself as a midwife, an educator and as an individual with a unique contribution to make. I have conceptualized the process of my doctoral studies as a journey. While the most intense activities were the data collection and the writing-up, everything connected with these was, in essence, an integral part of the voyage. Just as a traveller must make plans for a trip by: reading widely about the experiences of others, obtaining the necessary documentation in the form of tickets and passports, and budgeting for essential and non-essential expenses; reading, planning, budgeting and documentation form an integral part of the PhD process (Holloway and Walker 2000). As the traveller chooses her travelling companions, the PhD student selects a supervisor or supervisors. This choice is just as important to the research student as the choice of companion is to the voyager (Frame and Allen 2002); perhaps more so as these companions may share a journey of several to many years with the PhD student.

The traveller who remains open to new experiences and meets new companions along the road returns home a changed person with different perspectives and insights than her counterpart who remained safely ensconced in a familiar environment. While the voyager may cast an envying eye on the complacency and security of the non-traveller, she knows deep in her heart that her travels have irrevocably enriched her life. As she reflects on the voyage, she is already planning for new horizons. In the same way, as I now look back reflectively over the long journey of my doctoral studies, I am already looking ahead to new investigations and fresh challenges.

My research consisted of two projects, both fairly modest in size but instructive to me as a researcher in that they employed different methodologies and required a varied research tool kit. I learned valuable lessons both in how to do qualitative research and in how to present

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my research. These lessons may be implemented in the context of new intellectual voyages which will bring with them their own lessons to be learned. I look forward to future engagement in research, learning together with the next generation of midwives and educationalists, as a researcher and as a PhD supervisor.

8.1 Final words

I am grateful that I have been given the opportunity to complete my doctoral studies at this time. A PhD is worth doing. Both midwives and health professional educators have a recognized requirement for PhD educated colleagues among their ranks. Doctoral preparation imparts credibility (Frame and Allen 2002). It says to the world that academics in schools of health are the equals of academics in other university departments. Midwives prepared at doctoral level can claim their entitlement to speak and be listened to as professionals with the same rights, status and academic standing of any scientist or medical practitioner. In this final reflection I comprehend that both the research and the process of doing the research were worth the personal costs involved for the legacy I can leave to my profession and to the women cared for by tomorrow's midwives and obstetricians.

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Appendices

Section II

Appendices

Appendix 1

Created by Fiona MacVane Phipps
Reference 05-Q1202-23

What Do Medical Students Learn from Midwives?

A research study in partial fulfilment of the requirements for PhD Health Studies,
University of Bradford

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Participant Information Sheet

Introduction

As medical students on your obstetric rotation you will have the opportunity to work with midwives in providing intrapartum and community (antenatal and postnatal) care. This attachment is designed to introduce you to normal pregnancy, childbirth and postnatal care as much of the work you will be participating in with medical staff will be concerned with the care of women with pre-existing medical conditions or women experiencing problems requiring medical intervention during the peripartum period. While midwives have always participated in teaching medical students, there has been little evaluation of this from the students' perspective.

Invitation

You are invited to participate in a research project which is looking at students' experience of working with midwives in an holistic way in order to assess the benefit of this attachment to medical students and to evaluate two different educational interventions, namely the use of reflection, and the use of PBL scenarios as clinical teaching aids. Please take time to read the following information carefully and discuss it with others if you wish. Please ask the principal researcher or her academic supervisor if you wish clarification about any aspects of the study. Take time to decide whether or not you wish to take part.

Why Have I Received This Invitation?

All students who are on obstetric rotation at Bradford Royal Infirmary Maternity Unit (BRIMU) during the 2005/2006 academic year are being invited to participate. It is hoped that between five and ten students will be recruited from three different groups of students on obstetric rotation at BRIMU. This will allow the first group to act as a

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control group against which the two planned educational interventions can be assessed in the semi-experimental portion of the study. No more than thirty students in total can be recruited due to consideration of data management and time frame for the research project.

Participation

Participation will consist of three interviews with the researcher during your obstetric allocation. The first one will take place as close to the start of your placement as is mutually convenient for yourself and the researcher. The second interview will take place half way through the placement and the final interview will occur on completion or during the final week of the placement. This follows the pattern of interviews undertaken by midwifery students as part of their clinical assessment process. However, you are not being assessed and no clinician or tutor will be involved in the interview process, other than the researcher. The interviews will be open interviews. That is, you will be asked about your experience and the focus of the interview will be largely self-directed. In addition you will be presented with from one to three clinical scenarios to help prompt discussion and explore learning which has taken place during your allocation. Interviews will last approximately thirty to sixty minutes and will be recorded using a hand-held digital recording device.

Confidentiality

Data from the interviews, including names of participants will be held securely in a locked filing cabinet at the university until successful completion of the PhD viva (2007). The only people with access to this information will be the researcher and her PhD supervisor, Professor of Nursing Research, Robert Newell. The interviews will be recorded using a digital recorder and will be held on a computer file protected by password access. No information identifying participants will be shared with any other person or agency, nor will findings or low inference descriptors (direct quotes from interviews) used in any reports or presentations be attributed to individuals. Numbers or pseudonyms may be used to provide clarity but any personal details will be changed to inhibit identification of individual participants.

Risks Involved in Participation

The only possible risks to participants in this study are emotional or psychological. As childbirth is an emotive topic, some students may find certain experiences distressing. However, students are free to disclose as much or as little as they like to the researcher and these experiences are inherent in the educational programme and not due to participation in this research project. If a student were to become distressed during an interview, the researcher would offer to terminate the interview and would suggest that the student access additional support. This might be in the form of the student's own personal tutor, the university counselling service or the hospital chaplaincy.

None of the normal planned programme during your obstetric rotation will be reduced or affected by your decision to participate. Therefore, there are no educational risks.

Benefits of Participation

Appendix 1

By participating in this study you will be exposed to some additional planned teaching by the midwives you are working with. This is congruent with the type of teaching provided for student midwives by their clinical mentors. In addition, as the researcher is an experienced midwife and lecturer, with many years experience in supporting students during clinical allocations, you may derive some benefit from the opportunity to talk over your experiences with someone not directly involved in your educational programme.

Consequences of Participation

Participation or non-participation will have no consequences on your educational experience or on any clinicians' or educators' perceptions of you. You will be given at least 24 hours to decide whether or not you wish to participate in this study before the first interview takes place. You may choose to withdraw from participation at any time and this will have no impact on the balance of your obstetric placement. If you decide to withdraw any data collected from your interviews will be destroyed and will not be used in any interim or final research reports or presentations.

Participation on Research Studies

If you are currently participating in any other research projects it may be inadvisable to participate in this study and you must discuss this with your academic department. If you wish any more information about participation in research studies you may wish to discuss this with your personal tutor, with Consultants Dr. Nick Myerson or Dr. Derek Tufnell at BRIMU or with Research Midwife Diane Farrar, also at BRIMU. For any further clarification please contact the researcher, Fiona MacVane Phipps or her academic supervisor, Professor Rob Newell (contact details at the top of page 1).

Dissemination of Results

The results of this study will be disseminated through national or international conference presentations and publication in peer reviewed journals. A final research report will be prepared for the University of Leeds medical School and sent to the Dean and academic staff who have helped to support this project such as Dr. Jonathon Darling and Dr. Nick Myerson. In addition individual synopses will be prepared for participants if they indicate that they wish to receive one by signing the appropriate box on the consent form.

Thank You

Thank you for taking the time to read this form and considering participating in this research.

Appendix 1



MAKING KNOWLEDGE WORK

School of Health Studies

Dean of School
Dr Gwendolen Bradshaw

Centre Number: 1
Study Number: 05-Q1202-23
Participant Identification Number for this study:

CONSENT FORM

Title of Project: What Do Medical Students Learn from Midwives?

Name of Researcher: Fiona MacVane Phipps

Please initial box

1. I confirm that I have read and understood the information sheet dated 06/09/2005 for the above study and have had the opportunity to ask questions	
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my educational programme or clinical allocation being affected in any way.	
3. I agree to take part in the above study	
4. I would like to receive a synopsis of the study	

Name of participant Date Signature

Name of person taking consent
(if different from the researcher) Date Signature

Researcher Date Signature



Unity Building 25 Trinity Road Bradford BD5 0BB UK
Tel 01274 236300 www.bradford.ac.uk

Appendix 2

Scenario 1

Created by Fiona MacVane Phipps
What Do Medical Students Learn From Midwives
Ref. 05-Q1202-23

Overheard in the coffee room: a conversation between a student midwife and a medical student

Student 1: I felt really uncomfortable when she started shouting like that; it seems archaic for women to suffer so much pain when they don't have to.

Student 2: I think that's a pretty common response. I've noticed that some women seem to get offered pain relief just because the midwife or doctor feels uncomfortable but in my country there is a saying that the pain of childbirth increases a woman's love for her baby. I wonder what that is all about?

Student 1. I think women are really frightened about pain, about how they will cope. Do you suppose that's a factor in the rising caesarean section rate?



Appendix 2

Scenario 2

Created by Fiona MacVane Phipps
What Do Medical Students learn From Midwives?
Ref. 05-Q1202-23

So What Do I Say Now ?!

Steve is on placement with a community midwife. He is discussing induction of labour with Zara who is now Term + 10 days. While she says she will agree to a 'stretch and sweep' she is adamant that she will not agree to induction by prostin +/- arm.



Appendix 2

Scenario 3

Created by Fiona MacVane Phipps
What Do Medical Students Learn From Midwives?
Ref. 05-Q1202-23

Infant Feeding: Does it Really Matter?

You are visiting Katherine (para 1) on postpartum day 6. She came home on day 2 following a normal delivery of a 3.4 kg. male infant. Katherine was breastfeeding on discharge from hospital but now is unsure whether she wants to continue. She tells the midwife that baby Sam doesn't seem to have established any routine and sometimes she finds that a couple of hours after putting him down, he is crying for another feed. Sam's dad has kindly offered to 'take over the night shift' as he puts it and give Sam a bottle feed or two so Katherine can get some rest. He reports that Sam seems quite content, gulping down his feed and settling right back down to sleep. Katherine also says she feels that Sam is not latching on as well as he did at first and seems to 'fuss' a lot at the breast. She turns to you and says "after all, if a baby's loved, does the way you feed it *really* matter?"



Appendix 3

Extracts from a sample transcript.

Interview 2 at the DGH

Well the first week I was a bit intimidated at first and didn't really feel like I was welcome in delivery suite, I felt a bit like I daredn't come up here and daredn't spend time here, but as I got used to people and as they've got used to me I've spent more time up here any more time with the midwives, and so it's been good. I've performed 2 deliveries this week,

What was that like?

Really good, it was weird because I thought it would be more difficult than it was, but they were straightforward, so it was good I liked it

Was there anything particular about it?

I think the ladies and their relatives seemed to have a lot of respect for me, because with a student doctor in, they were quite happy to have me there and do things so, in particular there was a girl and her mum yesterday, they were really, I kept going in to speak to them, they were really happy for me to be there and when the girl gave birth she reached out to give me a hug and it was really nice, I really enjoyed it

And what else? Do you feel that you're more part of the team now?

Definitely, definitely. I wish I was here for another week. Sister X, one of the senior sisters got the episiotomy mannequin out yesterday and was teaching me how to suture an episiotomy, and things like, people making a lot of effort to make me feel welcome

Good. So what do you feel that you've learned from midwives particularly, is there anything?

Just the process that you go through in a normal delivery, that doesn't go wrong. You could say luckily, for the mums and the babies, maybe unluckily for me, I've not seen any ventouse or forceps deliveries, they've all been straight forward, but I've managed to see the care of a labouring women from start to finish, I've booked a lady in, taken all the details, I've learned how to write things in the books and how to do the partogramme, read CTGs and basically everything that a midwife does I feel I've had experience of at some point. It's been really good. In fact I've seen more midwife led care than obstetrician led care because I've only seen one section in 'NETH', I've not seen any sections here, it's just been unlucky they've not been on when I've been available

How do you feel about that from the perspective of a medical student, is it disappointing that you've not seen more medical....

Appendix 3

I'm glad in a way, because if you became an SHO in obs and gynae you would be with the registrar and you would be doing sections all the time, and you'd be in antenatal clinic, which I did, antenatal clinic, I think it's important as a medical student that you from a grassroots level get an appreciation of midwifery led care cos when you're a doctor you're not going to get that advantage cos you're not going to see it from a midwife point of view, and when you're a medical student you can see it from anyone's point of view, depending on who you shadow. When you're a doctor you're on that role and you've got certain jobs to do and you don't know what's going on with another team. So I'm glad that I've done a lot with the midwives because I think that it's been really valuable.

Good, very good. Cos I think sometimes if you only see the medical things, I think we talked about this last time, you get a perception that it never is normal, it never goes right, whereas the vast majority of births are straightforward and do go right. What about supporting women in labour did you learn anything about.....

What, in terms of emotional support or..

Physical or emotional?

Well I've learnt things about like induction of labour and how they put a CTG on, which you're not taught, you think it would be the most basic thing, but a lady wanted to go to the toilet yesterday, and the midwife was dealing with someone else, and I took her CTG off and unplugged her from her syntocinon infusion and put it all back on and it's surprisingly difficult when you don't really know what you're doing, but I fathomed my way through it and got the midwife to check it was OK but things like that, you don't learn how to do unless you're actually there, and then other things to do with support

During labour you said you had the opportunity to care for women all during the labour, what did you see about supporting the women in labour?

Well the fact that, I was quite surprised at first, that it's quite infrequent in the early stages of labour, and the lady and her partner or relatives are left on their own for quite a while and then the visits into the room become more frequent afterwards and it's, I don't really know what to answer, just seeing the different stages, and the lady just having the odd contraction and she's sat up and speaking and it gets to where she's on gas and air and then she's fully dilated and she's ready to push the last bit just seems to come all of a sudden

Did you feel that the communication between the midwife and the woman changed?

Yes I think they did. You see the rapport develop, cos when they're first booking a lady in it may be quite official, and then it gets more friendly and I know that one of the ladies yesterday was saying " Oh, will Midwife A be on all night, because I want her to deliver my baby, she's been with me all the time" so I think they develop a trusting and supportive relationship, and I suppose it does develop over time. And me as well

Appendix 3

yesterday because I was going in separately to the midwife, and building up my own rapport with them and speaking to the lady's mum and so I think, and when she gave birth I felt a part of it as well cos I'd built up that rapport, that relationship

Can I just show you that scenario we looked at last time. I'll just get my notebook out so I can take a few notes, and then I'll show you a new one 'Overheard in a coffee room', that was the one.

This is interesting cos my views may have changed on that, not changed, but this week I saw a lady that had had an epidural and didn't seem to have any kind of discomfort whatsoever, and when she was, for want of a better phrase, when she was giving birth it was like she was having a really big pooh, she was just straining and she was tired, but it wasn't distressing and it was completely, completely different to a delivery without an epidural

In a good way or bad way?

In a good way because the lady wasn't in pain, but in a bad way cos her husband was sat in a chair just watching, sat back, she was calm and it was quite quiet really and it sort of just popped out, but whereas I think that's awful because obviously the lady's going to feel a lot better that she's not in pain, but if the lady's in pain, she's screaming and she's working hard and she's sweating and screaming and her husband's there egging her, or her partner's there egging her on, you know, there's a lot of emotion caught up into that moment, just simply because of the pain and the hard work, I think that was missing, it was still a magical thing, but it wasn't as emotive as if she hadn't had the epidural

That's a really interesting observation. So that discussion between the students about the pain and the love, you could see that?

I could see that, I could agree with that, particularly seeing it first hand, definitely. I'm still not sure about whether it causes an increase in caesarean sections cos obviously I've not seen any this week, so I've not come across many women who've said 'Oh I want a caesarean if I can have one', Most ladies that I've spoken to or seen have wanted a normal delivery wherever possible, and possibly even avoiding an epidural, I know that lady only had an epidural cos she'd had quite a difficult early stages of labour, it lasted quite a long time, she had an artificial rupture and syntocinon. And things and the syntocinon balance was going off because the baby wasn't happy, so she had to have an epidural cos the pain was going on for so long, so I don't think she would have chosen to have one if everything had gone normally.

Appendix 4

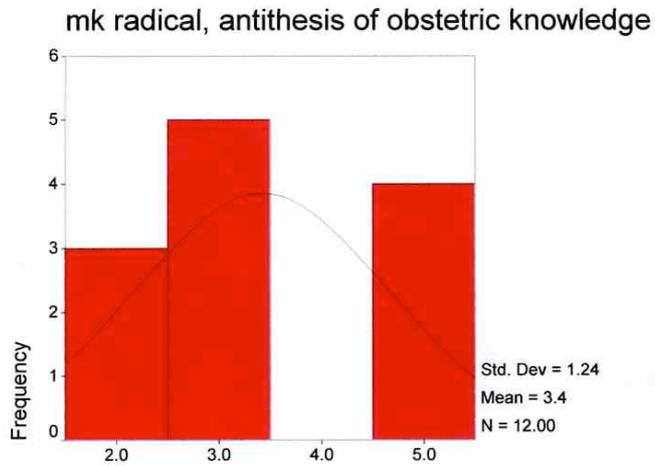
Proposed Academic Papers

arising from thesis (and the journals to which they will be submitted)

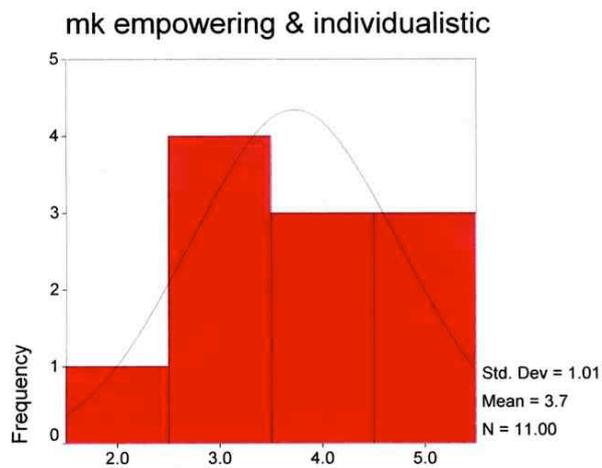
1. Is midwifery knowledge an outdated construct? (from Delphi survey): *BJM*
2. Reconstructing PBL as a qualitative research methodology. The 7-stage process: *The Qualitative Report*
3. Rhetoric, rote and persuasion: Are medical students adequately prepared for informed choice consultations?: *Medical Teacher*
4. IPE proposals for medical and midwifery students: working toward true collaborative practice: *Journal of Interprofessional Care*
5. Improving the obstetric experience for medical students: introducing midwifery knowledge: *Medical Teacher*
6. What do medical students want from midwives? Dispelling the scary myths: *Practising Midwife*
7. Warts and all: Reflection and honesty in thesis writing: *NET*
8. Finding the unique voice: A feminist deconstruction of research methodologies: *Women's Studies International Forum*
9. Champagne and red robes: using positive imagery and effective work planning to complete a part-time doctorate. *NET*
10. Seeing with the creative eye, speaking with the creative voice: research as art. *JAN*

Appendix 5

Delphi Descriptive Statistics (Sample)



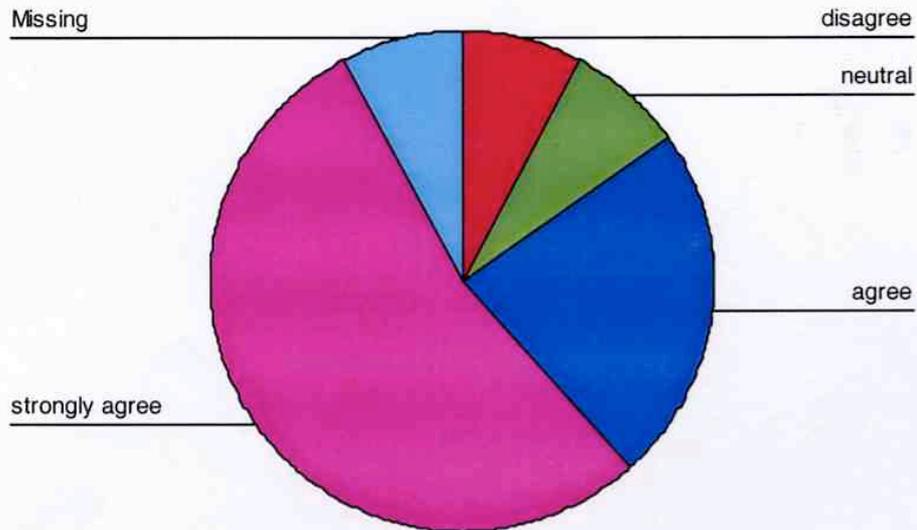
mk radical, antithesis of obstetric knowledge



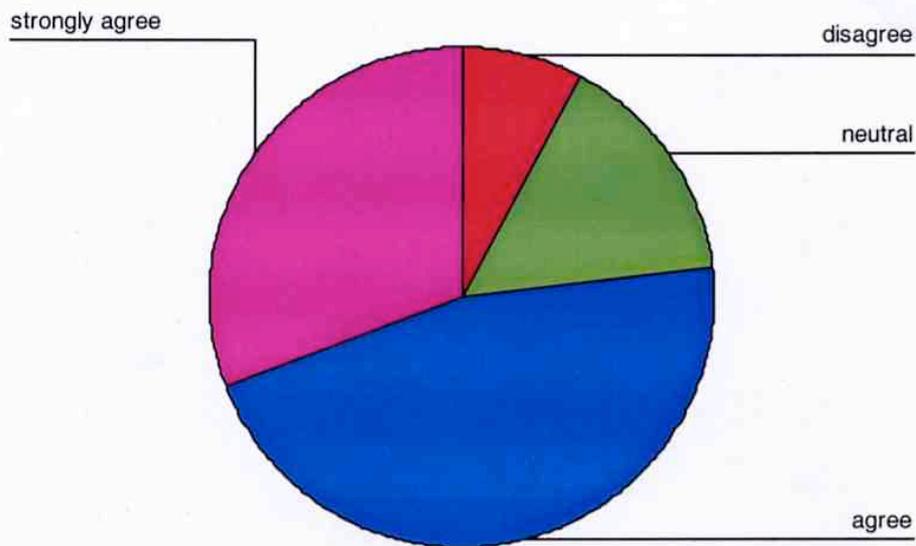
mk empowering & individualistic

Appendix 5

mk provides gentle solutions



midwifery knowledge is a social construction



Appendix 5

mk embodied & experiential

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	neutral	4	30.8	33.3	33.3
	agree	4	30.8	33.3	66.7
	strongly agree	4	30.8	33.3	100.0
	Total	12	92.3	100.0	
Missing	System	1	7.7		
Total		13	100.0		

mk becoming lost

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	2	15.4	16.7	16.7
	agree	4	30.8	33.3	50.0
	strongly agree	6	46.2	50.0	100.0
	Total	12	92.3	100.0	
Missing	System	1	7.7		
Total		13	100.0		

mw will be obstetric nurses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	1	7.7	8.3	8.3
	neutral	3	23.1	25.0	33.3
	agree	4	30.8	33.3	66.7
	strongly agree	4	30.8	33.3	100.0
	Total	12	92.3	100.0	
Missing	System	1	7.7		
Total		13	100.0		

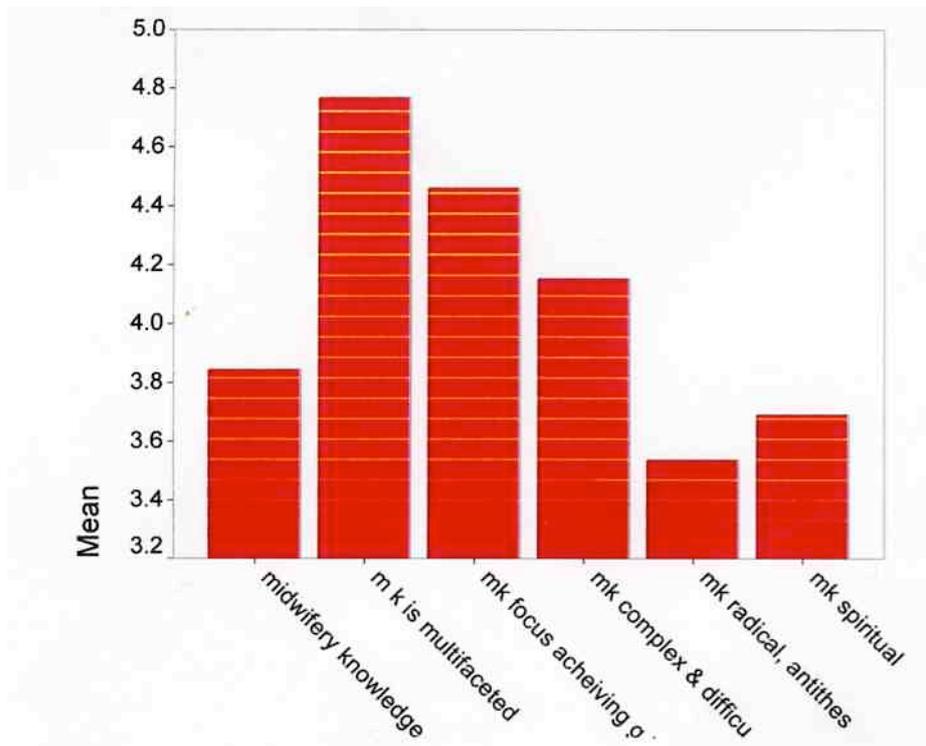
mk spiritual

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	2	15.4	15.4	15.4
	neutral	3	23.1	23.1	38.5
	agree	4	30.8	30.8	69.2
	strongly agree	4	30.8	30.8	100.0
	Total	13	100.0	100.0	

mk intuitive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	neutral	5	38.5	41.7	41.7
	agree	2	15.4	16.7	58.3
	strongly agree	5	38.5	41.7	100.0
	Total	12	92.3	100.0	
Missing	System	1	7.7		
Total		13	100.0		

Appendix 5



Graph

