WOMEN'S EXPERIENCES OF TRADITIONAL CHINESE ACUPUNCTURE TREATMENT FOR THREATENED PRETERM LABOUR

by

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TABLE OF CONTENTS

ATTESTATION OF AUTHORSHIP

"I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which, to a substantial extent, has been accepted for the qualification of any other degree or diploma of a university or other institution of higher learning, except where due acknowledgement is made in the acknowledgements."

Signed by:

Anneke Robinson
28 February 2005

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ABSTRACT

Preterm birth is one of the leading causes of neonatal mortality and morbidity in New Zealand and overseas. Neonatal intensive care is the most expensive item in the national health budget. The human cost to the child and the family is significant. In the last twenty five years there has been no reduction in the preterm birth rate despite major advances in neonatal and obstetric care.

The aim of this study is to describe and explore the experience of women who had received traditional Chinese acupuncture treatment for threatened preterm labour. I explore the perception of acupuncture as an effective treatment to stop preterm labour, prolong the pregnancy or prevent preterm birth in a subsequent pregnancy, where risk factors are present.

This is a descriptive and exploratory case study using a multiple case study design. A purposive sample was selected of five retrospective cases of women who had had a previous preterm birth experience and who had used acupuncture for threatening preterm labour in a subsequent pregnancy. Data was collected from the women using interviews, observations and review of midwifery and acupuncture case notes. The data was analysed using content and thematic analysis and also principles based on the philosophy of traditional Chinese medicine.

The key finding of the study is that the five women at risk all completed a full-term pregnancy. They all noticed that the signs and symptoms usually associated with threatening preterm labour went away when they had acupuncture. They also experienced a number of significant improvements to their general health and wellbeing. All five were totally happy with the outcomes and the entire acupuncture experience. When intervention is required, acupuncture based on the principles of traditional Chinese medicine appears effective as a treatment strategy in preterm labour. Few studies have been done in this area. Further research is needed so that women can be offered choices and healthcare professionals can have confidence in acupuncture as a treatment strategy for threatening preterm labour.

CHAPTER ONE

ORIENTATION TO THIS STUDY

"To everything there is a season, and a time to every purpose under heaven
A time to be born ……."
(Ecclesiastes, Chapter 3, Verse 1)

Introduction

A baby born before it's time will begin life by being separated from its mother and family and subjected to a barrage of tests and investigations. The warm safe embrace of its mother's arms will be exchanged for a transparent box in a space age environment with machines that beep. Life for this baby and its family will be very different to that of a baby born at the "right" time.

Depending on the degree of prematurity this baby may die or have to live its life with significant physical, mental and emotional challenges. The parent's lives will become an emotional rollercoaster ride (Holdom, 2001). They may experience fear, grief, guilt, anxiety, feelings of powerlessness and loss of control. Millions of dollars out of the annual health budget will be spent to pay for the required neonatal intensive care (Browne, 2001). Babies born before their time have a major and significant impact on many people's lives.

Rationale for this study

Despite major advances in neonatal and obstetric care in the last twenty-five years, there has not been a decline in the preterm birth rate (Creasy, 1993; Goldenberg & Rouse, 1998; Heaman, Sprague & Stewart, 2000; Buekens & Klebanoff, 2001). Preterm labour and birth, the causes of which are not well understood, may be a potential risk to all pregnant women. This is an area where greater understanding is required for the sake of the baby and family and to reduce the huge economic costs involved. Acupuncture, based on the philosophy of traditional Chinese medicine (TCM), may, in some cases, have something to offer. An

English language literature review revealed only one study researching acupuncture and preterm labour (Tsuei, Lai & Sharma, 1977). This study appears to have been very successful in terms of the outcome for reducing the preterm birth rate. However, it is interesting to note that, to my knowledge, no further studies have been done in this area. In view of the scarcity of research and the need to find "new and innovative ways to overcome this vexing problem" (Creasy, 1993, p.1229), I decided to study the use of acupuncture by women for threatened preterm labour.

Aim / purpose of this study

The aim of this study is to describe and explore the experience of women who have received traditional Chinese acupuncture treatment for threatened preterm labour. I seek to explore the perception of acupuncture as an effective treatment to stop preterm labour, prolong the pregnancy or prevent preterm birth in a subsequent pregnancy, where risk factors are present. My research question asks: "What is the experience of women who have received traditional Chinese acupuncture treatment for threatened preterm labour?"

Overview of this study

This is a descriptive and exploratory case study using a multiple case design (Yin, 1993, 1994). The case study participants are five retrospective cases of women who had had a previous preterm-birth experience (less than 37 completed weeks of pregnancy) and had used acupuncture as a means of possibly prolonging their subsequent pregnancy. These women would all be considered "high risk" for a repeat preterm birth, both in western medicine (Sweet, 1997; Parry & Hooton, 2004) and Chinese medicine (Maciocia, 1998; West, 2001). Four of these women received acupuncture within my own acupuncture practice and one from a colleague.

Data was collected from the women using interviews, observations and review of midwifery and acupuncture case notes. Their Lead Maternity Carer's (LMCs) were also interviewed to collect additional data to improve the trustworthiness of my study. All case study interviews were conducted in the Auckland region of New Zealand over a ten month period between October 2002 and July 2003.

The data was analysed using content and thematic analysis and also principles based on the philosophy of TCM. Case study can be used in both qualitative and quantitative research (Yin, 1993, 1994; Stake, 1995; Gillham, 2000). I have chosen a qualitative approach in keeping with the "whole" person philosophy of TCM where no distinction is made between mind, body and spirit. Qualitative studies have as their philosophical base, the belief that human behaviour can only be understood in the context and environment in which it occurs.

Background

The challenge of preterm labour and birth

The diagnosis, prevention and management of preterm labour is an important health issue. Preterm birth is one of the main causes of neonatal morbidity and mortality, both in New Zealand and overseas (Wright, Mitchell, Thompson, Clements, Ford & Stewart, 1998). Preterm birth has become the single most common cause of poor outcome for the neonate with 7–10% of all births contributing 75% of perinatal morbidity and mortality. Preterm infants are 40 times more likely to die in the neonatal period than those with normal birth weights (Morrison, 1990). No one intervention, strategy, or combination of interventions and strategies has, to date, been successful in decreasing the incidence of preterm birth. This is because the causes of preterm labour are not clearly understood and therefore the best approach to preventing and treating preterm labour is not yet known.

Financial cost in New Zealand

In a full year, the cost of caring for infants with respiratory distress syndrome, sufficiently severe enough to warrant ventilation, is estimated to be NZ $12.5 million (Wach, Darlow, Bourchier, Broadbent, Knight & Selby, 1994). Barbara Brown of the Health Funding Authority, in a media release to the New Zealand Herald on 28 March 2001, stated that the New Zealand Government annually spends NZ $64 million on specialist neonatal intensive care.

Maternity care in New Zealand

The woman who may find herself in preterm labour is likely to initially be under the care of an LMC, having entered this relationship early in her pregnancy with the expectation that he or she will provide her comprehensive maternity care including the management of her

labour and birth (Ministry of Health, 2002). A LMC provides primary care and must be a general medical practitioner, midwife or obstetric specialist. This service is government funded. There is an expectation by the government that all maternity care is planned with the woman following a consultation process in which the woman is informed of her choices and involved in the decision-making.

Referral to a specialist is recommended should any problem be suspected or identified during the pregnancy, labour or birth (Ministry of Health 2002). The guidelines for referral were developed in consultation with general medical practitioners, midwives and obstetricians. At the time of threatened preterm birth, referral to an obstetrician is expected. It has become the practice of some midwives to refer women at risk of preterm labour for acupuncture before or after referral to an obstetrician. Over the last decade there has been a perception of complementary therapies, including acupuncture, as a valid strategy alongside or instead of western medicine. This has occurred in New Zealand, Australia and in Europe. (Bensoussan & Myers, 1996; Consumer, 1997; Zollman & Vickers 1999). The increased number of health professionals straddling both western and eastern models of health practice has brought new possibilities of care.

Traditional Chinese acupuncture

Traditional Chinese acupuncture is a new and innovative way to address the challenge of preterm labour. My study is based on the philosophy and principles of TCM. These will be discussed in chapter four. However, in practical terms, this means that a thorough western and Chinese history, including tongue and pulse diagnosis and identification of "patterns of disharmony" (Appendix A), is done prior to treatment.

In contrast, some health professionals may practice what I call prescriptive needling, where a Chinese history and pattern of disharmony are not identified prior to treatment. In these situations, symptoms and pain may be relieved without necessarily treating the root cause (Ben) of the problem.

There has also been a recent influx of acupuncture practitioners from Asia who offer TCM acupuncture. Anecdotal evidence suggests midwives are less likely to refer to these practitioners. This is because many of these practitioners do not speak English and there

has been recent media attention regarding the legitimacy of their qualifications. Women may however self refer.

Acupuncture in New Zealand

Acupuncture is widely used in New Zealand. It is one of the most accepted and fastest growing complementary/alternate medicines (CAM) in New Zealand (Consumer Magazine, 1997). In any one day, at least 5000 individuals receive acupuncture from a variety of acupuncture practitioners. Nationally there are approximately 660 health professionals who offer acupuncture practice (Campbell, 2004). These health professionals are medical doctors, physiotherapists, chiropractors, osteopaths, midwives and nurses. They are members of their respective professional bodies and may also be members of the New Zealand Charter of Health Practitioners. There are approximately another 450 practitioners who may, or may not, be health professionals. These practitioners belong to the New Zealand Register of Acupuncture (NZRA). All the professional bodies have standards of care, a code of ethics and procedures for dealing with complaints.

Acupuncture is used for a wide variety of conditions including painful and chronic syndromes, neurological, musculoskeletal, rheumatological, endocrine, gynaecological, obstetrical, respiratory and psychological problems (Bensoussan & Myers, 1996). It is a non-regulated but established profession in New Zealand. The minimum qualifications for competence in acupuncture were determined by the National Advisory Body for Acupuncture. Tertiary qualifications in acupuncture are currently awarded by the New Zealand Qualifications Authority (NZQA). Education courses are offered in two universities, four private training establishments and two professional organisations. Some training programmes are specifically for health professionals but are based on the TCM model. The graduates of such programmes thus combine their western practice experience with a TCM acupuncture approach (Campbell, 2004).

Acupuncture and midwifery practice

The majority of reports in the literature on the use of acupuncture and related modalities in midwifery involve four main aspects of pregnancy and childbirth. These are: relief of nausea and vomiting, repositioning of the fetus in breech presentation, induction of labour and stimulation of uterine contractions and pain relief in labour (Beal, 1992). When Beal

(1992) reviewed the above studies, she commented on the lack of rigour in the researcher's methods and concluded that some well-conducted exploratory research would be beneficial in this area.

Acupuncture and midwifery practice in the United Kingdom (UK)

For the last nine years, Sharon Yelland a midwife/acupuncturist, together with a colleague, has run an outpatient clinic within the maternity unit in Plymouth, UK. The clinic has treated over 2000 women at all stages of pregnancy. This clinic is completely funded by the National Health Service (NHS). Anecdotal evidence and feedback from the women suggests that traditional Chinese acupuncture has successfully treated many conditions and complaints including hyperemesis, varicose veins, haemorrhoids, constipation, migraine, heartburn, anxiety and the four main conditions identified by Beal (1992) and referred to above (Yelland, 1996).

In 1993, Zita West, an English midwife/acupuncturist, followed in Yelland's footsteps and set up a midwifery acupuncture clinic at Warwick Hospital in the UK. This clinic is also completely funded by the NHS. She has written a book which discusses both conventional western medicine and traditional Chinese medicine, as applied to the field of obstetrics. In her book she discusses two clinical cases of women with threatened preterm labour that she has successfully treated with traditional Chinese acupuncture. She recommends that treatment for preterm labour should always be done in consultation with an obstetrician, but concludes that there is nothing to lose in treating these women with traditional Chinese acupuncture (West, 2001).

Background of the researcher

My academic and professional qualifications

I am a registered nurse and I have been a midwife for twenty-eight years. I have practised midwifery in a variety of hospital settings and locations throughout New Zealand. My last clinical position was as a charge midwife in delivery unit in a very busy base hospital in Auckland, where many women had preterm labours and delivery. In 1997 I completed a Post Graduate Diploma in Health Science (Traditional Chinese Medicine). This programme is offered at the Auckland University of Technology. It is for registered health

professionals and based on the TCM model. The graduates of this programme (including myself), thus combine their western practice experience with a TCM acupuncture approach. I then went to Nanjing in China twice and completed Clinical Certificates in Acupuncture (1998, 1999).

While in China, I saw a baby in the breech position being turned by a Chinese acupuncturist who used moxibustion on an acupuncture point on the outside of the little toe (Bl.67/Zhiyin). This had a profound impact on me as it was quite different to any treatment I had seen in the west for turning a breech baby. My experience in China revealed the possibilities of combining my acupuncture skills with my midwifery background.

My practise of acupuncture and traditional Chinese medicine

When I returned from China, I set up an acupuncture clinic in Auckland, New Zealand. Due to my strong background in midwifery and women's health, half of the women who have come to me for acupuncture treatment since then have been pregnant. I treat up to fifteen pregnant women a week, at all stages of their pregnancies.

Five years ago, one of my pregnant clients (Sue), who had previously given birth to her first child at thirty four weeks, was admitted to hospital at 32 weeks in threatened preterm labour. Sue was told by the obstetrician that she had a very high chance of having this baby within the next two days. This was because she was having contractions and her cervix was starting to dilate. She was considered "high risk" because of her previous preterm birth experience. Sue was very frightened and asked me to give her acupuncture in the hospital. I gave her acupuncture on two consecutive days and she went out of labour. We continued with the acupuncture 2-3 times a week on an outpatient basis, in my clinic. Sue's pregnancy continued on past 37 weeks and she was able to have the birth experience she and her husband wanted.

Since then I have successfully treated three other women who had a previous history of preterm labour and birth. These women threatened to go into labour (irritable uterus, backache, early descent of the presenting part, pelvic pressure and/or hospital admission for preterm labour) in a subsequent pregnancy. They then had acupuncture throughout their pregnancies and all reached full term. Watching these women and seeing the difference

that acupuncture seemed to make I became very interested in understanding the experience from the women's perspective. This led to my review of the literature and my choice of thesis topic.

My philosophy of health and healing

My approach and way of working with clients is based on a philosophy of holism where the mind/body/spirit/emotions are not viewed as separate entities. My treatments are aimed at improving clients' physical, emotional and spiritual well-being. Health is seen as more than just treating illness and symptoms. I believe prevention and promotion of health are very important as it is preferable to prevent an illness occurring before it becomes a chronic disease. Different health care issues may respond better to different treatment strategies. Western medicine, Chinese medicine and other complementary/alternative medicine (CAM) I believe, all have a place in the treatment, prevention and the promotion of health.

I provide care that is individualised and flexible. I believe that clients have a responsibility for their own health care and should be involved in all decisions made regarding this care. Clients are given information and educated about strategies to use to prevent health problems and maintain good health.

I apply this philosophy to my own and my family's health care.

How I practise acupuncture

I have been practising acupuncture for nearly seven years and treat between 20-30 clients a week, with a special interest in pregnancy and women's health.

An hour is allowed for the initial consultation, which includes taking a history, making a diagnosis and delivery of a treatment. A subsequent consultation includes a review of the client's symptoms, taking the pulse, viewing the tongue and a treatment. This follow up treatment usually takes about 45 minutes.

My approach to treatment may be summarised as follows:

- **Information gathering**: At the initial visit, a comprehensive client history is taken and questions asked from both TCM and western perspectives using my Wellness Assessment Form (Appendix B). As a TCM practitioner, I use the four methods of information gathering **(**si zhen**):**
    - Inspection (including looking at facial complexion and the tongue)
    - Listening and smelling
    - Asking questions and history taking
    - Palpation (including pulse diagnosis)

- **Disease differentiation** (bian bing): The information gathered (signs and symptoms) from the four above methods is used to make a diagnosis. In TCM terms, this is called identifying the patterns of disharmony (bian zheng). The eight guiding principles (internal/external, hot/cold, deficiency/excess and yin/yang) are used to aid in making this differentiation (Appendix C)

- **Selection of a treatment principle**: Treatment is then given based on this principle. Generally I would treat the symptoms (Biao) first. In subsequent treatments I would treat the root cause (Ben) of the problem. Both the Biao and the Ben may be treated at the same time if the presenting symptom is not severe

- **Selection of the acupuncture prescription**: The most appropriate treatment modality and acupuncture point selection, is chosen based on the treatment principle, as above. This maybe body needles, ear needles, moxibustion and/or cups

- **Delivery of the acupuncture treatment**: In my practice I use body needles, ear needles or ball-bearings, cups, moxibustion and a smart-point diode. I do not use TCM herbal medicine. I have been taught that when using body needles it is important that clients experience a sense of heaviness and/or tingling at the point and/or up and down the channel (Deqi or needling sensation). Needles are usually retained for 15- 20 minutes.

As a general rule regarding the duration of a course of treatment, for every year a client has had a symptom, one month of treatment is required (Flaws, 1989; McLean & Lyttleton, 2003).

Acupuncture and safety in pregnancy

There is much debate about the points that should be used in pregnancy (West, 2001). There is a school of thought that says you shouldn't treat pregnant women with acupuncture in the first three months of pregnancy, as there is a risk that this may cause miscarriage. However, not all practitioners, including myself, subscribe to this belief (West, 2001; Yelland, 1996; Maciocia, 1998).

Notwithstanding this, there are some cardinal rules that must be adhered to when treating pregnant women. They are:

- Always treat the body with respect and consider what you are doing (West, 2001)
- Always respect the balance of qi and blood
- Pregnant women may be more "sensitive" to the treatment, so less needles and less treatment time may be required
- Do not use strong stimulation during pregnancy, unless you are trying to get the woman into labour
- Certain points are regarded as "forbidden" to needle when treating pregnant women before they reach 37 weeks. These points are:
    - L.I 4 / Hegu
    - SP 6 / Sanyinjiao
    - GB 21 / Jianjing
    - BL 31 / Shangliao
    - BL 32 / Ciliao
    - BL 67 / Zhiyin.

  These are "forbidden" because they move qi, move blood or have a strong downward movement. They can, however, be used to induce labour.

- Abdominal points should also be avoided, especially as the pregnancy advances (certain abdominal points may be used to treat nausea and vomiting in the first 12-14 weeks of pregnancy).

Thesis outline

My thesis outline is as follows:

This chapter orientates the reader to my study. It explains what my study is, why I undertook it, what I hope to achieve by doing it and provides an overview of how I went about it. It includes some background information about preterm labour, traditional Chinese medicine and the practice of acupuncture, to provide context. It also introduces me as the researcher.

The following chapter describes the findings of a comprehensive English language literature review of what is known about the prevention, risk identification, diagnosis, treatment and management of preterm labour at this time. What is known about acupuncture and preterm birth is included. The review seeks to provide further context for this study.

Chapter three outlines the research approach, design and procedures. The aims, methods, setting, recruitment, sampling criteria and analyses are described and justified. An overview of the data collection procedures and measures taken to ensure trustworthiness and consideration of ethical principles in this study, are explained.

Chapter four presents the five women's narratives. These narratives identify the women's motivation for seeking acupuncture treatment, experiences of acupuncture, outcomes and their satisfaction with the treatment. The TCM patterns of disharmony and causative factors for each woman are identified and discussed. The LMC's narratives are included for validation purposes only.

The final chapter discusses the key finding and themes that emerged from the data collected. Cross-case analysis of the five women's narratives is discussed. Similarities and

differences are identified and considered. Implications for practice, education and research are presented. Limitations and strengths of the study are identified and the chapter concludes with my final thoughts.

Summary

Western medicine struggles to find effective treatment strategies to prevent or stop preterm labour. My experience as both a midwife and a TCM acupuncturist puts me in a unique position to care for women who have had a previous preterm birth and are at high risk of a subsequent preterm labour. Observation of the success of acupuncture has led me to access the retrospective data from five women and their LMCs. Using case study methodology this thesis presents those results against a review of the related literature.

CHAPTER TWO

REVIEW OF THE LITERATURE

"The history of the research on preterm birth and low birth weight and their prevention has been characterised by successions of enthusiasm and disillusion" (Buekens & Klebanoff, 2001, p.159).

Introduction

The experiences of the women interviewed in this study and the conclusions drawn from their experiences must be viewed in the context of what is known about preterm birth. In this chapter, a definition of preterm birth, an historical perspective and the risk factors associated with it are outlined. Our lack of knowledge about causes and the challenges associated with the prediction, prevention, diagnosis, treatment and management of preterm labour are addressed. Future directions and new research focuses on risk factors for threatened preterm labour are introduced. These are identified and discussed as they relate to the women in this study.

The concept of Jing or Essence in TCM is identified. This vital substance is considered to be an integral part of our constitution and genetic inheritance. The role Jing plays in fertility, preterm labour, keeping bodies in balance and free from disease and illness is discussed.

The literature search for this study was extensive. Many articles were sourced from midwifery, obstetric, epidemiology, neonatology, psychology, sociology and acupuncture journals. The AMED (Alternative Medicine), Pre-CINAHL, Medline, Nursing & Allied Health and Cochrane databases were searched. Reference was made to a wide range of acupuncture textbooks. With respect to studies into acupuncture and preterm birth, nothing was found except one study (Tsuei, Yiu-Fun & Sharma, 1977) and a description of two anecdotal cases of preterm labour treated with acupuncture (West, 2001).

Definition of preterm birth

Births that occur before 37 completed weeks of pregnancy are considered preterm (Goldenberg & Rouse, 1998). A preterm infant is defined as one that has a gestational age of less than thirty seven completed weeks and is considered preterm irrespective of birth weight (Sweet, 1997). Recent advances in neonatal intensive care have resulted in very small and premature infants surviving. The above definitions have been expanded to include very low birth weight infants (VLBW) who weigh less than 1500 grams at birth, and extremely low birth infants (ELBW) as less than 1000 gram at birth (Halliday, 1992, as cited in Sweet, 1997).

Background

Incidence of preterm birth

Preterm birth occurs in seven to ten percent of all pregnancies (Goldenberg & Rouse, 1998). The latest research from the Report on Maternity (1999) shows that seven percent of babies born in New Zealand in 1999 were born preterm. Maori had the same rate of preterm births as other groups in 1999 whereas in the past, their rate was higher (Health Funding Authority, 1999). Pacific women had significantly fewer preterm babies compared to all other ethnic groups. The rate of preterm birth both in New Zealand and internationally has remained the same for 25 years and is not declining. In the USA the number of preterm births has actually increased (Buekens & Klebanoff, 2001).

Neonatal mortality and morbidity

Preterm birth is one of the main causes of neonatal morbidity and mortality both in New Zealand and overseas (Wright, Mitchell, Thompson, Clements, Ford & Stewart, 1998). Preterm birth has become the single most common cause of poor outcome for the neonate with only 7-10% of all births contributing 75% of perinatal morbidity and mortality. Preterm infants are also 40 times more likely to die in the neonatal period than are those with normal birth weights (Morrison, 1990).

In the last 45 years neonatal and obstetric interventions have decreased the mortality rate from 50% to 5% among VLBW infants of 1000 to 1500 grams (Bottoms, 1997 et al, cited in Goldenberg & Rouse, 1998). The improvement in the survival rate has not been

accompanied by any reduction in the risk of prematurity associated neurological disabilities (Goldenberg & Rouse, 1998). Preterm birth is therefore an important health issue.

Financial cost of preterm birth

The financial costs of providing neonatal intensive care to preterm infants are substantial. The neonatal intensive care unit is the most expensive item in the healthcare budget (McLean et al, 1993, as cited in Ruiz, 1998). In New Zealand the cost of caring for infants with respiratory distress syndrome, which is sufficiently severe enough to warrant ventilation, is estimated to be NZ$12.5 million per year. The average cost of caring for a surviving infant is roughly NZ$52,000 and a non-surviving infant, NZ$24,500 (Wach, Darlow, Bourchier, Broadbent, Knight & Selby, 1994). Barbara Browne of the Health Funding Authority, in a media release to the New Zealand Herald on 28 March 2001, stated that the New Zealand Government annually spends NZ$64 million on specialist neonatal intensive care.

Emotional cost for parents

A New Zealand paediatrician, Dr Simon Rowley, was quoted as saying that *"having a premature baby has a huge emotional impact on parents"* (Holdom*, 2001, p.51).* In a convenience sample, Holditch-Davis, Bartlett, Blickman, & Miles (2003), interviewed thirty mothers of high risk premature infants at birth and six months, corrected for prematurity. These babies either had a birth weight of less than 1500 grams or medical problems requiring mechanical ventilation. The authors found that the parents were concerned about their baby's survival, health crises, fragile appearance, separation and loss of the anticipated maternal role. Mother's reported feeling guilty over failure to carry their baby to term, uncertainty about the baby's condition, sadness and helplessness. As a result they often experienced significant emotional distress, particularly anxiety, worry and depression.

However, it is not only the mothers of VLBW babies who experience emotional anxiety and distress. Nystrom, & Axelsson (2002) in a study done on eight women who had full term babies who were treated in a neonatal intensive care unit for 2 – 10 days and sent home once they were healthy found that even though these babies were not critically ill, it was still a stressful experience for the mothers to be separated from their babies in the first

week of their lives. They experienced feelings of despair, lack of control, threat and disappointment.

The five women in this study also experienced similar feelings to varying degrees. It would appear from the literature and this study that having a preterm baby in the neonatal unit and the associated separation from the baby has a significant emotional impact on mothers.

Aetiology of preterm birth

The three main causes of preterm birth are spontaneous preterm labour, preterm rupture of membranes (PROM) and medical induction due to iatrogenic factors for either maternal or fetal reasons. 40% of women will go into spontaneous premature labour and no known cause will be found (Sweet, 1997). Preterm labour, if not successfully treated leads to preterm delivery. The causes of preterm labour are not clearly understood and therefore the best approach to preventing and treating preterm labour is not known (Wheeler, 1994).

Prevention of preterm birth

The focus on preterm birth to-date has been prevention and two main strategies have been identified. One is the risk identification and intervention approach which was prevalent in 1980s and early 1990s. The other is the population wide intervention approach advocated during the same time period (Morrell, 1990). I will discuss these two approaches and then identify reasons why they have not had a significant impact on lowering the preterm birth rate.

Risk identification and intervention approach

The traditional medical approach to prevention in the past has been to identify "high risk" women and offer them individual and specific protection (Wheeler, 1994). Refer to Table 1 for sociodemographic, genetic, obstetric and gynaecological and medical risk factors associated with preterm birth.

Table 1: Risk factors identified with preterm birth

Sociodemographic factors:

- Maternal age
- Race/ethnicity
- Level of education
- Poor dentition
- Smoking/alcohol/drugs
- Work & commitments

Genetic factors:

- Family history of preterm labour/delivery

Obstetric & gynaecological history:

- Parity
- Inter-pregnancy interval
- Previous low birth weight/preterm delivery
- Previous miscarriage
- Previous stillbirth/neonatal death
- Previous history of infertility
- Cone biopsy

Medical complications of pregnancy:

- Gestational bleeding, cervical incompetence
- Infection

Source: Berkowitz and Papiernik, (1993); Ruiz, (1998).

Data combined and categorised by author.

The risk identification approach has involved the implementation of prematurity prevention programmes providing "at risk" women with education about the signs and symptoms of preterm labour and more frequent antenatal visits. Refer to Table 2 for common signs and symptoms associated with preterm labour.

Table 2: Common signs and symptoms of preterm labour

- Low back pain
- Intermittent thigh pain
- Pelvic heaviness or pressure
- Abdominal cramping
- Menstrual-like cramping
- Regular uterine contractions (may be painless)
- Change in fetal movement
- Increase or change in vaginal discharge
- Vaginal bleeding
- Rupture of membranes
- Change in urination habits
- Diarrhoea

Source: Morrison (1990); Wheeler (1994); Sweet (1997).
Data combined by author.

Other prevention strategies include home uterine monitoring, nutritional counselling and supplementation, psychological support, cervical cerclage and tocolytic therapy. Refer to Table 3 for medical, psychological and nutritional interventions.

Table 3: Interventions to prevent preterm birth

Medical

- Antenatal care (routine or enhanced)
- Risk scoring systems
- Cervical cerclage
- Progestin supplementation
- Programmes for cessation of tobacco drug or alcohol use
- Patient education (to detect signs of PTL)
- Home uterine-activity monitoring
- Tocolytic therapy
- Bed rest
- Hydration
- Screening for and treatment of infection (UTI, bacterial vaginosis and STD's)
- Antibiotics for preterm labour or premature rupture of membranes
- Low dose aspirin
- Frequent contact with a nurse (USA)

Psychological

- Psychological support

Nutritional

- Counselling
- Caloric supplementation
- Protein supplementation
- Vitamin or mineral supplementation
- Calcium supplementation

Source: Goldenberg and Rouse (1998).

Data categorised by author.

The risk identification and intervention approach is based on the premise that if preterm labour is discovered early enough and treated appropriately, the preterm birth rate can be reduced (Heaman et al, 2000). However this has not proven to be the case and is due to the following factors:

- The precise diagnosis of preterm labour is not easy. The only absolute proof is progressive cervical dilatation of the cervix. Once this has occurred it is often too late to attempt preventive treatment
- Preterm birth prevention programmes directed only at high risk women have been ineffective (Heaman et al, 2001) as half of all preterm births occur in women without clinical risk factors (Iams et al,2001)
- Among "high risk" women, educated about signs and symptoms of preterm labour and using a device to monitor their contractions, only eleven percent correctly identified more than half of their contractions. This eleven percent also identified a high number of false positive marks (Newman, Gill, Wittreich & Katz, 1986, cited in Wheeler, 1994). This study suggests that many women in preterm labour do not recognise the majority of their uterine contractions.
- Tocolytics will only delay labour for up to forty-eight hours. While this is useful to enable time to transfer women to tertiary-based care and administer antenatal steroids to the mother, tocolytics have little effect on the preterm birthrate (Steer & Flint, 1999).
- The interventions that are effective include treatment of urinary tract infection, cervical cerclage and treatment of bacterial vaginosis in high risk women, are applicable to only a small percentage of women at risk of preterm birth and therefore have not had an impact on lowering preterm birth rate (Goldenberg & Rouse, 1998).

Heaman et al (2000) believe that because the preterm birth risk identification and intervention approach, which is directed only at "high risk" women, has been ineffective in lowering the preterm birthrate, greater benefit may come from prevention activities directed towards the entire population rather than a specific group of women.

Population-wide intervention approach

Few population health approaches for reducing the preterm birthrate have been reported in the literature (Heaman et al, 2000). One programme implemented in France reduced the preterm birthrate for singleton live births from 5.4% to 3.7% over a period of twelve years. The programme involved major changes to French perinatal policy, social changes to pregnancy work leave policies and a commitment to financial and emotional support to women during pregnancy (Papiernik et al, 1985). The programme provided universal access to antenatal care, an intensive public education campaign, emphasis on modifying risk factors related to unhealthy lifestyles and self-assessment and self-management by the woman herself.

While I believe a population health strategy has merit, there are a number of factors that could make the implementation of this approach difficult. They are as follows:

- There would need to be an increase in society's awareness of the issue of preterm labour and birth
- It would require a commitment from government and policy makers and a change in a number of social policies
- Funding would have to be obtained to implement the proposed strategies and the initial cost of implementing this approach could be high.
- Effective coordination of the various sectors involved would be needed
- There would need to be a balance between the responsibility of the public health system versus that of the woman herself
- The reduction in the preterm birth rate achieved in France was only 1.7% and took 12 years to achieve
- It would take years to assess whether this approach was effective in lowering the preterm birthrate in the entire population

Obstetric treatment and its limitations

Goldenberg & Rouse (1998) suggest that a better understanding of the mechanisms leading to preterm birth are needed and until this occurs there will be no substantial reduction in preterm delivery. Furthermore Buekens & Klebanoff (2001) state that the success rate in reducing preterm births has been so disappointing they are concerned the problem will be

seen as unavoidable. They believe a new focus away from the topics of past research is required.

Future directions

The new emphasis in research is on:

- gene-environment interactions. Particularly the relationship between vaginal bacterial vaginosis and a maternal genotype for a specific proinflammatory cytokine. A combination of these two factors is considered to increase the risk of preterm labour (Macones et al, 2004).
- newly identified risk factors such as:
    - the role of low fish oil (Omega 3) in diet. Women who have diets that are high in fish oils have a reduced risk of preterm birth (Olsen & Secher, 2002)
    - high licorice consumption in the diet. A high maternal intake of licorice(>500 mgs a week) has been linked to an increase in preterm birth (Strandberg, Andersson, Jarvenpaa, & McKeigue, 2002)
    - periodontitis-associated pregnancy complications. Women with gum disease and infected teeth have an increased rate of preterm birth, which increases with the number of teeth involved (Jeffcoat et al, 2001)
- international studies to develop effective screening tests to ascertain whether there is a link between preterm labour, preeclampsia and small for gestational age babies (SCOPE study, University of Auckland, 2004).

I will briefly discuss the high licorice consumption and periodontitis-associated pregnancy complications as women in my study had these risk factors.

High licorice consumption

Heavy licorice consumption has been associated with a more than two-fold risk of preterm labour (Strandberg et al, 2002). Heavy consumption was classified as eating more than 500 mg in one week. Licorice contains a natural cortisone and craving licorice has been linked to adrenal exhaustion (Priest, 2004). A desire for licorice can be an early warning sign for

adrenal exhaustion and has been further linked to chronic stress. Three of the women in my study craved or ate large quantities of licorice.

Periodontitis-associated pregnancy

There is an association between the presence of periodontitis at 21 to 24 weeks' gestation and subsequent preterm birth (Jeffcoat et al, 2001). The relative risk of preterm birth associated with gum disease in the second trimester of pregnancy is increased seven times (Parry & Hooton, 2004). One of the women in my study had dental work for a root canal performed at 20 weeks.

In contrast to the western worldview of preterm labour and the associated reductionist research, TCM introduces an alternative perspective. Historically the focus in TCM on disease has been on prevention. Additionally the causes of disease are seen as multifactorial and consider an individual's underlying constitution, lifestyle, emotions and the way they interact with their external environment (Flaws, 1989; Wolfe, 1993). I will briefly discuss these concepts as they relate to preterm labour.

The concept of prevention

In TCM theory there is a concept of prenatal qi (Jing or essence). Essence is a fluid nutritive type of qi, which is stored in the Kidneys (Appendix C). There is a connection between the Kidneys and the reproductive organs in both men and women. Jing is therefore considered to be an essential component in fertility and also contributes to our libido. If the Jing is depleted or deficient there may be problems with infertility, congenital abnormalities and childhood illness (Maciocia, 1989). Jing contributes to our constitution and is passed on from the parents to the baby at conception. If the parents have depleted Jing their child will also have weak and depleted Jing. How we manage and live our lives also determines how quickly we use this precious substance. It cannot be augmented but only "protected" and "supported" by postnatal qi which is obtained from the food we eat and the way this food is processed and absorbed.

Jing can be seen as "money in the bank", energy or qi leftover from daily life, which is then stored to be used in times of need. Physical trauma, severe emotional stress, and pregnancy, labour and birth would all use and deplete Jing. The way we live our lives is

therefore very important in TCM. If we do not eat well, get enough sleep, abuse our bodies with recreational drugs, smoke cigarettes and get infrequent exercise we will draw on our "money in the bank" and soon use it up. Women who inherit depleted Jing may be at increased risk of preterm labour, particularly if their own lifestyles do not nurture and support it. These women would also have imbalances in qi and Blood due to the role of Jing in the formation of Blood and the special relationship between qi and Blood (Maciocia, 1998). This "flow on" effect may continue and involve the Zangfu organs (Appendix C). If the Zangfu organs involved are the Kidney, Liver or Spleen, a worsening cascade of patterns of disharmony will occur as these organs have various roles in the formation, storage and control of Blood. Preterm labour in TCM can therefore be viewed as a complex and multifactorial process, which results from a combination of inherited constitutional and lifestyle factors.

Acupuncture and preterm labour

After an extensive review of the literature only one study published in English, could be found addressing acupuncture and preterm labour. This study, published in 1977 by Tsuei, Yiu-Fun & Sharma treated 12 cases of premature labour with electro-acupuncture. In a previous study related to analgesia for women in active labour, by chance an acupuncture point on the inside of the foot (Gongsun/Sp.4) was found to stop uterine contractions (Tsuei & Lai, 1974). This is a special point in TCM as it is the master point of the Chong Mai (Sea of Blood). The Chong Mai originates in the uterus and is related to the Kidney channel, which also connects to the uterus. Gongsun/Sp.4 will therefore have an effect on uterine contractions, calming and relaxing the uterus as demonstrated in the Tsuei et al study (1977).

The twelve women were treated twice daily with electro-acupuncture for three days then discharged and treated twice each week on an outpatient basis. Eight of these women were multigravidas and all had a history of preterm birth. Six also had cervical changes, although Tsuei et al did not give a Bishop score or discuss the degree of cervical effacement or dilatation. Treatment time varied from four to sixteen hours and birth was delayed until full term in eleven of the twelve cases, giving a success rate of 91.6%. The one woman who did not reach full term had preterm rupture of membranes and the treatment had to be abandoned.

One further reference was found in a textbook written by an acupuncturist and midwife in the UK (West, 2001). She discusses two anecdotal cases of women with threatening preterm labour that she treated in a National Health funded clinic at Warwick Hospital. The first woman had been pregnant seven times (including two miscarriages and twins in her fourth pregnancy). With each pregnancy she had threatened preterm labour/irritable uterus. She was repeatedly admitted to hospital from 20 weeks. She was given weekly acupuncture from eight weeks in her last three pregnancies. In her most recent pregnancy she managed to avoid hospital admission until 32 weeks and had her baby at 38 weeks.

In the second case a woman with a history of infertility had an IVF pregnancy. She was treated by West at 24 weeks as she presented with an irritable uterus. She also had backache and a feeling of heaviness as if the baby was going to drop out. West did not state the outcome of this pregnancy. The women in my study also presented with similar signs and symptoms that West described for these two women.

Summary

It is clear from the literature available that reducing the incidence of preterm births would improve neonatal outcomes, reduce the human cost to affected families and reduce the large amounts of money spent on neonatal intensive care annually out of the national health budget. It appears that Western medicine has found the reduction of the preterm birth rate a huge challenge and there is no clear path to a solution. With respect to role of traditional Chinese medicine, there have been no English language published studies in New Zealand and very few overseas, that explore the use of acupuncture as a possible intervention to reduce the preterm birth rate. TCM offers an alternative perspective, one that is consistent with the philosophical underpinnings of my study.

CHAPTER THREE

THE RESEARCH PROCESS

Introduction

This chapter begins with my reasons for choosing qualitative research and case study method as a means of addressing my research question: "What is the experience of women who have received traditional Chinese acupuncture treatment for threatened preterm labour?" A justification of the philosophical (traditional Chinese medicine) and methodological approach (case study) is given. The method, including selection of participants, data collection and analysis of the data is described. Ethical considerations and the trustworthiness of this study are discussed.

Paradigm or worldview

Qualitative research is the paradigm or worldview on which this study is based. Qualitative research attempts to understand, search for meaning and make sense of the world from the participant's perspective. Reality is not seen as a single, fixed phenomenon waiting to be measured. There are multiple interpretations of reality which are subjective, in a state of constant flux and change over time (Merriam, 2002). The researcher is the primary tool for collecting the data. The interaction between the participant and the researcher creates the study findings and provides the data to be analysed. These findings "emerge" from the data collected, as patterns and themes are searched out and identified to make meaning of the participant's experiences. Subjectivity and values held by the researcher are seen as inevitable but need to be articulated and identified (Polit, & Hungler, 1997). The emphasis is on seeing the phenomenon of interest in a complete and holistic way. This view of the world is also consistent with the philosophy of traditional Chinese medicine.

Philosophical approach

TCM includes the practice of Chinese herbal medicine, acupuncture, moxibustion, cupping, massage (tuina) and diet. It has a history dating back thousands of years (Beal, 1992; Yelland, 1995; Cheng, 1996). The underlying philosophy is based on a very different belief system to the western one, where we "dissect mind from body and man from nature" (Beinfield & Korngold, 1991, p.5). Refer Table 4 for a comparison of western and TCM philosophies and practice. Influenced by the ancient Chinese philosophical concepts of yin yang and five phase theory (wu xing), the human body is viewed as an integrated whole, as the human microcosm within the universal macrocosm and disease is understood within this philosophical view of the world. Illness occurs when the body is out of balance or not in harmony. This may occur as a result of an inherited constitutional weakness, eating inappropriate foods or inappropriate dietary habits, longstanding or severe emotional upset and/or be caused by external climatic factors (Maciocia, 1989). The aim of TCM treatment is to prevent disease before it occurs, and if present, to restore the body to balance and harmony. Harmony "describes the sense of ease, congruency and vitality that is experienced when all functions of the soma and psyche are in accord with each other and with the external environment" (Beinfield & Korngold, 1991, p 406).

TCM is viewed as a holistic system in which internal organs (zang fu) are connected by channels (jing luo) through which fundamental substances flow (qi, xue, jin yue, jing and shen). Refer Appendix C: "Fundamental concepts and frameworks in traditional Chinese medicine" for definitions of these concepts. The body is believed to be covered with a network of multilayered channels that are linked to each other and connect the inside, outside, upper and lower portions. Acupuncture points are located along these channels and are the specific sites through which the qi and blood of the zang fu organs are transported to the body surface (Maciocia, 1989; Cheng, 1996). Acupuncture points can be stimulated by the use of needles, cups, moxibustion and massage (tuina) (Appendix C). Acupuncture needles are sterile, fine, hair-like stainless steel needles that are inserted into the acupuncture points. Qi can be summoned to the places that need it and dispersed from the areas where it is congested and causing a blockage. Stimulation of the points helps to correct any imbalance of qi and blood. Restoring the body to balance and harmony means that the symptoms as well as the underlying root cause of an illness can be treated. A client

may notice that their headaches improve; they sleep better and have less premenstrual tension. This group of symptoms are not related in western medicine, but they are important in TCM as they provide vital information, help to determine the TCM diagnosis and determine the most appropriate treatment.

Table 4: Health and wellness: Comparisons between western and TCM philosophies and practice

Western	TCM
Based on philosophy of dualism	Based on philosophy of holism
Abnormalities of structure	Disharmonies of qi and blood and internal syndromes of imbalance
Focuses on immediate relief of symptoms (Biao)	Focuses on treating the root cause (Ben) of disease, as well as symptoms (Biao)
Treats organic disease	Treats organic and functional disease
Healthcare practitioner is in control and seen as the "expert" with all the knowledge	Partnership relationship where the client has responsibility for own health and healing
Focus on curing disease	Focus on prevention and healing, even when dying
Practitioner is seen as mechanic, fixing broken parts	Practitioner is seen as gardener, cultivating life
Focus on immediate/quick relief of symptoms (drugs/surgery)	Focus on more long term/slower healing relief of both symptoms and root cause
Often rushed 10-15 minute consultations. Practitioner remains the expert and the client can become disempowered	Usually 30 - 45 minute appointments – time for listening, discussion and treatment. Responsibility for healing rests with the client, and so does the power and knowledge
Puts limit on curing, i.e. miracles don't happen	No limit on healing, i.e. miracles can and do happen

Adapted from: Benfield & Korngold (1991); Little in Baume & Petty, (1998); Kelly (2000).

Study design

Case study

"The distinctive need for case studies arises out of the desire to understand complex social phenomena" (Yin, 1994, p.3). Preterm labour is a complex social phenomenon, the causes of which are not well understood. Case studies are conducted when little is known about a phenomenon or situation and are useful in the descriptive and exploratory phase of an investigation when there is little prior research in the area. A descriptive and exploratory case study, with a multiple-case design, is therefore consistent with my research question and aims of my study.

Case study defined

Case study is a research method which looks at a unit of human activity which is embedded in the real world, can only be understood in context and that merges in with its context so that the precise boundaries are difficult to draw (Yin, 1993, 1994; Stake 1995; Gillham, 2000; Merriam, 2002). By focusing on a single phenomenon or entity (the case), case study seeks to describe and explore this phenomenon in depth. A case may be an individual, group of individuals, institution or community, but it must be bound by a unit of analysis. My unit of analysis is a group of five women who had TCM acupuncture for threatened preterm labour and who received treatment from two specific acupuncture practitioners (myself and a colleague). My study is within the bounds of clients who received acupuncture for threatened preterm labour from two specific acupuncturists who work at two specific clinics.

A multiple case study method

A multiple case design is appropriate when the researcher is interested in exploring the same phenomenon with a number of individuals (Yin, 1993, 1994; Stake, 1995). The study of multiple cases about the same phenomenon make the case more compelling and the study's overall credibility is increased (Yin, 1994).

Procedures/process of doing the research

Setting

Two acupuncture clinics in central Auckland were chosen for my study which included my own and another practitioner's. My clinic is in a separate part of my home with its own entrance and parking provided. There is a separate toilet and waiting room with toys for children, and tea and water are provided. My home is set in an attractive, quiet residential suburb, surrounded by mature trees. Clients often remark on the beautiful and peaceful surroundings. The other acupuncturist's clinic is also set in a quiet residential area. This practitioner specialises in pregnancy, women's health and infertility. The clinic is an attractive bungalow style house. Three practitioners specialising in traditional Chinese medicine rent and work in the house, which also has bathroom and parking facilities.

Selection of participants

Consultation was undertaken with LMCs and acupuncturists in my informal networks in Auckland for support of my study. A review of client records in my own acupuncture practice and a referral from another acupuncturist provided the women in my study. The other acupuncturist sought verbal consent from the one eligible woman in her practice to participate in my study. Information Sheets and Consent to Participate Forms were then posted out to the women and their LMCs to be signed (Appendix D). To be included in my study the women needed to have had a previous history of preterm birth, and a subsequent singleton pregnancy in which they had received acupuncture for threatened preterm labour. The women, their LMCs and acupuncturists had to be able to speak and read English. They also had to reside within two hours of Auckland. Women in their first pregnancies, women with multiple pregnancies and non-English speaking women were excluded from my study.

Sample size

A purposive sample of five retrospective cases of women and their LMCs was selected. Purposive sampling is a deliberate, non-random method that aims to sample a group with particular characteristics (Polit & Hungler, 1997). A small sample is required for a multiple-case design (Yin, 1993, 1994). This is a requirement to achieve an in-depth and intensive description and exploration of each case, and provide reliable and trustworthy findings. My sample size of five is therefore regarded as sufficient. If similar results are

obtained from three cases Yin believes replication has been achieved. Additional cases may be selected to look for contrasts between the cases.

Study participants

The women

Socio-demographic details were collected from the women's midwifery and acupuncture notes. The women were all aged in their 30's, and their ages ranged from 30-37 years. All five women would be considered high risk for a repeat preterm labour and birth experience due to their previous socio-demographic and obstetric history's (Berkowitz & Papiernik, 1993; Parry & Hooton, 2004). One woman identified as Maori and the other four identified as New Zealand Pakeha. All five women were married. Three were health professionals and had spent a large proportion of their working lives doing shift work. Their levels of education varied. All five had completed secondary school, four had a tertiary qualification and two had university degrees. Three of the women had a previous history of acupuncture use and still use acupuncture for ongoing health care prevention and promotion. All five women chose fictitious names to ensure anonymity.

The LMCs

The women's LMCs were also interviewed. This was done to increase the trustworthiness of my study. If the women and their LMCs both told the same story, particularly about critical events such as hospital admissions, cervical dilatation and what the obstetrician said regarding imminent birth of the baby, data triangulation is said to have occurred and the narratives are considered to be more trustworthy.

The three LMCs were female midwives who worked in independent practice. They all attended births in hospitals and at home, and had good relationships with other midwives and obstetricians. Their midwifery experience ranged from 30 years (Rosa), seven years (Barb) and five years (Shelley). All three LMCs had a history of personal acupuncture use. They are still using acupuncture for their own health care and use it both for acute conditions and health care maintenance. Both myself and the other acupuncturist were known to the LMCs, and our practice was regarded as safe and appropriate for the woman in my study. All the women were also referred by their LMCs to obstetricians during their periods of threatened labour as recommended in the referral guidelines (Ministry of Health,

2002). Two of the women had the same LMC (Sue and Lucy). Jenny's LMC, an obstetrician, did not return the Information Sheet and Consent Form and therefore was not interviewed. The data from the three LMC's narratives was used only to substantiate the women's stories as it is beyond the scope of this thesis to complete analysis on their transcripts.

Data collection

To increase the trustworthiness of case study research many case study researchers advocate using multiple sources when data is collected (Yin 1993, 1994; Stake 1995; Merriam 2002). I therefore used a variety of data collection methods to provide for triangulation of data sources. Triangulation refers to the convergence of the different data collection methods (interviews, observations, review of case notes, letters and reports) to the same end point (Polit & Hungler, 1997). In my study I interviewed both the women and their LMCs, documented observations made during interviews and reviewed midwifery and acupuncture case notes. I also reviewed relevant literature from journals, books and newspapers.

Interview process

I conducted in-depth semi-structured interviews in either the woman's/LMC's homes, or my acupuncture clinic. The interviews lasted from an hour to an hour and a half and all were audio-taped. A schedule of the questions asked of the women and their LMCs is attached (Appendix E). I posted the tapes immediately after each interview to the transcriber, who had previously signed a confidentiality agreement. The interviews were all double taped using two high quality audio-tape recorders. I kept one copy so that if the tape sent to the transcriber was lost I had a backup copy. The tapes were all transcribed verbatim within a week and e-mailed back to me to begin the data analysis. The transcriber deleted her copy once I had confirmed receipt of her e-mail. All transcribed interviews were returned to the women and LMCs to check for accuracy, change and add any other comments if required.

The place and time of the interviews was chosen by the women/LMCs and depended on their child care arrangements. Times were chosen when their children were either at school,

day care or asleep. The interviews could then be conducted without interruptions. Three of the women (Sue, Felicity and Levi) and one LMC (Barb) chose to be interviewed at my clinic. The other two women (Lucy and Jenny) and two LMCs (Rosa and Shelley) chose to be interviewed in their own homes.

The other acupuncturist's participation was limited to the time taken to provide access to acupuncture clinical notes for me to review. The one woman whose notes I had to access had consented to this in the signed Consent Form (Appendix D). This was scheduled so as not to interfere with the acupuncturists' normal clinical practice.

Data analysis

The data collected from the women's narratives was analysed using content and thematic analysis, using the philosophical perspective of traditional Chinese medicine. Within case and cross-case analysis is also done when using case study as a method with a multiple-case design (Yin, 1993, 1994; Stake, 1995).

Content and thematic analysis

Data analysis started when I completed my first interview. I recorded my impressions, observations and reflections in my case study log immediately after the interview. This is suggested by case study researchers as a strategy to increase the trustworthiness of the data collected and is a step in the process of establishing a case study data base (Yin, 1993, 1994; Stake, 1995).

The process of analysis continued when I received my first transcribed interview back by e-mail. I printed off a hard copy and read the transcript through many times. I looked for answers to my research question. In doing so I considered the following questions:

- What was this woman's experience of acupuncture?
- Was it a positive experience?
- Had it made a difference to her threatened preterm labour signs and symptoms?
- If so, how and to what specifically?
- Had acupuncture made a difference to anything else?

- What stood out about her story?
- What does TCM say about this woman's story?
- What is her TCM pattern of disharmony?
- Is this woman's lifestyle a contributing factor?

I continued this process with each transcript as I received them. A pattern of common and similar themes started to emerge from the women's stories. I then started using coloured coded highlighters, on both the soft and hard copies to identify the common patterns and themes that were emerging. The themes were a combination of both TCM concepts and descriptive concepts, however they often overlapped. This will be illustrated later in my discussion chapter.

I now had a total of 26 common themes. I designed and put these themes into grids. Themes that seemed to be saying similar things were put in the same grids. I reflected on these themes for weeks and constantly revisited the meanings, searching for deeper meanings, different meanings and new meanings. I was immersed in the data and sometimes felt I was drowning in it! I left it for weeks and then revisited it.

After I received the fourth transcript I started to notice some differences in the women's stories. I now began the process of looking for commonalties and differences within and across all five cases. This is a process that Yin refers to as pattern matching and is the process of searching for replication across the cases. If three cases have similar results, replication is said to have taken place. When contrasting results are produced, theoretical replication has occurred and is a guide to future research (Yin, 1993, 1994).

Similarities and differences were identified from within and across each woman's narrative. These similarities and differences are the patterns and themes that emerged from the analysis of the five women's narratives. They give meaning to the women's experiences of having had TCM acupuncture treatment for threatened preterm labour.

The trustworthiness of this study

Trustworthiness is a process of ensuring that a study is methodologically sound and appropriate for the research question being studied. Rigour and trustworthiness are as important in a case-study design as they are in any research (Yin, 1993, 1994; Stake, 1995). Historically the worth of any research study has been evaluated using the quantitative terms of reliability and validity. It is generally accepted by researchers undertaking qualitative research that the concepts of reliability and validity do not fit a qualitative paradigm (Sandelowski, 1994, Lincoln & Guba, 1985).

Lincoln and Guba's (1985) model is one that is adopted by many researchers when considering trustworthiness in qualitative research. They describe four general criteria for establishing trustworthiness in any research study. These four criteria are credibility, transferability, dependability and confirmability. I have chosen to use these four criteria in my study.

Credibility

Credibility is establishing a match between the women's experiences and how I represent these experiences. A measure of a study's credibility is whether the women recognise the description of the experience as their own (Beanland, Schneider, Biondo-Wood & Haber, 1999). A study is also credible when other people (researchers or readers) can recognise and relate to the experience when reading my study (see Table 5 for an overview of the criteria and strategies used).

Strategies I used to ensure a match between the women's experiences and my interpretations of these experiences were peer debriefing (with supervisor and a colleague), member checks (returning transcripts and discussing emerging themes with participants), repeated observations and returning many times to the data. I also adopted Yin's (1993, 1994) recommendation that a case study protocol be used. He believes this is essential if using a multiple case design. A case study protocol maintains a chain of evidence and enables the reader to trace the steps that the researcher took from the research question to the conclusion of the study.

A major strength of a case study design is the ability to use multiple sources of evidence when collecting the data. Multiple sources of evidence essentially provide multiple measures of the same phenomenon (Yin, 1993, 1994). I therefore interviewed the women and their LMC's, recorded observations made during the interviews and collected data from midwifery and acupuncture clinical notes (triangulation of data sources).

To ensure credibility of data collection I conducted in-depth interviews (prolonged engagement) that yielded rich and detailed descriptions of the women's experiences. Adequate time was allowed for each interview (60–90 minutes).

The relationship between me and the women was also important when conducting an in-depth interview. A relationship that is open and one where the women feel valued and respected hopefully yields rich and meaningful data. Krefting (1991) identifies the closeness of the relationship between researcher and participant, paradoxically as a major threat to the credibility of a qualitative study. She believes that the researcher may become so enmeshed with the participants that she may have difficulty separating her own experience from that of the participants.

A strategy to deal with the closeness of the relationship between myself and the women in my study was for me to identify my biases, values and feelings about TCM acupuncture treatment for threatened preterm labour before commencing the data collection. I did this by writing these biases and feelings down in my research log before I interviewed the women. In chapter one I have also identified and articulated my values and beliefs about health and healing.

Transferability

Transferability is the relevance of the findings to other similar situations. It is the equivalent of external validity and generalisability in quantitative research. I ensured this by inserting rich descriptions of the research setting, context and process in my study. I also included generous quotes from the participants in my narratives chapter. In case study research, however, generalisability is to the case/cases and not the total population (Stake,

1995). Yin believes a strength of a multiple case design is that if similar results are obtained from three cases, replication has been achieved (Yin, 1993, 1994).

Dependability

Dependability is parallel to reliability in quantitative research and was achieved by having researchers look at my data (investigator triangulation) to ensure that additional data had not been overlooked (Krefting, 1991; Sandelowski, 1986; Koch & Harrington, 1998; Lincoln & Guba, 1985). As mentioned previously, a case study protocol was used to maintain a chain of evidence so that other researchers could follow my processes.

Confirmability

Confirmability is achieved by being explicit about the logic and methods used in data analysis and interpretation. Transcripts were returned to the participants for verification, so they could make changes or add any additional comments. The emerging themes were also discussed with the participants. I kept an audit trail of all data collected and analysis performed so that other researchers could audit my research process.

Table 5: Overview of strategies used to ensure trustworthiness in my study

Criteria	Explanation of the criteria	Case study strategy used
Credibility	Confidence that the data and the interpretation of the data is believable	• Use of case study protocol • Triangulation: data source, investigator, method and theory • Prolonged engagement • Peer debriefing • Member checks • Researcher credibility
Transferability	The extent to which findings from the data can be transferred to other settings or groups	• Specification of the population of interest • Rich description of research setting, context and process • Use of generous quotes from women in report • Replication logic in multiple case studies
Dependability	Stability of data over time and over different conditions. Consistent findings if study replicated with same subjects or in a similar context	• Case study protocol • Audit trail
Confirmability	Objectivity or neutrality of the data. The focus is on the characteristics of the data (is it confirmable?) and not on the characteristics of the researcher (am I objective and unbiased?)	• Maintaining a chain of evidence (audit trail)

Sources: Polit, D.F., & Hungler, B.P., (1997). *Essentials of nursing research: Methods, appraisal and utilisation* (4th ed.); Yin, R.K., (1993). *Case Study Research: Design and Methods* (2nd ed.).

Ethical considerations

Ethical approval for my study was gained from the Auckland Ethics Committee on 31 July 2002 and Auckland University of Technology Ethics on 3 September 2002 (approval letters are attached in Appendix F).

The following major principles of beneficence, respect for human dignity, consent and justice (Polit & Hungler, 1997) guided my study.

Principle of beneficence

Freedom from harm

Participants in any research study should be protected from emotional, psychological and physical harm. The women in my study may have found it distressing discussing issues relating to their previous experience of preterm labour and birth. They were informed that counselling would be provided free of charge by Auckland University of Technology Health Counsellors should the need arise. The need for counselling did not arise. In fact the women found it therapeutic discussing their previous experiences with me.

Freedom from exploitation

A potential ethical dilemma arose for the women participating in my study. This is because four of the women were clients in my own acupuncture practice. The women were informed that they did not have to participate in my study, that their non-participation would not affect their treatment in any way and they could withdraw from my study at any stage. A withdrawal without jeopardy clause was included in my Consent Form (Appendix D).

Risk/benefit ratio

There were no specific benefits for the women in my study other than the satisfaction of knowing that the information they provided may help others in the future.

Principle of respect for human dignity

Right to self-determination

The women were informed of the voluntary nature of their involvement and that they had the right not to give information. They could at any time seek clarification as to the procedures and purpose of my study from either me or my supervisor whose name and contact details were included on the Information Sheet and Consent Form (Appendix D).

Information and informed consent

The women gave voluntary consent to take part in my study on the basis that they had been fully informed, had the power of free choice and clearly understood the information provided. Information and Consent Forms were posted to women and their LMCs. A time frame of two weeks was allowed for the women and LMCs to decide whether they wanted to take part in the study. If they had any queries about the study, they were given the opportunity to contact me or my supervisor to clarify any issues. None of the women or LMCs felt the need to seek clarification about my study. Data collection did not take place until the women had signed and returned the Consent Forms.

Issues relating to the principle of respect

As a researcher, I did not practise concealment or covert data collection or deception with regard to the nature of my study.

Principle of justice

Right to fair treatment

The women were fairly treated throughout and after my study. This was achieved by honouring any agreements entered into with the women, access for the women to professional services to support them if required (advocacy and counselling), treating the women with respect and remaining courteous and tactful at all times.

Confidentiality, right to privacy and use of results

The women were promised confidentiality of information and identity. Pseudonyms were used and cross-case analysis was done in my study to ensure the anonymity of the

participants. They were advised that any published material would use a pseudonym to prevent personal identification unless they specifically request otherwise.

Storage of data

Hard copies of data and audio tapes were locked in my clinic filing cabinet. The typist who transcribed the tapes signed a confidentiality agreement (Appendix G). Soft copies of interview transcripts were held on a non-networked, password-protected clinic computer. Any details that could identify any of the participants were either removed, or changed from all hard and soft copy records. Upon completion of my study, the hard copy data will be stored in a locked filing cabinet at AUT for ten years.

Treaty of Waitangi

The midwifery relationship is based on partnership (Pairman, 1999). I am a midwife and acupuncturist and hold an ideology which includes partnership, protection, participation and empowerment.

Adherence to the Health Research Council Guidelines was followed as there was one Maori woman included in my study (Health Research Council of New Zealand, 1998). Consultation was undertaken with Maria Rameka, Principal Lecturer – Nursing, Auckland University of Technology (AUT), with respect to my research proposal. Maria is a member of AUT Kawa whakaruruhau committee. A letter of support was obtained from Maria regarding cultural safety in relation to principles of The Treaty of Waitangi and guidance in relation to Maori clients (Appendix H). A copy of research results will be made available to Maria at the completion of my study.

Summary

This chapter describes the philosophical and methodological approach taken to this study. Qualitative research and traditional Chinese medicine share a common philosophy of holism. This philosophy underpins the research procedures of data collection and analysis used. The data collected from the women's narratives is analysed using content and thematic analysis. Trustworthiness and ethical considerations that guided this study are identified and described. The five women's narratives are presented in the next chapter.

CHAPTER FOUR

THE NARRATIVES

This chapter focuses on the five women's narratives. Their experiences of acupuncture, outcomes and satisfaction with acupuncture are discussed. The TCM patterns of disharmony for each woman and underlying constitutional and lifestyle factors contributing to these patterns are identified. Much of this data is presented in table form either in the body of this chapter or as appendices. This was done to avoid duplication of information as many of the patterns, treatment principles and acupuncture points used were the same for all five women.

The women's experiences are described using their own words. This is to enable the reader to draw their own conclusions about the themes that emerged from the narratives. The LMC's narratives are included to validate the women's narratives and improve the trustworthiness of my study. It is beyond the scope of this master's thesis to provide analysis on the LMC's narratives.

Sue

Introduction

Sue was 37 years old when she was pregnant with her second child. She and her husband are both health professionals. Their oldest child was two years old and was born early at 34 weeks. Sue's age, history of previous preterm birth and cervical cone biopsy were all risk factors for another preterm birth. For additional risk factors for preterm labour refer Tables 6 & 7, Chapter 5). Sue came for acupuncture in her second pregnancy, with nausea and vomiting in the first trimester. At 32 weeks she threatened to go into preterm labour again and was admitted to a base hospital for treatment. She was given acupuncture treatment in hospital over a period of two consecutive days and was subsequently discharged home.

Sue's story

Motivation for having acupuncture treatment

With our first child we had planned a home birth. It was a bit annoying because the labour was okay and apart from the baby being early, everything was pretty straight forward. So it was a bit sad that we weren't able to have him at home. For our second child we really wanted to be at home and for it to be a private experience and not to have the medicalisation.

The thought of having another child early was just terrible. The stress, not just on me but on my partner was huge. He found it extremely stressful. It was important to him, not to have our second child early, because we wondered how we were going to do all that feeding, all that going in and out of hospital, when you also have a toddler. One of the main strategies to avoid another preterm labour was to have acupuncture. We thought well what have we got to lose, let's go for it.

I wanted to have acupuncture treatment in early pregnancy to help maintain wellness, minimise any morning sickness and just to get all balanced up and get me on a good starting block. I believe you cannot split the body and the mind. The plan always had been that I would have acupuncture right through the pregnancy. We thought 26 weeks would be a critical time in the pregnancy and believed the acupuncture would help to keep my uterus quiet.

Experience of acupuncture treatment

When I am pregnant I worry and think about things a lot and I don't necessarily sleep as well. I would always wake up at about three or four o'clock and it would not necessarily be to go to the toilet. I would find it quite hard to go back to sleep. The acupuncturist did points that helped improve my sleep and stopped me worrying and thinking about things. It also helped with the nausea and the vomiting in the early stages, and the tiredness. She did some other ones that were for calming and they really made a difference. I found it really, really hard to rest, but I knew that if I didn't there was a possibility of having this baby early, so that made it easier to accept. I

also noticed with both pregnancies that I craved licorice badly and I really hogged into it.

Perception of difference to threatening preterm labour

I think the acupuncture definitely made a difference to the preterm labour. At around about 32 or 33 weeks I had a period where I threatened to go into labour again. That was around about the time that I had started to have similar experiences with my previous child. With this pregnancy I recognised the signs that labour was threatening a lot earlier than I had with my first child. It was almost not like labour contractions. It wasn't even that bad. It was a pulling down feeling, different to a period feeling, but it was a very heavy feeling from down below, like my cervix was definitely changing. I could almost feel that it was opening up and changing and that maybe the baby had dropped and engaged and descended quite a bit more.

My uterus was also definitely more irritable and tightening a lot more. The tightenings were not lasting for long periods but they were quite frequent. They were not necessarily painful; I would not have said it was painful, but it was different to how my uterus had been to that point in this pregnancy. So it was not like contractions are when you are in labour. Things started to happen in the morning, and I started to think oh god, it feels like my cervix is changing. So I waited for an hour or so and decided I would ring the midwife, even though I knew what she would ask me.

I would not be able to say, I am having contractions every three minutes, and I have had a show, and my waters have broken. She knew my previous history and that whatever I told her, she would have to take it quite seriously. So I rang the midwife and she actually came to our house and did an assessment. She definitely felt that things were changing with my cervix and rang the obstetrician. I had seen this obstetrician once in my pregnancy because of my previous history. The midwife rang him and I went into the hospital where they did a heart rate monitoring and they checked me out, did some blood checks, made sure I didn't have a urinary tract infection, and that was all clear.

I was having contractions, which showed up on the monitor, and the midwife did another assessment and my cervix had definitely changed. It was getting fully effaced and it was certainly getting ready for labour and the baby's head was well down. The contractions were quite frequent. They were about two or three every ten minutes. They were not that long, and when you looked at them on the monitor they were not that intense. I think because of what had happened before, and because obviously my cervix had started to change, they were taking it quite seriously. The obstetrician then came in to see me.

He and the midwife recommended that I have the steroids. Once the midwife told him what the VE was, he said he expected I would give birth within two days and that it was highly unlikely that I would go longer that the two days. This was a kind of a wake up call and we thought, oh well here we go again. That whole thing of oh gosh, we are on the same cycle again.

I rang the acupuncturist and she came into the hospital and did her thing, put in various needles. It was really good that the acupuncturist could come and do acupuncture on me in the hospital there and then. I think if I hadn't been seen so quickly, it would have made a big difference to what might have happened. Also for me as a person, I felt that the other health professionals saw that the acupuncture was important to me and that it was of use.

I felt different almost as soon as the acupuncturist put the needles in. She did the one on the top of my head, the one that would bring energy up. I remember saying to her that I could almost feel the baby being pulled up. One of the strongest perceptions that I had was that the baby was very low and I felt a lot of pressure in my lower pelvis, just pressure, no pain or anything. It was a really heavy pressure feeling and the acupuncture relieved it.

My uterus also settled down and relaxed, felt less tight and the cervical kind of feeling eased. You could feel the tightenings with your hand. They felt tight and irritable, and even rolling over and things like that would rev it up. The

acupuncture treatments also made me feel more relaxed and calm and I remember even falling asleep during some of them. I felt at least this time we were catching it early enough and that maybe we could stop it. I really believe that the acupuncture made a difference. When we got to the Monday everyone was shocked that we were still there. We thought, my god, if we can still be here today over that acute period, then maybe we could keep it at bay for longer. So we decided to go for it.

I think the midwife was surprised to a certain degree that I didn't have the baby when I was in hospital. But she certainly was not cynical about the acupuncture in any way. She had had experience with other patients who had had acupuncture, but I think she still expected me to have the baby early.

After I was discharged from hospital I had acupuncture 2 or 3 times a week. In between treatments it was almost like the baby would go down and down and down and the acupuncturist would stick the needle back in and the baby would go up again. Then one or two days later the baby would maybe be going a bit further down and dropping down a bit more, and then the acupuncturist would put the needle in and the baby would go up again. So, I don't know, but maybe that helped to keep the baby's head off my cervix and stopped it from dilating just from the pressure.

I remember thinking it seemed a hell of a long time from 33 weeks and 5 days to 37 weeks, particularly when the specialist said 90% I was going to have the baby within two days. It didn't seem possible that we could get that far. Our goal and our aim was to have this child at home, so we knew we had to get to 37 weeks.

Every time I came for acupuncture I got two more days. We had that goal of 37 weeks, and then each week we got another week. When we got to 35 and a half weeks, we were brave enough to think maybe we could get to 37 weeks. When we got to 36 and a half weeks, psychologically knowing that we were nearly there, I felt I was able to let go.

Outcomes and satisfaction with acupuncture

We got to 37 weeks and three days, so we just scraped in and that was fantastic. I rang my midwife and she came and did a VE. I was 5-6cm before the real labour even started. I was having a few odd niggles but nothing major. My labour was quick, and it was pretty good. The transition was pretty nasty; I really would not recommend that to anyone. I had ball bearings on plasters on points in my ears. I think they helped me keep it together. It wasn't necessarily painful that transition, but I really felt like I was getting mixed messages. It was really hard, wanting to push, then not wanting to push, and not being able to get comfortable. Pressing the ear points helped keep me focussed. I think that having the ear points in between the treatments as well was quite important from 33 weeks right up to when I was due. It was really useful to know that I could use the ear points in between my acupuncture needle treatments.

I definitely felt calmer in the days after the birth. I am sure that it was the fact that it had gone well, and that our baby was born at home. It had been everything we had hoped it would be. Our baby was healthy; I felt calm and didn't have the blues. With the first birth my emotions were right up and then right down. The cost of the acupuncture treatment was irrelevant. To prevent another preterm labour and birth you cannot really measure the cost. It wasn't just financial it was a whole lot of things. It was really great to be together after the birth.

If I had another baby, I would absolutely have acupuncture again. I probably would come from about 26 weeks and come every two weeks because I am sure things happen before any of the niggles or the signs appear. I am sure that things were happening to my cervix earlier than that. I know that. I just know that.

After I had my second baby, the midwife rang the obstetrician to let him know I had got to 37 + 3 weeks, and he was really stunned, just gobsmacked. Yes he was really stunned that we had got that far, really pleased, but quite shocked. I also spoke to him and said it was because of the acupuncture.

I know the acupuncture made a difference. You don't need to be doing the research. I am sure had I not been able to have the acupuncture at 33 weeks when I was having that irritable uterus I would have had the baby earlier.

Experience of acupuncture treatment

Sue was admitted to a base hospital for threatened preterm labour on the Friday. She was told by the obstetrician that she had a 90% chance of having her baby within the next two days. Two acupuncture treatments and three days later, Sue was still pregnant.

Sue described the reactions of "shock" and amazement of the people involved. She herself was surprised, as this experience was different to how it was last time when her labour progressed to her baby being born early. There was a glimmer of hope on the horizon, maybe, just maybe, the labour could be "kept at bay". Sue and her husband made a decision for Sue to continue with the acupuncture treatment that she had in the acute stage of her preterm labour in hospital. They decided to "go for it" as there was nothing to lose and much to gain.

Rosa, Sue's midwife confirmed what Sue had said regarding the cervical changes and the obstetrician's comments regarding the imminent birth.

"Sue was 32 weeks & called me with query prem labour. I sent her to hospital and we did a CTG. She was contracting 3 in 10 and the CTG confirmed the contractions. A VE confirmed cervical changes, her cervix was 80% effaced, 1.5cm dilated, and gave a Bishop score of 7. The obstetrician said that he thought Sue would have the baby in the next 48 hours. There was no way with contractions and a cervix like that, she would get more than 48 hours".

Rosa painted a picture of impending birth. The process of labour appeared to have begun. All the usual measures seemed to tell us this was so. The obstetrician had even put a time limit on the birth day. However, Sue was still pregnant 3 days later.

After Sue's discharge from hospital, she started having acupuncture three times a week. She perceived a difference, a change from before, during and after her acupuncture treatment. She spoke of her uterus as "settling" and relaxing. This description suggests a quietening, a calming that was also reflected in Sue's body. She relaxed and slept. From a TCM perspective her body, mind and emotions were in harmony. This perception of difference started to give Sue the confidence to believe that perhaps this time her labour could be "caught" early enough and stopped.

Sue described a pulling up sensation during the acupuncture treatment. The effects of the treatment seemed to be immediate. She felt that her baby was actually being pulled up. There was a sense by Sue that her baby may have been responsible for the pelvic pressure she was feeling. Sue made a distinction between the pressure and any feelings of pain. There was no pain, only "heavy pressure". This again is a distinctive pattern of disharmony in TCM.

Sue also noticed that her general health and wellbeing improved. The quality and quantity of her sleep improved. She had increased energy and felt emotionally calmer. She even relaxed and slept during some of her acupuncture treatments. Her backache and sensation of cold lessened. The improvement in Sue's general health and wellbeing and the disappearance of the signs and symptoms commonly associated with preterm labour (backache, irritable uterus, early descent of the presenting part), all pointed towards a rebalancing of her patterns of disharmony. Refer to Table 11 in Chapter five – Perception of improvement in health and wellbeing after acupuncture treatment.

Outcomes and satisfaction with acupuncture

Sue achieved a full term pregnancy. She got the birth she wanted and was totally satisfied with her acupuncture experience. Sue is still having acupuncture today for healthcare prevention and promotion. Her baby breastfed well and was calm and settled. This was a contrast to her previous child. Refer Table 12 in Chapter five re outcomes and satisfaction with acupuncture.

Traditional Chinese medicine

TCM patterns of disharmony - Sue

Pattern	Menstrual & obstetric history	Presenting signs & symptoms	Tongue	Pulse
Kidney yang xu	Menarche 13 yrs Regular periods 3/28 No breast tenderness, loose bowels at start of period, craves sugar and moody before onset. G2 P1	History talipes at birth (OT) Backache - intermittent achy Frequent urination Internal cold Cold hands, feet & kidneys Thirstless Panic, fear & fright	Pink body	Slow Kidney yang ↓ Kidney yin ↓
Spleen qi xu with Damp		Exhaustion & fatigue Insomnia, wakes 3-4am, processing & thinking. Loss of appetite Cravings for sweets Worries ++ Heaviness & dragging down sensation. Early descent of presenting part. Foggy in head	Scalloped edges, greasy coating over middle jiao	Spleen slippery
Liver Invading Spleen		Premenstrual syndrome Irritability and frustration 1/52 ac before periods 7/40 - nausea, belching, phlegm and saliva in mouth. 28/40 - reflux 30/40 – baby	Red edges	Liver wiry

Diagnosis

- Kidney yang xu
- Spleen deficiency with Damp
- Liver invading Spleen

Treatment principle

- Warm and reinforce Kidney yang
- Strengthen the Stomach and Spleen and disperse Damp
- Soothe the Liver and regulate qi

Treatment plan

Acupuncture and moxibustion: appropriate points used based on the treatment principles and individual patterns of disharmony for Sue can be found in Appendix I. For actions and indications for use for each point, refer to Appendix J.

Frequency of acupuncture treatment

Sue had ten treatments in the first trimester related to nausea and vomiting. She had acupuncture three times a week after her hospital admission for threatened preterm labour at 34 weeks, until she had her baby at 37+3/40 (refer Table 10, Chapter 5).

TCM Analysis

All five women had many patterns of disharmony in common. To avoid duplication of information the aetiology and possible contributing constitutional and lifestyle causative factors are discussed in depth in Appendix K and L. Sue's specific patterns of disharmony and aggravating constitutional and lifestyle factors will be briefly discussed here (refer Additional features of patterns of disharmony table below).

Sue had an underlying constitutional Kidney deficiency already present. She was born with talipes which in TCM is related to the Kidney. She had a history of working irregular hours and shift work. This work also involved heavy lifting and standing for long hours. These factors will all further deplete Sue's Kidney qi. She is a self confessed "worrier" and has spent many years studying. She also has a pattern of eating irregular meals and "eats on the run". These lifestyle factors will have an effect on Sue's Spleen qi and therefore the Spleen's role of transforming and transporting will be less effective which will affect Sue's post-natal qi. She will draw on her constitutional Kidney qi (Jing) which will further deplete her Kidney. Fear is emotion associated with the Kidney in TCM. Kidney qi will be depleted if this emotion is experienced over a long period of time, or to an extreme degree. In her second pregnancy Sue was very worried, anxious, stressed and fearful she would

have another preterm baby. Sue described this stress as "huge". Sue lived a busy and stressful life. She is a high achiever who had one child, worked, studied and always set high standards for herself. These extreme emotions will have an effect on Sue's Liver qi. The Liver qi is easily disrupted by emotional factors such as repressed emotions, frustration and anger. The Liver is responsible for the smooth flow of qi in all the channels and if this flow is disrupted an imbalance in the other channels will also occur.

The sensations of pulling down, aching, heaviness and the early descent of the baby into the pelvis that Sue described can be attributed to Spleen qi deficiency with Damp in Chinese medicine. This pattern will be aggravated by consumption of Damp natured foods like dairy and rich foods. Antibiotics are also Damp in nature and Sue has had antibiotics in the past. The backache and irritable uterus Sue experienced are signs of Kidney qi deficiency. Refer to the table below for additional aggravating factors and other features for Sue's patterns of disharmony.

Additional features of patterns of disharmony - Sue

Pattern	Aggravated by	Relieved by	Other features	Disposition of woman	Pulse & tongue
Kidney yang deficiency	Fatigue Overwork Standing for long periods Heavy lifting	Avoidance of aggravating factors Balance between work & rest	Lower backache Cold to touch Aversion to cold Cold limbs	Intolerant of cold	Tongue body – pink Pulses slow, deep & fine Both kidney pulses ↓
Spleen qi deficiency with Damp	Consumption of damp-natured substances like dairy, sugar, greasy or rich food, Antibiotics, worry	Simple bland diet Avoidance of aggravating factors Relaxation	Exhaustion & fatigue Foggy head Heaviness & dragging down sensation	Sleepy & tired	Tongue – scalloped edges, greasy white coating over middle jiao Pulse - Spleen slippery
Liver invading Spleen	Emotional upset, eating while upset	Relaxation & following exercise	Labile mood General muscle tension Alternating bowel habits Irritability & frustration	Age 37 Tense, more common in females aged 20-50	Tongue body – normal with red edges Pulse – wiry

			1/52 before periods Nausea, belching 7/40		

Table adapted from: Differential Diagnosis Tables in Clinical Handbook of Internal Medicine, Vol 2, Stomach & Spleen, Maclean W. & Lyttleton J., University of Western Sydney, 2003.

Rosa, Sue's LMC's narrative

Sue called me with query prem labour. I sent Sue to hospital and we did a CTG. She was contracting 3 in 10 and the CTG confirmed the contractions. A VE confirmed cervical changes, her cervix was 80% effaced, 1.5cm dilated, and gave a Bishop score of 7. After a discussion with Sue and the obstetrician a dose of steroids was given. The obstetrician said that Sue would have the baby in the next 48 hours. There was no way with contractions like that and a cervix like that, she would get more than 48 hours. I know that Sue had a great deal of confidence in the acupuncture and in the acupuncturist to make a difference. If anything was going to make a difference it would be the acupuncture.

With the acupuncture, there is this point on the top of your head that pulls things up. Sue said that the acupuncturist had said to her, we are going to pull the energy up so that you can hold your baby in. So that was a metaphor that she held on to. I think the word 'hold' is a really useful one in midwifery, because it is about the mother holding the baby in her body. There is certainly in labour, a sense of holding the environment, holding the birth but it is also empowering the woman to believe that she has a huge ability to make a difference. If you believe that you can just let it all go, then that does not give you the intentionality to believe that you can make a difference.

With my limited understanding of acupuncture, when you are pregnant it seems appropriate to be in a very yin state, inward and focussed. So encouraging rest and quiet is allowing the woman to be quite yin, inward and focussed on herself and her baby rather than being out there in the bigger world. Conversely when you are in labour you need to be in a yang state.

Sue is a woman who moves at speed and is quite a yang personality. She is someone who was always busy in her behaviour, so resting to try and keep the baby in, was a tension and a huge challenge for her. I think it was very difficult for her to be a yin personality. The acupuncture made her more relaxed and this helped. I had such confidence in acupuncture after Sue was discharged from hospital. By this point I knew we could do it, yes absolutely. Sue got another 5 weeks from that date. It was fantastic wasn't it?

I would recommend acupuncture to other woman for preterm labour and I would get them to have acupuncture from quite early on in their pregnancies. I think they should have acupuncture when they are in their second trimester rather than waiting for the third trimester. If they are women who have had babies around the early 30 weeks, the acupuncture would give them a focus and recognition that they need to do things in this pregnancy differently.

Yes I would continue to refer women with a history of preterm labour for acupuncture with confidence. I think it is important to have real confidence in the acupuncture. I would also refer women for acupuncture for conditions such as morning sickness, nausea, insomnia, backache, bowel motions, breeches and posterior position, that whole end of trimester stuff. These women are often really exhausted and there is a sense, not in Chinese terms, but my sense that they are really deficient and under-resourced for labour. I think acupuncture works well for those women.

Levi

Introduction

Levi was 35 years old and 32 weeks pregnant when she first had acupuncture. In 14 years she had been pregnant 11 times. Her 20 year old special-needs brother lives with Levi, her husband, who is self-employed, and their seven children in their three-bedroom rented house.

Levi began her latest pregnancy with a large number of risk factors. She worked very hard caring for her seven children and disabled brother with very little rest and limited financial resources. She had a short inter-pregnancy interval between her seven children and three miscarriages. For additional risk factors see Tables 6 & 7 in Chapter five.

In her previous pregnancy Levi had first trimester bleeding and subsequently gave birth at 34 weeks by caesarean section. In this last pregnancy she was referred for acupuncture by her midwife, with a history of first trimester bleeding, backache, uterine tightenings and general fatigue. At 35 weeks the baby had descended early in the pelvis (D2), which can be a sign that labour is threatening in a multigravid woman.

Levi's story

History of previous preterm experience/motivation for having acupuncture

My previous baby was six weeks premature and I didn't want this baby to come early. I have seven children, and I am a permanent caregiver for my 20-year old brother who is a special-needs child and has to go to a special school. I was seeing my midwife and she felt that it would be beneficial for me to have acupuncture. I wanted to try it as I knew I had to do something else to help. I didn't really know about any other treatments and the acupuncture seemed like a good idea.

Experience of acupuncture treatment

One of the main things I noticed was that my energy level was at a point where I could cope with carrying the baby more. I noticed this straight away after my first acupuncture treatment. This was a change from before. I was quite energetic but nowhere near as energetic as when I was having the acupuncture. I also felt so much more alert and happy and my awareness of myself was different. My nausea was also reduced.

This lasted for the whole week until I could see the acupuncturist again. The acupuncture put me on a really good level to cope with everything. It just seemed to make life a lot easier for me and everything seemed to be less stressful. I felt more positive and a lot more relaxed and had more energy to do

things. I would carry the energy with me until I came and saw the acupuncturist again. It was just amazing. Yes, even though I had a lot of commitments, things seemed to flow a whole lot better.

Before I had the acupuncture I would wake up probably four or five times a night. After having the acupuncture I could sleep a full six hours without waking up. I never used to be able to do that. The acupuncture also helped me stay well. I was just so well throughout this pregnancy. With my prior pregnancy I was always unwell and not really focussed, and felt stressed. This time everything was really positive for me.

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I remembered being so glad I was going to see the acupuncturist again the next day because it was as if I was coming down from how I was feeling. It would kind of wear off. I guess that is how you could explain it. But it was usually only on the last day, the day before I would go for a treatment. After I had my treatment it would put me back to a level where I was really happy again.

I believed I would have had the baby earlier if I hadn't done something to help myself with trying to carry the baby to full term. It was always on my mind that I didn't want to have this baby early. I wanted this baby to come naturally and not be early. After the first acupuncture treatment I was much more confident that I wouldn't have the baby early. I felt the acupuncture had been of benefit to me and I gained more confidence after each treatment.

Perception of difference to threatening preterm labour

Before I had the acupuncture, my tightenings would always stay, just like my back pain. When I had my back pain it would linger around. Every time I was pregnant I had constant problems with my back. This time I never complained about my back, it would just go away. It would not stay long enough for me to think, oh, I have got something to worry about.

I noticed when I had acupuncture that my tightenings didn't last for as long. Previously they just came and went, came and went. So this time I was kind of

waiting for them, but they didn't come back as much as they usually did. I was surprised and felt it had a lot to do with the acupuncture. At about 35 weeks my midwife told me that my baby was at D2 but I didn't feel too much difference. I hadn't really noticed.

Partner's perception of difference

Before my next acupuncture treatment I felt agitated, like I couldn't wait to go. My husband often teased me and would say 'aren't you feeling too good'? I said I was feeling on top of the world, but I would feel even more on top of the world after my treatment. My husband was really helpful even though he was working fulltime. He always made sure that he would take time out when he knew I had an appointment. He needed to look after the children so I could have a relaxing acupuncture treatment.

We were so positive that it had really helped me. He was very impressed with how I was when I came home and noticed that my energy levels were much higher. I said to him, you won't believe it I have just had the most awesome treatment. He said yes it looks like it. Gosh you are glowing and looking really really well. I felt different and had all this energy that I didn't have earlier in the morning. My husband felt the acupuncture was doing me a lot of good and that it was amazing. He asked what the acupuncturist did to me and said I should keep going for treatment. I looked forward to going every week and I thought yes I intend to keep going.

I felt strong after the treatment. Not having had acupuncture before and then knowing what the treatment did for me was wonderful. It was really something very nice and peaceful and good that I had taken away from there. It was financially quite hard for us, my husband had to work a lot harder and I had to sell my arts and crafts. I made some extra money that way. We went out of our way to make sure that I could have the acupuncture every week. I felt really confident that the acupuncture was working for me and that I was going to go to the end.

Outcomes and satisfaction with acupuncture treatment

At 42 weeks, I went into labour. I went to the hospital, and it was just a matter of hours, and the baby came. It was just so amazing because I had a nice, healthy, ten pound baby. He was the hardest baby to push out, but the best birth experience even though he was bigger. That birth was one of my better experiences. I felt more relaxed, and not frightened, like I was in previous pregnancies and especially with my last baby. I had a lot of fear the whole time, and was thinking the worst, but this time it was the opposite.

Having the acupuncture left something in me and with me, that I felt I could carry with me even till now. When I think about the acupuncture treatment it gives me good thoughts in my head. I learned it is not only good for when you are having a baby but is also good for other things as well, because the points focus on the whole body. I am glad that I had the acupuncture. I do want to have acupuncture again, and it probably won't be for a pregnancy, but it will be for me. Yes, I would definitely have acupuncture again.

Experience of acupuncture

Levi experienced immediate benefits from her acupuncture treatments. Acupuncture enabled Levi to live her life. She found that because she had more energy and felt more relaxed and less stressed, her life seemed to flow more smoothly. She felt that her load had been lightened and she could be more focused and positive.

Levi felt that she had a more heightened awareness of herself as a person. She described physical, mental and emotional changes to her body and painted a picture of calmness and serenity that wasn't there before the acupuncture treatment. She compared how she felt prior to having had acupuncture and how she felt subsequently. Acupuncture appeared to give Levi energy over and above what she needed to cope with living her life. Refer Table 11 in Chapter 5.

Levi described a feeling of anticipation the day before her next treatment. She felt that the effects of the acupuncture would not be sustained for the whole week. She described a "coming down" feeling after a period of six days from the previous acupuncture treatment.

The other women in my research also described this feeling to varying degrees. There seems to be for each woman, a period of time that is experienced in subjective signs and symptoms when the acupuncture no longer seems to be working or holding things at bay. This will be discussed further in the next chapter.

Levi experienced a change in the pattern of her uterine tightenings and her nagging backache. She perceived a difference, a difference that made her feel more relaxed. This difference increased her confidence in her body's ability to "hold on" to her baby and "hold off" her labour. She described a constant and predictable rhythmic pattern to her tightenings, like waves breaking on the sea shore.

Weekly acupuncture became a priority in Levi's life. It was highly valued by both Levi and her husband. They were totally and utterly convinced of the benefits. They made financial sacrifices and Levi's husband always made time to care for their children. Levi never missed one of her weekly acupuncture treatments. She did however; miss a couple of her midwifery appointments when her husband wasn't available to take care of the children.

Levi noticed that her life just seemed "to flow". She described both physical and emotional changes that she believed were related to the acupuncture. She spoke of being on a "really good level" to cope with her very busy life. This seemed to be related to an increase in energy that Levi felt she was getting from the acupuncture treatment. Levi also experienced improved sleep and less backache and nocturia.

Outcomes and satisfaction with acupuncture

Levi got to full-term and had her baby at 41 weeks. She had a vaginal birth after a caesarean section (VBAC). She got the outcome she was very committed to achieving, a full-term vaginal birth. However, it would seem from Levi's narrative that she got more than just this. Levi described an absence of fear which was a constant presence in her previous pregnancies. The acupuncture seemed to have had a lasting effect on the way Levi felt about herself and the way she lived her life. She spoke of "carrying" this sensation with her and of being able to recall it when she thought about her previous acupuncture treatment. See Table 12 in Chapter 5 re outcomes and satisfaction with acupuncture.

Traditional Chinese medicine

TCM patterns of disharmony – Levi

Pattern	Menstrual & obstetric history	Presenting signs & symptoms	Tongue	Pulse
Kidney qi xu	Menarche 14 yrs Cycle regular 6-7/28 Bright blood, no clots, pain, breast tenderness or bowel changes First trimester bleeding in last 2 pregnancies Early descent of presenting part at 35/40 Irritable uterus ++ 31/40	Backache-dull, achy, worse when tired. Frequent urination G10 P7 2 miscarriages. Fear & shock associated with previous birth experience and preterm baby. Babies close together in age Insufficient sleep and rest due to family commitments	Body – pale Coating – thin, white	Slow Kidney yang ↓ Kidney yin ↓
Spleen qi xu	-	Tiredness & low energy Loss of appetite Cravings for licorice, spicy foods and seafood Worry Not focussed and not feeling alert	Pale tongue body	Deep fine pulse
Liver qi stagnation	-	Irritability and agitation Labile mood ↑ ↓ Insomnia (wakes 5-6 times a night)	Edges - red	Wiry liver pulse

Diagnosis

- Kidney qi deficiency
- Spleen qi deficiency
- Liver qi stagnation

Treatment principle

- Support and strengthen the lower back
- Tonify the Kidneys
- Tonify Spleen and Blood

- Soothe Liver qi
- Calm the Shen

Treatment plan

Acupuncture and moxibustion: appropriate points used based on the treatment principles and individual patterns of disharmony for Levi can be found in Appendix I). For actions and indications for use for each point, refer to Appendix J).

Frequency of acupuncture treatment

Levi had acupuncture once a week from 32 weeks. She was referred by her midwife because she was contracting and had an irritable uterus. Levi required two further treatments for induction of labour at 41 weeks (refer Table 10).

TCM Analysis

In 14 years Levi had been pregnant 11 times. She had had two previous miscarriages and a previous preterm birth with short interpregnancy intervals. Miscarriage is seen in TCM as more emotionally and physically draining on the body than a pregnancy (Maciocia, 1998). Levi's Kidney qi would be progressively depleted with each successive pregnancy, miscarriage and birth. Levi noticed that her back pain was always worse when she was pregnant. This was because Kidney qi and Jing is needed to nourish the fetus. Therefore pregnancy would compound an already depleted Kidney qi. Her LMC commented in her narrative that Levi's risk for threatened preterm labour was getting worse with each successive pregnancy. Significant fear and dread in Chinese medicine also depletes kidney qi and Levi talked about this last birth as being an experience where she was much less fearful. The acupuncture treatment was increasing Levi's Kidney qi and moving her stagnant Liver qi.

Levi lived a busy and stressful life. She had seven children and cared for her disabled brother. They lived in cramped conditions and she had little time for and to herself. In a situation such as this Levi would certainly have Liver qi stagnation. Levi experienced immediate relief from acupuncture. She noticed that her energy levels went up and that she felt calmer and more in control. What was in fact happening from a TCM perspective was that the acupuncture treatments were unblocking Levi's stagnate Liver qi and enabling the

qi to flow. Levi perceived this unblocking and moving of qi as increased energy to live her life. The change in energy levels and a reduction in her nausea levels are all related to smoother flow of Liver qi. Levi also ate large quantities of licorice. Cravings for licorice may indicate adrenal exhaustion as licorice has a natural cortisol that would be required in times of stress (Priest, 2004). Refer to the table below for additional aggravating factors and other features for Levi's patterns of disharmony.

Additional features of patterns of disharmony - Levi

Pattern	Aggravated by	Relieved by	Other features	Disposition of woman	Pulse & tongue
Kidney qi deficiency	Excessive physical work, heavy lifting, prolonged standing, fear associated with first trimester bleeding, irritable uterus at 31/40++, eleven pregnancies, short inter-pregnancy intervals	Rest Inter-pregnancy intervals > 2 years & avoidance of aggravating factors	Backache – dull, achy, better for pressure & rest Urinary frequency	-	Tongue – pale body Coating – thin white Pulses – fine & deep Both kidney positions ↓
Spleen qi deficiency	Spicy foods Cold or raw foods Previous use of antibiotics Eating on the run Worry	Bland, light, well cooked meals Small meals	Fatigue & energy ↓ Loss of appetite Not focussed or feeling alert Insomnia	Tired	See above
Liver qi stagnation	Emotional upset Stress	Contentment Relaxation & following exercise	Irritability & agitation Labile mood ↑↓	Age – 35 Tense, more common in females aged 20-50	Tongue – edges red Liver pulse wiry

Table adapted from: Differential Diagnosis Tables in Clinical Handbook of Internal Medicine, Vol 2, Stomach & Spleen, Maclean W. & Lyttleton J., University of Western Sydney, 2003.

Barb, Levi's LMC's narrative

Levi had a history of previous preterm labour and caesarean section. She found it really stressful worrying about having another prem baby. I looked after her with the prem baby as well, he was the seventh one. He was a 34 weeker, and it was hard for her. When she had the Caesar, Levi felt it was a real abuse to her body. I remember her being very anxious about it afterwards. She always wanted me to look at it and she just hated that she had been cut.

She lived in a really, really small three bedroom house with her husband, the six kids and the prem baby. This meant that she organised all the kids into two small rooms. The tiniest room that was left she used for herself, her husband and the prem baby. You could literally only get in and out of the room. She had this tiny baby that she was trying to have in a healthy environment. Levi was incredibly hard working, she didn't seem to have much money, and everything went to the children. She also didn't seem to have much sleep. She worked late into the night, everything was always spotless. It looked like it was difficult for her to make time for herself, and that was one of the things that I hoped could change through her having acupuncture.

In this pregnancy she had bleeding early on, at about 10 or 11 weeks. Then she started having cramping fairly regularly. It looked like she was going to follow the same pattern as the one that she had had with the prem baby. She didn't have bleeding with her earlier children, so it looked as if those risks were increasing with each pregnancy. She had an early consultant referral because she was bleeding and stressed out about getting another caesarean. I went with her to see the obstetrician because I wanted to hear what he had to say, and I wanted to support her. He said that she was not required to have an elective section, and that he would encourage her to have a vaginal birth. He said that most women with a J-shaped scar are perfectly fine, and that was actually contrary to what the other consultants were saying.

I talk with all my clients about what they use in their healthcare practices. I want to get to know them in that way and would talk about complementary therapies as an option. I

want to be aware of the sort of choices they would make. Sometimes I think they use things for the first time when they are pregnant. Often it has never ever really occurred to them that complementary therapies could help, and maybe because they are pregnant they want to do things naturally.

I had experience with having acupuncture myself and had discussions with the acupuncturist about the idea of using acupuncture for preventing preterm births. I thought that the acupuncture would give Levi a really good chance of not delivering early. It really felt like she had a huge risk of having another preterm labour, not just because of her history but because of her stressful life.

When I saw her at 35 weeks and 2 days, the baby was D2. I remember that we talked about how low the baby was and that this could be an indication that she was not going to go to term. It was just wait and see. I definitely had it in my mind that she could go into labour at anytime. She wasn't someone that I could put off for another month before I really thought about her again. I know the acupuncture was really important to her, from the feedback that she gave me. She felt that it really helped her. She said she felt more relaxed and much more confident about not going into early labour.

I know Levi was really, really pleased with the acupuncture. She wouldn't have kept going once a week if she hadn't felt it was helpful. She had quite a bit to arrange to get there and money was difficult. She didn't even see me weekly. She would sometimes phone and say she couldn't come. I was really surprised that she ended up going to 41 weeks. We ended up waiting for her labour.

I would definitely refer other women for acupuncture if they were at risk of going into preterm labour. The acupuncture really made a difference to Levi. I would refer them if, like Levi, they had had bleeding and cramps, but I would also think about referral if they were just anxious. They might not have any physical signs of another preterm labour but they could be very anxious about going into labour early again. I think the anxiety could contribute as well. I believe in acupuncture myself and I think it is worth doing anything holistic that can help women not to have prem babies.

Jenny

Introduction

Jenny was 30 years old when she first had a full-term pregnancy. She is a health professional, married to a part time university lecturer. Together they own and manage several businesses. Jenny's previous obstetric history put her in a high-risk category for preterm labour and birth. She had had a previous miscarriage at nine weeks, a preterm birth at 34 weeks and two neo-natal deaths at 26 and 24 weeks. (Refer risk factor Tables 6 & 7 in Chapter 5).

Prior to Jenny's fifth pregnancy she moved from another large city in New Zealand to Auckland. There had been a difference of opinion between Jenny and her previous obstetrician about whether she had had an incompetent cervix. Jenny felt that it was in her best interest to have a cervical suture inserted to prevent further second-trimester abortions. The obstetrician believed Jenny's neo-natal deaths were not attributed to cervical incompetence.

Jenny's story

Motivation for having acupuncture treatment

> *I had a miscarriage and a D&C a year before I became pregnant with my first child, Nina. I felt this altered some things in my body, because I had bled for longer than I should have, but didn't think to get any help till later. I didn't have any problems during my pregnancy but she was born six weeks early, was about five and a half pounds and was in the neonatal unit for ten days and was very jaundiced. She needed oxygen to start with.*
>
> *When Nina was three, we tried to get pregnant again and couldn't. I don't think I was particularly fertile after I had her. Five years after she was born I had a little boy born at 26 weeks. I went into preterm labour and he was lost. Then a couple of months later I got pregnant again. I went into spontaneous labour and had a baby girl, born at 24 weeks. The obstetrician did an internal which I was so dead against as I felt I would go into labour if he did. He didn't listen. I basically went into labour at that point and she was lost.*

This obstetrician could find nothing wrong with me. He thought that I might have had problems with my placenta. He didn't think I had an incompetent cervix. I had lots of investigations including a hysteroscopy, and blood tests and they couldn't find anything. They came up with nothing. I was actually quite angry because I had an English midwife who worked at the high risk clinic. She said to the obstetrician that I needed stitching. She confronted him a couple of times and we went to him to see if he would agree to put a stitch in my cervix. He said no, that there was no indication for a stitch.

He said I could go away on holiday and could do anything I liked. We went away for a couple of days, and I went into labour after he did the VE. I vomited and was seasick on the boat, and that put me into full labour. At home, I knew that even standing in the kitchen, and preparing to go away on holiday, would put me into labour. Also if I walked a lot in the day or if I was tired at the end of the day I would have contractions very early on. Having contractions would depend on what I did and how well I was. If I had a cold it would bring on the contractions. If I was upset I would have contractions.

We moved from Wellington to Auckland and I went to a high risk clinic after the two babies I lost. The specialist in Auckland had a different view from the obstetrician in Wellington. He thought I had an incompetent cervix and needed a stitch. He was the specialist for the last three children and didn't have any qualms with the acupuncture as long as I was happy with it.

Experience of acupuncture treatment

I was probably like most people, and had to have something happen to me before I looked for alternatives. I decided after the two babies I lost, I obviously needed to address something. I hadn't found a huge amount of preventative care in the western health model at that point. I was more open minded and felt I needed to go somewhere else to get help. After looking at several options, I decided acupuncture was the one that could help me the most. I then went for acupuncture and found it very good. I went about four or five times before I

became pregnant with Johnny. I went to the acupuncturist every week right throughout my pregnancy.

This time I had acupuncture to be well in my pregnancy, to get me through the labour and to recover more quickly. I had acupuncture and herbs every week and that was very successful. I also gave up work after the third pregnancy and the two babies I lost. I worked in mostly toxic environments, gas environments, and a lot of it was anaesthetic work. I worked fulltime and did shift work.

I am an on-the-go sort of person. I clear the bench before anyone can have a drink of water. I fly from here to there all the time. Before I conceived the children I was always on the run and never sat down to eat and be quite happy not to eat until 4 o'clock in the afternoon. I would perhaps have an apple for breakfast, and not eat again until the evening. I sometimes felt I needed a quick sugar burst and had cravings for pizza and chocolate. I just kept going. I felt pressure in my work too. I would never take a lunch break, and it was only a half hour lunch break. I would sit there and study with my books, so it was part of what I was.

When I was unwell I was exhausted, absolutely exhausted. I would wake up at ten o'clock in the morning and feel like I could go back to sleep. I had constant colds, sore throats and a cough that I couldn't get rid of. I was basically quite run down and often I didn't feel like eating. The acupuncturist said that my stomach and spleen qi were very low. There was a kidney yin and also a kidney yang deficiency as I was also always really cold. I think we both tracked it back to a childhood UTI which was never picked up and sorted out. Maybe not eating very well, very run down from night shifts and just my lifestyle. She said there was also some liver involvement.

Perception of difference to general wellbeing

I absolutely believe that acupuncture made a difference in lots of ways, both pre-conceptually and during the pregnancy. I would look forward to my

acupuncture treatments because my general wellbeing improved and I had a lot more energy. I had less frequent colds, sore throats and my chest was clearer. My premenstrual tension was less, I felt less irritable and quite happy to sit down when I could. Before the acupuncture I found it exceptionally hard to just sit around. I had to be cleaning a ceiling, or something, or out working. Having acupuncture put my mind at ease and that helped a lot. My periods became regular every month. I had never had monthly period, they had always been two-monthly. I was not so irrational at home or irritated at silly little things. The acupuncture made life easier, smoother and happier.

When I was pregnant and having acupuncture I was a lot warmer. Always being cold was a big thing. I had cold hands and feet and felt very cold inside and around my kidneys. I would wear three jumpers, which was particularly overboard. I also had a problem with my back which ached a lot. That was actually better, and my back and kidneys definitely felt warmer. I think my kidney function was generally better. I went to the toilet less often and a good amount, which was different for me. I also had fluid retention and was puffy around my ankles. This improved and my bones didn't ache so much, especially my arms. I wasn't nauseous at all and felt a lot clearer in the head. My vision was a little bit better, which was interesting. Mentally, emotionally and physically I felt better and I knew I would get through this.

Perception of difference to threatening preterm labour

I would panic when I felt contractions and thought I could go into labour anytime. Not exactly panic, but I would worry like anything every time my stomach tightened up. When I had the acupuncture my uterus wasn't as firm, like a contraction firm. It felt more relaxed, higher and more comfortable. The tightenings and contractions basically disappeared and would generally work up to the next visit in 7 or 10 days.

The acupuncture made a difference bodily-wise by lifting up the uterus. It felt like things were pulling or lifting up, not externally, more internally. When I was pregnant with Johnny, I felt a dragging down sensation, as though my

uterus was low, like it was on my legs. When I had a cold and my uterus was low, I felt heavier and heavier. My legs particularly would feel very heavy. With the acupuncture my stomach felt higher, I felt as though I was not carrying on my legs. I also felt the heaviness in my hips. I could feel my perineum and I would have to actually lie on the couch and put my legs up to feel any different. I would dive off to the acupuncturist and I would have my little lifting up needle in my head. I had this needle every week. I felt my whole stomach lift up, the relief on the bottom layers. My stomach would usually relax, so my uterus could be higher. My stomach turned in and up rather than hanging out and over. I got very very in tune to feeling it being low. I would say to the acupuncturist, I have got to come back again. It is now ten days and I have got to pop back in for another treatment.

Even resting didn't have the same effect. I would put my feet up as much as I could, but as soon as I stood up my uterus would be down again. I knew I needed the needle in my head and the kidney points in my legs. I had ongoing appointments and monitored them myself. I knew exactly how much my uterus would go down and would pop off for treatment again. I went weekly for ages, then two-weekly for a while when we thought that things were settled, and then back to weekly at the end of my pregnancy.

Partner's perception of difference

My husband had given up hope of having another baby. He was very upset about a few things that had previously happened in the hospital in Wellington. He had always been open to alternative medicine and thought there must be something that could be of help. He didn't think anyone or anything in the Western model could help us.

He absolutely loved the acupuncturist, thought she was great for me and great for what we were trying to achieve. He was surprised the acupuncture made such a difference. He noticed the look of me was better, simple things like more colour in my cheeks. He noticed I was different while I was having the

acupuncture treatment but he was afraid to be too confident. He believed it was the acupuncturist and the acupuncture that made the difference.

Outcomes and satisfaction with acupuncture

I went to full term with Johnny. I had a lot less tightenings and contractions while I was having the acupuncture until he was ready to come. That was different to my previous pregnancies. Johnny was great and was a very settled, good baby. He slept well. Nina never slept and was very irritable with food. She had allergic reactions to things she ate then get a rash. Johnny had none of that. He was the healthiest baby and was the one I had weekly acupuncture with.

I am still having acupuncture and Chinese herbs now. I went back when I finished breastfeeding, have been back for about a year and know it has made a big difference to me.

Experience of acupuncture treatment

Jenny found acupuncture improved many of her signs and symptoms of threatening preterm labour and noticed a great improvement in her general health and wellbeing. Jenny's lifestyle was one of always being on the go. She described herself as someone that never ate before 4.00 pm. She studied in her lunch break and she could not sit still and rest at home. During and after acupuncture Jenny experienced feelings of calm and relaxation and also increased warmth. Being warm was a big thing for Jenny. She commented that she always had to wear two jumpers to keep warm. Jenny noticed the following improvements in her general health; increased energy levels, reduced nausea and backache. Refer Table 11 in Chapter 5 for perceptions of improvement in health and wellbeing.

Jenny spoke of heaviness, a hanging out, a lowness and then a lifting and a pulling up during an acupuncture treatment. She described a knowing, a feeling of being very "in tune" with the sensation of lowness and heaviness in her body. She knew this feeling well. It was her enemy, an enemy to be avoided at all costs. She arranged another acupuncture treatment, she got relief. She had kept the enemy at bay. This feeling of heaviness and

lowness that Jenny describes has a special significance in TCM and will be discussed in the analysis section.

Jenny described a feeling of anticipation prior to her acupuncture treatments. She felt she was more content to just "be". Her premenstrual tension was reduced, colds and coughs that had constantly plagued her went away and she had a lot more energy to cope with her life. Numerous physical and emotional signs and symptoms had improved or disappeared. She attributed this change to the acupuncture which she believed enabled her to live her life in a more balanced, relaxed and healthy way.

Outcomes and satisfaction with acupuncture

Jenny completed a full term pregnancy after a previous miscarriage, two neonatal deaths and a previous preterm birth. She had a baby that was settled and had fewer allergies than her previous child. Jenny went on to have two more full term pregnancies. Refer Table 12 in Chapter 5 re outcomes and satisfaction with acupuncture.

Traditional Chinese medicine

TCM patterns of disharmony – Jenny

Pattern	Menstrual & obstetric history	Presenting signs & symptoms	Tongue	Pulse
Kidney yang xu	Menarche 13 yrs Lower back pain before period G4 P1 1 miscarriage (8 months between next conception) History of infertility	Backache Frequent urination Fluid retention Internal cold Cold hands, feet & kidneys Thirstless Panic, fear & fright	-	Slow Kidney yang ↓ Kidney yin ↓
Spleen qi xu with Damp		Exhaustion Somnolence Loss of appetite Cravings for sweets Worry Cysts Heaviness & dragging down sensation Foggy in head	Thick greasy white coating	
Spleen and Lung qi deficiency,	2 mid-trimester abortions	Poor appetite Pale complexion	Pale body	Weak, thready, deficient lung

sinking qi	(close together, 1 month between conceptions)	Weakness and fatigue Shortness of breath Chronic cough Frequent colds Early descent of the presenting part		position
Liver qi stagnation	Dull abdominal pain Small clots	Nausea Irritability Premenstrual syndrome		Wiry

Diagnosis

- Kidney yang xu
- Spleen qi xu with Damp
- Spleen and Lung qi deficiency, sinking qi
- Liver qi stagnation

Treatment principle

- Strengthen and support the lower back.
- Tonify the Kidneys and support yang.
- Strengthen the Spleen and Lungs, supplement qi.
- Promote the elevation of yang qi (p 787, Lyttleton, Vol 2).

Treatment plan

Acupuncture and moxibustion: appropriate points used based on the treatment principles and individual patterns of disharmony for Jenny can be found in Appendix I). For actions and indications for use for each point, refer to Appendix J.

Frequency of acupuncture treatment

Jenny had three preconceptual acupuncture treatments. She had acupuncture throughout her entire pregnancy until she had her baby at 39 weeks. Frequency varied between weekly and fortnightly treatments (refer Table 10).

TCM Analysis

The sensation of heaviness and lowness that Jenny described is attributed to a pattern of disharmony in TCM called Spleen qi deficiency with Damp. This pattern, in Jenny's case,

was caused by irregular eating patterns, eating on the run, excessive worry and studying for long periods with infrequent exercise. She described herself as "an on the go sort of person, who flies from here to there, skips meals and often didn't eat till 4.00 pm. She also spent long periods of time studying. She also had the constant worry when she was pregnant of avoiding another preterm labour and neonatal death. These factors all deplete Spleen qi in Chinese medicine. Damp is a worsening pattern of Spleen qi deficiency that occurs when Damp forming foods such as dairy, greasy and fried food are eaten and Damp medications such as antibiotics are taken. There is a further progression of a Spleen pattern of disharmony in Jenny's case. She has Spleen qi sinking and the Spleen qi is unable to "hold things up". See Appendix K for aetiology of this pattern.

Jenny also has an underlying Kidney yang deficiency. As a child she had a history of urinary tract infections and had removal of a cyst on the bone which required a bone graft. These signs and symptoms are indicative of an inherited depletion of Kidney Jing. Refer to the discussion in chapter two on Jing and its importance in an individuals' constitution, ability to conceive and role in the formation of blood. Jenny's lifestyle was one that compounded an already depleted situation. Her prenatal qi was deficient and lifestyle factors did not support the making of postnatal qi. Jenny therefore started depleting her stored Jing and had difficulty in conceiving and "holding onto" her babies. Refer to the table below for additional aggravating factors for Jenny's patterns of disharmony. See also Appendix L for an expanded list of possible contributing constitutional and lifestyle causative factors for TCM patterns of disharmony.

Additional features of patterns of disharmony - Jenny

Pattern	Aggravated by	Relieved by	Other features	Disposition of Woman	Pulse & Tongue
Kidney yang deficiency	Chronic illness, fatigue, overwork, miscarriages & pregnancies with short inter-pregnancy interval, fear & fright	Rest, inter-pregnancy interval > 2 years	Backache, frequent urination, fluid retention, internal cold, cold hands & feet & kidneys Thirstlessness	Intolerant of cold	Tongue – pale body Pulse – slow, weak, thready, both kidney positions ↓

Spleen qi deficiency with Damp	Consumption of dairy, sugar, greasy foods, previous antibiotic use, skips meals & eats on the run, worries	Simple bland diet	Exhaustion, Somnolence Loss of appetite Cysts Foggy head Heaviness & dragging ↓ sensation	-	Thick, greasy white tongue coating
Spleen and Lung qi deficiency, and sinking qi	Spleen & lung qi deficiency causes Spleen qi to be unable to hold things up	-	2 mid-trimester abortions at 26/40 & 24/40 Pale complexion Shortness of breath, chronic cough, frequent colds, early descent of presenting part	Sallow, pale complexion Run down	Pulse – weak & deficient in lung position
Liver qi stagnation	Emotional upset & stress	Contentment, relaxation & following exercise	Irritability premenstrual syndrome	Age – 30 Tense, nervy, more common in females ages 20-50	Wiry Liver pulse

Table adapted from: Differential Diagnosis Tables in Clinical Handbook of Internal Medicine, Vol 2, Stomach & Spleen, Maclean W. & Lyttleton J., University of Western Sydney, 2003.

Lead maternity carer

Jenny's Lead Maternity Carer (LMC), a male Obstetrician was sent an information sheet and consent form requesting to be interviewed as part of my study. He did not reply or return the requested information. He was therefore not interviewed.

Felicity

Introduction

Felicity for many years worked as a health professional. She had a career change when she and her husband started their own business. They own their own home in a middle to upper class area in central Auckland. In her first pregnancy, from 28-36 weeks Felicity had numerous hospital admissions and steroid injections for threatened preterm labour. She eventually had this child at 36 weeks. This child suffered from headaches and severe reflux which Felicity attributed to the drugs she was given to stop her threatened preterm labour.

Felicity's story

Motivation for having acupuncture treatment

After my first preterm birth experience, my midwife said maybe we should give acupuncture a go. She had heard about an acupuncturist who had helped a lot of women with nausea, morning sickness and other things. She called the acupuncturist and asked if she would be able to help me. The acupuncturist had treated another woman who had come for preterm labour and she had got to full-term.

The reason I came for acupuncture in my second pregnancy was because I started contracting at 31 weeks while swimming. I went straight into hospital, stayed one night, had steroids, and then came home again. My concern was that I was contracting this early. They say the labour is usually quicker with your second baby so I didn't think I would get to full term. I wanted to try anything that would mean not going into hospital. I really did not want to go through that again. I had to give up work straight away with the first baby. I couldn't do anything. I wasn't even allowed to walk up to the letterbox because the contractions would start.

Experience of acupuncture treatment

The acupuncture was great, it was incredible, absolutely amazing. The needles would go in and then within two or three minutes, the contractions would ease off in intensity. They wouldn't be so close together and then would go completely. It was absolutely amazing. I would be having contractions and driving down the drive thinking I couldn't wait to get back for acupuncture. I couldn't wait to get there. I had no further hospital admissions with my second pregnancy once I started having acupuncture.

Whereas in my previous pregnancy I remember when I had the salbutamol I would feel so wound up because it would make me shake. I would be shaking and trying to eat food, and the peas would be falling off my fork. I would be so hot and have

palpitations, and it was awful. With the acupuncture treatment it would just totally relax me which really helped. I am not the sort of person who can completely stop. I have never been like that. I am better if I'm on the go and find it hard to slow down. I like a busy life. Acupuncture helped me to relax and slow down.

I also had this pressure down in my groin. I could feel the baby's head really low. I told my acupuncturist this and she said she would take that into account when she put the needles in. I felt the baby come up. I actually felt her moving up. I remember the point in the top of my head made me feel more relaxed and the moxa the acupuncturist did was great for lifting the baby up. Straight away that took the pressure off, as she would always be so low. I got so much pain down there. I was surprised because with my first one I constantly had that low pushing feeling. It never went away. It was awful, it just never went. But it was quite bizarre really, because after the acupuncture I could feel her coming up and the pressure went away.

I went for acupuncture three times a week from 31 weeks. My goal was to get to 34 weeks. I just took one week at a time. At 34 weeks I noticed that things were maybe not holding as well as they had in the past. The acupuncturist added in a different point in the foot. It was a really strong one. That point carried on helping me again. I also went home with things in my ears, you know, the ball bearings. I pressed those in between and that was good too.

When my tummy was really tight, the tightness would go away during the treatment. I left feeling so much more relaxed, and not uncomfortable like when I had arrived. This feeling lasted at least 24-48 hours. I would usually get about two days before the contractions started niggling again. I once rang and asked if I could come earlier because the contractions had come back. If I had left it more than two days, say three or four days I am sure my baby would have delivered earlier. I felt the acupuncture was there if I needed it. It gave me more energy to do more stuff and it would take away all that pressure and pain. I knew if it got really bad I could call my acupuncturist. She always said I could call her at any time and that was a big thing.

I just couldn't wait till she got the needles in. I would say to my friends I am going back for acupuncture. They would ask how I could stand it having needles. And I said, because within two minutes of the needles being in I felt so much better, and all the tightness and pressure would go. So I used to look forward to that. With the first baby I would have to go into hospital and there was nothing pleasant about the whole situation in hospital.

Perception of difference to general wellbeing

I also noticed that acupuncture helped with other pregnancy problems. I often got frontal headaches. They were behind my eyes and dull and achy, often lasting all night. They were like tension headaches but after having acupuncture they went away completely. I also used to get constipated and the acupuncture helped with that. I went more often and became more regular. After the acupuncture I was so much more relaxed and would sleep better. Prior to having treatment I used to toss and turn and could not get off to sleep. When I had the acupuncture I was able to get off to sleep in a flash. I also noticed that I craved licorice and ate a lot of it. I would buy herbal licorice, and maybe have two or three straps a day, and then other days I would just have one.

My midwife thought I would probably deliver early. When she took me on she knew my history, so she thought there was a chance that I would have another early one. She changed her holiday because she thought the baby would come early. She was really great and managed me at home.

Partner's perception of difference

My husband thought acupuncture was all a bit weird and a bit strange and wishy-washy because it was alternative. It was not like going to the hospital and having the drugs and things like that. He knew nothing about it. On the first day when I went for treatment he came in with me. My acupuncturist explained the whole thing to him and it was really great that he was there and was able to listen. She explained about acupuncture, how it worked and what we would be doing. He was quite relieved, and thought it was okay.

As we went along he agreed that the acupuncture was absolutely fantastic. He thought it was fantastic that there was somewhere for me to go when my contractions started. He noticed that I was a lot more comfortable and a lot more relaxed. I would come back from my treatment and I would say oh, oh that was so great. So he was into it in the end. Now my husband swears by it. I heard him talking to a friend of ours the other week. She was pregnant and was really nauseous and had been really sick. He suggested that she should try acupuncture. He was reformed because he noticed such a difference in me and in our second child.

With my first pregnancy, every night I would go to sleep and wonder if the baby would come that night. I never felt that with the second one because I knew I could have acupuncture. It was so different. I was so tired with the first one and felt too tired to labour. I was just exhausted from the stress of the previous eight weeks. People would ask me how long my labour was. I would say it felt like it was about eight weeks.

Outcomes and satisfaction with acupuncture

The outcome was great with my second pregnancy. I got to 39 weeks, which was another 8 weeks. I really believe I would not have been able to do it without the acupuncture. There was no way, no way, especially with having the stress of another child to look after as well. I kept thinking this baby was going to be much bigger. I was so happy I had got to 39 weeks. I was completely relaxed when I went into labour and I thought yes I am ready to see you now. It was a really nice labour. The birth was beautiful, completely different from the first one. It was a water birth and it was lovely. I had no pain relief. With the first one I had an epidural and the whole works. It was nice to be able to hold my baby and not have it whisked away, and just be able to stay together. It was me and her and it was lovely.

Our second child is healthy, naughty and energetic. The difference in having a full-term baby was gi-normous. It was huge. I breastfed her until she was ten months, no problem. She didn't pull off and have tummy pains all the time like the first baby. She had a little bit of reflux, but nothing compared to the first one. I think having a

full-term baby has made a huge difference. Also not having as many drugs during my second pregnancy. If the drugs stressed me so much in my first pregnancy, surely they must have stressed my baby as well.

If I got pregnant again I would definitely come back for acupuncture without a doubt. I would come back earlier before I started contracting. I would go back for acupuncture before I went anywhere else. I have recommended it to so many people. Yes I would definitely have acupuncture again.

Experience of acupuncture treatment

Felicity perceived a difference from her first pregnancy experience once she started acupuncture. She got relief from her contractions and less downward pressure in her pelvis. This gave her confidence that she would not go into preterm labour and had a big effect on her mental and emotional well-being. Felicity perceived what was happening in her body and with her baby positively reinforced, that she was doing the right thing for them. The acupuncture gave her faith and a belief in herself and her body to carry this baby to full-term.

Felicity experienced feelings of anticipation before acupuncture knowing she would get relief from the contractions. She noticed that she felt calmer and more relaxed after her treatment. This was a huge contrast to how she had felt after being admitted for a salbutamol infusion. Felicity's husband noticed and commented how relaxed and calm she appeared compared to her previous pregnancy. He had had no previous experience with acupuncture and was "converted" once he saw the difference it made to Felicity and their second child.

Felicity noticed an increase in her energy levels and that her headaches decreased. She described these headaches as being behind her eyes and dull and achy and lasting all night which she believed were tension headaches. Refer to Table 11 in Chapter 5 re perception of improvement in health and wellbeing after acupuncture.

Outcomes and satisfaction of acupuncture

Felicity achieved a full-term pregnancy and this birth experience was very different to the last. She was more in control and had a water birth in a small hospital which was something that she would never have contemplated at the outset of her pregnancy. The resulting baby sleeps and feeds well. It has none of the problems its sibling had. Felicity has referred her friends and family for acupuncture as she was completely satisfied with her experience. Refer Table 12 in Chapter 5 re outcomes and satisfaction with acupuncture.

Traditional Chinese medicine

TCM patterns of disharmony - Felicity

Pattern	Menstrual & obstetric history	Presenting signs & symptoms	Tongue	Pulse
Kidney yang xu	Menarche 13 yrs Irregular periods 5/28-45, lower back pain & moody & grumpy 1/52 before period. Small clots, dark red blood, painful abdominal cramps during period. G2 P1 Endometriosis for 4 years diagnosed by laparoscopy	Backache Nocturia (3 times/night) Fluid retention Internal cold Cold hands, feet & kidneys Thirstless Panic, fear & fright	Thick, greasy, white coating at kidney area	Slow Kidney yang ↓
Kidney yin xu	Shift work for long periods without sufficient sleep & rest.	Backache	Body - red	Kidney Yin ↓
Spleen qi xu with Damp		Exhaustion Somnolence Loss of appetite Cravings for sweets Worry Heaviness & dragging down sensation Foggy in head	Greasy white coating	Slippery spleen pulse
Liver qi stagnation with Heat	Irregular periods Long cycle 40-80 days Dull abdominal pain Small clots Contractions from 16 weeks	Headaches – cap/frontal Nausea Irritability Premenstrual syndrome Backache – worse for stress Insomnia	Red edges	Wiry

Diagnosis

- Kidney yang and Kidney yin xu
- Spleen qi xu with Damp
- Liver qi stagnation

Treatment principle

- Support and strengthen the lower back
- Tonify the Kidneys and support yang/yin
- Strengthen the Stomach and Spleen and disperse Damp
- Soothe Liver qi

Treatment plan

Acupuncture and moxibustion: appropriate points used based on the treatment principles and individual patterns of disharmony for Felicity can be found in Appendix I). For actions and indications for use for each point, refer to Appendix J).

Frequency of acupuncture treatment

Felicity had acupuncture three times a week from 31 to 36 weeks (refer Table 10). The acupuncturist went on holiday and Felicity felt confident that she would now go to full-term. She eventually had her baby at 39 weeks.

TCM analysis

Prior to becoming pregnant Felicity had suffered from endometriosis. This was diagnosed four years previously by laparoscopy. This pattern of disharmony evolved from Liver qi stagnation in Felicity's case. Her previous history of irregular periods, long menstrual cycle of 40 – 80 days, dull abdominal pain and small clots tell us that her Liver qi is blocked. Her headaches, irritability and backache which was worse when she was stressed, also provide additional confirmation. Felicity has a wiry Liver pulse and a tongue that was significantly red on the edges.

She also has both Kidney yang and some Kidney yin signs. Her tongue body is red and both Kidney yin and yang pulses are low and depleted. Felicity has an imbalance

called Kidney water not controlling Heart fire as evidenced by her insomnia. There is a link between the Heart channel (Bao Mai) and the Uterus in TCM and any Heat could disrupt the balance in this channel and predispose Felicity to have an irritable Uterus due to this underlying Kidney deficiency and excessive heat. Refer to Appendix K for aetiology of patterns of disharmony for case study women.

Additional features of patterns of disharmony - Felicity

Pattern	Aggravated by	Relieved by	Other features	Disposition of woman	Pulse & tongue
Kidney yang deficiency	Fatigue, shift work for long periods with insufficient rest & sleep	Rest Avoidance of aggravating factors	Backache, internal cold, cold hands & feet Thirstless Nocturia 3 x Fluid retention	Intolerant of cold	Slow pulse Kidney yang ↓
Kidney yin deficiency	Fatigue, shift work for long periods with insufficient rest & sleep	-	Backache (see redder tongue body)	-	Tongue – redder body Kidney yin pulse ↓
Spleen qi deficiency with Damp	Consumption of dairy, sugar, greasy foods History of antibiotic use	Simple bland diet	Exhaustion Somnolence Loss of appetite Craves sweets Heaviness & dragging down sensation Foggy in head	Sleepy, tired	Tongue – greasy white coating Slippery Spleen pulse
Liver qi stagnation	Emotional upset & stress	Contentment, relaxation & following exercise	Headaches – cap/frontal Nausea Irritability Premenstrual syndrome Backache – worse for stress Irregular periods Dull abdominal pain with period Small red clots	Age – 31 Tense, nervy, more common in females ages 20-50	Tongue – red edges Liver pulse wiry

Table adapted from: Differential Diagnosis Tables in Clinical Handbook of Internal Medicine, Vol 2, Stomach & Spleen, Maclean W. & Lyttleton J., University of Western Sydney, 2003.

Shelly, Felicity's midwife

Felicity responded really well to my suggestion that she try acupuncture because she had the attitude she would try anything if it worked. I had a lot of faith that we could get her there with the acupuncture. Her husband had the same attitude towards acupuncture that he had towards a midwife. He was a bit sceptical and he needed proof that it worked. He was obviously a great fan of acupuncture in the end, but he wanted proof.

Felicity was having runs of contractions and threatening to go into prem labour. I thought acupuncture might be able to help her. It certainly seemed to make a difference. It did not stop her threatened prem labour but it certainly gave her relief from the contractions for a few days at a time. Then she would have contractions again. She needed to have acupuncture 2 or 3 times a week to keep the contractions under control. After she started having acupuncture she didn't have any more hospital admissions.

After a while I was pretty positive she would get to 36 weeks because I was seeing a pattern emerging of contractions and a lot of uterine activity but nothing happening to her cervix. So I started to think she would probably go to term. The acupuncture may have had something to do with that. It definitely could have. The reason? Who knows? Felicity's account was that it made a big difference to her. She felt it made quite a difference to the pattern of the contractions, and she believed the acupuncture was calming her down. She certainly felt a lot more relaxed.

Felicity had her baby at 39 weeks in the end. She had a lovely water-birth in a small hospital. It was a very positive experience for her. I think seeing the acupuncture work for her made her believe that she didn't actually need to be at a base hospital to have her baby. Her second birth was not about hospitalisation. She needed to complete her pregnancy, and see that she could get there like anybody else.

I am a great fan of acupuncture. It is something that I offer to women in pregnancy for nausea, vomiting, high blood pressure and now prem labour. I had heard that an acupuncturist had used it on a couple of women for prem labour and it seemed to have worked. I knew that acupuncture was a good thing because I had done some research on

acupuncture in pregnancy. It was my first line of treatment for pregnancy problems. I certainly know now that it helps with prem labour.

I would definitely refer other women for acupuncture if they were threatening to go into prem labour. I believe someone with a history of prem labour should have acupuncture in the early stages of pregnancy, before it develops into anything. I would suggest they went at about 12 weeks for the first treatment and then take advice from the acupuncturist. These women often need to have acupuncture earlier. I would send them for treatment before they actually go into prem labour.

Lucy

Introduction

Lucy was 32 years old when she became pregnant with her second child. She is a teacher and her husband a professional. They live in their own home in a middle to upper-class suburb in Auckland. Lucy presented with a number of factors that could increase the risk of a repeat preterm labour and birth experience. She had had two miscarriages and her last child was born prematurely at 35 weeks. For additional risk factors for preterm labour refer to Tables 6 & 7 in Chapter 5. This child has speech and development delays which Lucy attributes to the baby being born early. She has spent many hours helping this child with remedial work including reading.

At 20 weeks Lucy first came for acupuncture because she had backache. At this time she also had a growth of Group B Strept which was identified by a vaginal swab. When Lucy was 24 weeks she noticed that her uterus was becoming more irritable and that she was having more Braxton Hicks contractions. This coincided with a period when her daughter was unwell and Lucy therefore had disturbed nights and very little sleep. At 30 weeks Lucy's midwife noticed that the baby's head was 4/5 into the pelvis (D4) indicating the possibility of preterm labour.

Lucy's story

Motivation for having acupuncture treatment

I had already had a previous baby that was preterm, at 35 weeks. I was concerned that our next child would be born even earlier than this. When I reached about 20

weeks I started to get some lower back pain and this prompted me to do something a bit earlier than I had intended.

On a couple of previous visits to my midwife, I had seen a poster on the wall showing a variety of different complaints in pregnancy that could be treated with acupuncture. One of those was preterm labour. I noticed this and kept the thought in the back of my mind. I had previously had acupuncture many years ago on an Achilles tendon injury and that had helped, so I was quite open to trying acupuncture for something like this. I had obviously discussed with my midwife that I was concerned about preterm labour again. I had mentioned that I wanted to try homeopathy and acupuncture and a variety of different things that I had always been quite open to.

Experience of acupuncture treatment

I asked the midwife about the acupuncturist and got her details. She said that acupuncture would be something to consider later on down the track, at around 28 weeks. So as soon as I started to get the lower backache at 20 weeks, I decided to have the acupuncture earlier and continued to go regularly. When I reached about 28-29 weeks the midwife was rather astounded when she felt around and noted that the baby had slipped down into D3. She felt that was a cause for concern because of my previous history with preterm labour.

Perception of difference to threatening preterm labour

At 30 weeks the backache became very much a secondary issue because I was feeling lots of Braxton Hicks and the baby went as low as D4. They weren't painful, just tightening, but they were regular and more frequent in the evenings probably when I was tired. I found that after acupuncture the Braxton Hicks would be less frequent.

The acupuncture made me feel more confident that I was doing everything I could to help hang on to this baby. I always felt more relaxed and calm after the acupuncture treatment. I think it helped in my head, got rid of the stress and relaxed me. I had a much more positive frame of mind that I was going to hang

on to this baby. During the acupuncture the baby moved around a bit and a couple of times she moved back up and that was always a really good boost for my frame of mind. I think it was related to the acupuncture. I felt that of all the acupuncture points, the one I noticed the most was the one on top of my head. This needle went in and it was pulling up, and I could almost feel it. It was the one that had the most impact on me. I felt like I needed that point and it was going to help keep the baby up there. So that point was my favourite. It is hard to say whether sometimes it is a physical thing or a psychological thing, but I felt really positive that the baby was moving up.

I had seen an obstetrician earlier in my pregnancy because of my history of preterm labour. The midwife said that she called the obstetrician at 30 weeks because she wondered about me having prophylactic steroids to mature the baby's lungs. She was really concerned that the baby was going to deliver early. She felt it was going to be only a matter of weeks. After the birth she told me that, at the time she was trying to encourage me but I know she was concerned, I could tell that she was concerned. She wrote this letter to the acupuncturist.

Letter from Rosa (Lucy's midwife) to the acupuncturist

Dear Acupuncturist

I have seen Lucy today. The baby seems very low, D4 and OA. I have repeated the mid-stream urine and a high-vaginal swab as there was previous GroupB Strept on the swab. I have got a call into the obstetrician re prophylactic steroids. Lucy is only 30 weeks and the baby does not seem as if it could get any lower, which concerns me. We are counting on your skills.

I also felt I was going to have the baby at 30 weeks. There was definitely that thought there, and it concerned me. It was a matter of doing everything possible to stop it, which was one of the reasons why I increased my sessions with the acupuncturist to twice a week, rather than weekly. The other thing we put into place was to make me rest. It wasn't bed rest but it was very much feet up as

much as possible and chilling out, doing very little, not lifting, all those sorts of things. It was very boring. I read lots of books. I had a full-on two-year-old daughter who would tear around the place, so life was busy. She was looked after as much as possible by my family so I could rest more.

The acupuncture made me much more relaxed and that enabled me to rest more. It was a twofold thing, I think it helped physically, but it also really helped psychologically. I think it had a lot to do with my mental state, especially when having a preterm baby, because it was stressful. The acupuncture released a lot of stress physically, but also released a lot of stress mentally. So you have got the mental thing and the physical thing.

Outcomes and satisfaction with acupuncture

I held onto my baby until 39 weeks. My midwife was surprised that I had got that far. We laughed in later appointments about me needing to be induced. I was induced because my blood pressure was elevated and I had a spell of unwellness. I couldn't put it down to anything specific. My midwife was concerned that perhaps I had eaten something funny, and she wanted to rule out Listeria. We had blood tests taken and they showed some irregularities with my liver function. In the end I had a caesarean section at 9cms because my temperature went up and the baby's heart rate was really high.

I would definitely have acupuncture again. I have had acupuncture for two completely different things, one for a sports injury and one for preterm labour, and both times I felt that it helped. Certainly if I was going to have another baby it would be something I would definitely do. Obviously I would see how the baby was presenting. If the baby was D4 at 18–20 weeks, I would do the same again. The acupuncture helped keep the baby in, and do the job.

Experience of acupuncture treatment

Lucy experienced a change to the pattern of contractions with acupuncture. She felt they were less regular, and her backache which was a constant presence was relieved for significant periods of time. At 30 weeks Lucy's baby descended deeply into the pelvis

(D4). Both Lucy and the midwife were very concerned that she could deliver early again as early descent of the presenting part accompanied by backache and an irritable uterus are common signs of threatening preterm labour. Lucy perceived that the acupuncture pulled the baby up. She noticed this particularly after a special point on the top of the head (Baihui – Du.20) was needled and treated with moxibustion. She described this point as her favorite as she felt really positive the baby was moving up. Lucy felt that acupuncture had reduced the threat of having a preterm birth.

Lucy's midwife Rosa was very concerned that Lucy would give birth at this stage and even wrote a letter to an obstetrician asking him whether there was an indication for prophylactic steroids. At this stage Lucy needed to increase her acupuncture treatments from once a week to twice a week. She also described that the acupuncture enabled her to relax as this was a difficult thing for Lucy to do. Refer to Appendix K: Aetiology of patterns of disharmony.

Lucy also experienced increased energy levels and a reduction in fear, anxiety and agitation. See Table 11 in Chapter 5 re perception to improvement in health and wellbeing.

Outcomes and satisfaction with acupuncture

Lucy completed a full-term pregnancy at 39 weeks. She unfortunately required a Caesarean section at 9 cm as her temperature was elevated and the baby became distressed. Lucy was however still satisfied with the outcome and she believed the acupuncture "had done the job and kept the baby in". Lucy would have acupuncture again if she found herself in a similar situation. Refer to Table 11 in chapter five re perception of improvement in health and wellbeing after acupuncture.

Traditional Chinese medicine

TCM patterns of disharmony - Lucy

Pattern	Menstrual & Obstetric History	Presenting Signs & Symptoms	Tongue	Pulse
Kidney qi xu	Menarche 13 yrs Cycle regular 3-5/26-28 Red blood, no clots, pain, breast tenderness or bowel changes G4 P1 2 miscarriages One year between miscarriage and birth of next child Previous preterm at 35/40 Irritable uterus 30/40	Presented with backache at 20/40 Backache – dull, achy, worse on right side Better for pressure and rest Nocturia at 19/40 5 times a night Dark shadows under eyes Weak ankles	Body – pink Coating – thin, white Tip – red	Slow both Kidney yin and Kidney yang ↓
Kidney yang xu		Feels cold internally and cold hands and feet	Wet tongue	Slow Kidney yang ↓
Spleen qi xu		Tiredness and low energy Loss of appetite Worry associated with work and previous child Worries when stressed		
Spleen qi sinking	Early descent of presenting part D4 at 30/40 Retroverted uterus			
Liver qi stagnation	Moody 1/52 and occasional bloating before period	Angry and tension in jaw when stressed Labile mood ↑ ↓		Wiry liver pulse

Diagnosis

- Kidney yang xu
- Spleen qi xu
- Spleen qi sinking
- Liver qi stagnation

Treatment Principle

- Support and strengthen the lower back.
- Tonify the Kidneys and support yang.
- Strengthen the Spleen and supplement qi.
- Promote the elevation of Yang qi.
- Soothe Liver qi.

Treatment plan

Acupuncture and moxibustion: appropriate points used based on the treatment principles and individual patterns of disharmony for Lucy can be found in Appendix I). For actions and indications for use for each point, refer to Appendix J).

Frequency of acupuncture treatment

Lucy had acupuncture from 20-38 weeks. Initially she came once a week. When her baby's head descended into the pelvis at 32 weeks her treatments were increased to three times a week initially and then back to twice a week. She had her baby at 39 weeks.

TCM Analysis

Lucy, like Jenny, had a TCM pattern of disharmony identified as Spleen qi sinking. Lucy had a retroverted uterus and with the early decent of her baby's head at 30 weeks, this indicates that her Spleen qi and underlying Kidney yang deficiency were unable to "hold things up". Baihui / Du.20 was treated with moxibustion to pull Lucy's yang qi up and Lucy experienced this as her baby being "pulled up".

Lucy had an underlying Kidney qi deficiency, which was aggravated by her two miscarriages and short inter-pregnancy intervals. Other signs and symptoms of Kidney qi deficiency that Lucy experienced were her painful lower back, weak ankles, fatigue, nocturia and the dark shadows under her eyes. The feeling of internal cold and general intolerance of cold indicated a more complicate pattern of Kidney yang deficiency. Lucy also had Liver qi stagnation as evidenced by her labile mood prior to her periods and general muscle tension when she was stressed. She recognised that

the acupuncture made her feel more relaxed and felt that there was a strong connection between her emotional and physical wellbeing. It was difficult for Lucy to relax and rest as this was not something she was used to doing. She was a high achiever who was always on the go and rested infrequently. This would not help her already depleted Kidney and Spleen qi. Refer table below for additional aggravating factors and other features for Lucy's patterns of disharmony.

Additional features of patterns of disharmony - Lucy

Pattern	Aggravated by	Relieved by	Other features	Disposition of woman	Pulse & tongue
Kidney qi deficiency	Prolonged standing Fear Childbirth 2 miscarriages Short inter-pregnancy interval	Avoidance of aggravating factors Inter-pregnancy interval of > 2 years	Painful achy lower back Weak ankles Fatigue Nocturia 5 x Dark shadows under eyes	-	Tongue body – pink, thin, white coat Pulse – both kidney positions ↓
Kidney yang deficiency	↓ Sleep Fatigue Overwork Always busy	Balance between work & rest	Internal cold Cold hands & feet	Intolerant of cold	Slow pulse Wet tongue
Spleen qi deficiency	Cold or raw foods Antibiotics used in past Eating on the run	Bland, well cooked food, small meals	Fatigue & low energy Loss of appetite Worry associated with work and previous child	Pale complexion	Pulse – fine & deep
Spleen qi sinking	Spleen qi & Kidney yang deficiency causes Spleen qi to be unable to hold things up	-	Retroverted uterus Early descent of presenting part – D4 at 30/40	Pale complexion	Pulse – fine & deep
Liver qi stagnation	Emotional upset	Relaxation & following exercise	Mood ↓↑ Moody 1/52 before periods Angry & muscle tension in jaw when stressed	Age – 32 Tense, more common in females aged 20-50	Wiry liver pulse

Table adapted from: Differential Diagnosis Tables in Clinical Handbook of Internal Medicine, Vol 2, Stomach & Spleen, Maclean W. & Lyttleton J., University of Western Sydney, 2003.

Rosa, Lucy's midwife said:

I referred Lucy for acupuncture because her first child was born at 35 weeks. In my experience with women who have had premature births, there are some things that are repeatable and some things that are not. Premature birth tends to be something that does repeat itself. We talked at the first visit, when she was ten weeks pregnant about strategies for preventing another premature birth. I recommended that she see an obstetrician and have acupuncture during the pregnancy, and that she didn't work fulltime. Lucy's first child had some speech delay and also had an unstable gait. She was being seen regularly by a paediatrician. Lucy felt that her child's behavioural and physical problems were related to her pre-maturity.

Lucy had a number of risk factors. On her third visit when she was 20 weeks, I did vaginal swabs which showed that she had a growth of GroupB Strept. The link between GroupB Strept and premature labour is really well documented. She was also complaining at that visit, of quite significant backache. I believe that she started seeing the acupuncturist because of the backache. When Lucy was 28 weeks the baby's head was really deeply engaged in her pelvis. At 30 weeks I wrote a referral letter to the acupuncturist saying that her baby was very low, at D4.

I didn't think that at 30 weeks, when the baby was D4 and Lucy had backache and Group B Strept that she would get another 10 weeks. So I do remember feeling worried and thought that it was very likely that she would go into labour at this time. However she eventually got to 38.5 weeks. Towards the end of her pregnancy Lucy developed abnormal function tests and had to be induced.

I talked to the obstetrician after Lucy's baby's birth. His response was of being slightly bemused. I think obstetricians who operate in that strong scientific allopathic model will tend to be reluctant to give credence to something like acupuncture if something defies expectation. They would probably need a hundred women, with a randomised control trial before they would believe it, so I think he put it in the 'interesting' box.

Summary

The five women described their experiences with acupuncture. Each woman identified a desire to achieve a full-term pregnancy and avoid a repeat of their previous preterm labour and birth experience. This previous experience was described by all five women as very stressful. Worry, fear, anxiety and dread were emotions described and evoked by their previous preterm experience. This was in sharp contrast to the experiences they had with acupuncture treatment.

Preterm labour and birth is a multi-factorial issue and cannot be treated and managed with a reductionist approach. TCM focuses on identifying patterns of disharmony and restoring balance between the physical, mental, emotional and spiritual parts of the whole woman. The key findings and related themes are discussed in Chapter Five.

CHAPTER FIVE

DISCUSSION CHAPTER

This chapter discusses the emerging themes as they relate to my research question and the aim of my study. My research question asked: "What is the experience of women who have received traditional Chinese acupuncture treatment for threatened preterm labour?" My aim is to describe and explore the women's experience of acupuncture as a treatment to prolong pregnancy and prevent preterm labour, where risk factors are present.

The key finding of my study is that the five women at risk of preterm labour all completed a full-term pregnancy. Two themes linked to this key finding emerged from the women's narratives. They are:

- Reducing the threat of preterm labour
- Experiencing improved health and wellbeing

I will now discuss the key finding and the two related themes.

Completing a full-term pregnancy

Completing a full-term pregnancy is a particularly significant outcome when the western medical risk profiles of the five women are considered (Berkowitz & Papiernik, 1993; Parry & Hooton, 2004). All five had a history of previous preterm birth which has been identified as one consistently major factor for a subsequent preterm birth experience (Lumley, 2003; Parry & Hooton, 2004). The women also had a number of other risk factors in common which are also associated with preterm birth. For example, they all had very busy and stressful lives which involved activities such as careers, business ownership and child care. Three of the women (Levi, Jenny & Lucy) all had a history of previous miscarriage. Levi also had first trimester bleeding and Jenny had two neonatal deaths at 26 and 24 weeks. A summary of the relative risk for sociodemographic, obstetric, gynaecological and medical risk factors for the five women are included in Table 6 and Table 7.

Table 6: Epidemiological factors associated with preterm birth for case study women

Risk factors	Sue	Levi	Jenny	Felicity	Lucy
Sociodemographic factors					
Maternal age	37	35	30	31	32
Race/ethnicity	European	Maori	European	European	European
Level of education	Bachelor Degree	College Education	Tertiary Education	Tertiary Education	Tertiary Education
Home ownership	Yes	No	Yes	Yes	Yes
Poor dentition	Root canal 20/40	n/a	n/a	n/a	n/a
Smoking/alcohol/drugs	-	-	-	-	-
Work & commitments	Worked p/t 3/7 & 1 child	Care of disabled brother & 7 children	Own businesses & 1 child	Own business & 1 child	Worked p/t 3/7 & 1 special needs child
Genetic factors					
Family history of preterm labour/delivery	Grandmother 34/40 Sister 25/40	-	-	-	-
Obstetric & gynaecological history					
Parity	G2P1	G10P7	G4P1	G2P1	G3P1
Inter-pregnancy interval	2 years	Pregnant 11 times in 14 years	8/12 &1/12 between miscarriage & NNDs	3 years	Miscarriage then 1 year & 3 years
Previous low birth weight/preterm delivery	PTD 34/40	PTD 35/40 LSCS	PTD 34/40 NND 26/40, 24/40	PTD 36/40	PTD 35/40
Previous miscarriage	-	3	1	-	2
Previous stillbirth/neonatal death	-	-	NNDs (2)	-	-

Risk factors	Sue	Levi	Jenny	Felicity	Lucy
Previous history of infertility	-	-	Yes	-	-
Cone biopsy	Yes	-	-	-	-
Medical complications of pregnancy					
Gestational bleeding, cervical incompetence	-	Gestational bleeding	Cervical incompetence	-	-
Infection	-	-	-	-	20/40 Group B Strept

Table 7: Risk factors & relative risk of preterm delivery for case study women

Risk factors preterm delivery	Relative risk score	Sue	Levi	Jenny	Felicity	Lucy
Sociodemographic factors						
Low social class	2	-	2	-	-	-
Teenager	2	-	-	-	-	
Maori	1.6	-	1.6	-	-	
Smoking	2.3	-	-	-		
Working	1.5	1.5	1.5	1.5	1.5	1.5
Low weight	2	-	-	-	-	-
Poor dentition	7+	7+	-	-		-
Gynaecological history						
Cone biopsy (laser, knife, LLETZ)	2.3	2.3	-	-	-	-
Uterine abnormality	7	-	-	-	-	-
Obstetric History						
2 early miscarriages or abortions	2	-	-	-	-	-
3 early miscarriages or abortions	6	6	-	-		-
Previous mid-trimester loss	3	-	3	-	-	-
Previous preterm delivery	4	4	4	4	4	4

Parry E. & Hooton J. (2004). *Preterm Labour: Current Evidence & Future Directions*. Workshop, NZCOM Conference.

The outcome is also significant when the TCM patterns of disharmony are considered (Table 8). The women all had patterns of disharmony involving the Zang organs of the Kidney, Spleen and Liver. These three organs are integral in the formation, storage and management of blood in TCM (Cheng, 1996; Maciocia, 1998). When there is a disruption to the blood in TCM this will also affect the flow of qi, and visa versa, as the qi and the blood have a special and unique relationship. It is said that "qi is the commander of blood and blood is the mother of qi" (Cheng, 1996, p.51). This means that blood cannot be separated from qi and its formation and circulation. The two extraordinary channels, Chong Mai (sea of blood) and Ren Mai (sea of qi) will also be affected causing an imbalance of blood and qi in these two channels. As a result of the imbalances in these Zang organs and extraordinary channels, the women will be at increased risk of preterm labour (Tureanu & Tureanu, 1999).

Table 8: Overview of traditional Chinese patterns of disharmony for case study women

Patterns of disharmony	Sue	Levi	Jenny	Felicity	Lucy
Kidney deficiency	✓	✓	✓	✓	✓
Kidney yang deficiency	✓	-	✓	✓	✓
Kidney yin deficiency	-	-	-	✓	-
Spleen qi deficiency	✓	✓	✓	✓	✓
Spleen & Kidney yang deficiency	-	-	✓	-	-
Spleen qi deficiency with Damp	✓	-	✓	✓	-
Spleen & lung qi deficiency	-	-	✓	-	-
Spleen qi sinking	-	-	✓	-	✓
Liver qi stagnation	✓	✓	✓	✓	✓
Liver invading Spleen	-	-	✓	-	-

Two of the women (Jenny and Lucy) had a further progression of the Spleen qi deficiency pattern of disharmony, resulting in Spleen qi sinking, and early descent of the presenting part. In Jenny's case, her pattern was much more advanced and resulted in two mid-trimester abortions. Sue, Jenny and Felicity also had a further progression of Spleen qi deficiency resulting in the formation of Damp. As a result of this Damp they experienced feelings of pelvic and perineal congestion and heaviness. In Jenny's case this was quite severe and extreme. In all these cases, the patterns of disharmony were attributed to a combination of constitutional and lifestyle factors as discussed for each individual woman in the previous chapter.

Prior to acupuncture treatment, all five women in the study had Liver qi stagnation to varying degrees. This was because they led very busy, full and stressful lives. They had infrequent exercise, ate meals "on the run" and often put their own needs last. Once they started having acupuncture treatment they noticed that their lives seemed to flow more smoothly reflecting the fact that their Liver qi was also flowing more smoothly. This had a follow on effect on the other channels and organs (Zang Fu) in their bodies. It was the beginning of the restoration of balance and harmony that was a factor in completing a full-term pregnancy.

Reducing the threat of preterm labour

All five women noticed that the signs and symptoms commonly associated with threatening preterm labour (Morrison, 1990; Wheeler, 1994; Sweet, 1999) went away when they had acupuncture (refer Table 9). They used the following metaphors to describe their experiences: a "calming down" of the uterus, a "lifting up" of the uterus, a "pulling up" of the baby and back pain not "lingering around". All the women noticed the pulling up sensation of the baby when the acupuncture point Baihui was needled and treated with moxibustion. This point in TCM is a very powerful point that pulls yang qi upward (Deadman et al, 1998). This was a strange sensation that the women had never experienced before.

Table 9: Physical signs and symptoms usually associated with threatening preterm labour for case study women

Physical signs & symptoms	Sue	Levi	Jenny	Felicity	Lucy
Irritable uterus	✓	✓	✓	✓	✓
Backache	✓	✓	✓	✓	✓
Sensation of pelvic/perineal/cervical pressure/heaviness	✓	-	✓ ++	✓	✓
Early descent of presenting part	✓	35/40 at D2	✓	✓	28/40at D3 30/40 D4
Hospital admission for preterm labour	1- 32/40	-	-	1- 32/40	-

Two of the women, Sue and Felicity, had hospital admissions for threatened preterm labour. Sue was informed by an obstetrician in the hospital that she was likely to have her baby within the next two days. She was 32 weeks pregnant, contracting and had a cervix that was 80% effaced, 1.5cm dilated and had a Bishop score of 7, a favourable score for labour. Sue had acupuncture in the hospital on two consecutive days. Subsequently she was discharged from hospital and had no further admissions. Felicity also had no further admissions once she commenced acupuncture treatment.

The women's experiences with the signs and symptoms were validated by the women's LMCs, their husband's feedback and acupuncture and midwifery clinical notes (refer previous chapter). For example, Rosa, Sue's LMC said "I had such confidence in acupuncture after Sue was discharged from hospital. By this point I knew we could do it, yes absolutely. Sue got another five weeks from that date. It was fantastic wasn't it?"

Tsuei et al (1977) and West (2001) found that acupuncture was effective in eliminating the signs and symptoms of threatening preterm labour in at risk women. They noted that acupuncture was required once or twice a week throughout the remainder of the pregnancy

to keep the signs and symptoms away. I also observed in my study that regular acupuncture treatment was required.

The women's experience of acupuncture was that the signs and symptoms went away within minutes of the insertion of the needles, and stayed away for a period of time which varied between the women from two to ten days. To keep the signs and symptoms at bay, Sue and Felicity needed acupuncture treatment three times a week. Levi, Jenny and Lucy needed treatment once a week. Jenny was also taking TCM herbs and had had a suture inserted into her cervix at 14 weeks. These two factors may have also influenced the length of her pregnancy. Lucy at 30 weeks needed to have more frequent acupuncture as her baby descended to D4.

The women also self-monitored their threatening signs and symptoms and requested additional treatments as required. This enabled them to feel more in control. Prior to having acupuncture treatment the women felt they had little or no control over what was happening to their bodies. As the treatments continued the women, their husbands and their LMCs started to see a pattern developing between acupuncture treatments and no threatening signs and symptoms of preterm labour. There was individual variation between the five women as to the number of acupuncture treatments required (refer Table 10).

Table 10: Frequency and number of acupuncture treatments for case study women

Before threatened preterm labour	**Sue**	**Levi**	**Jenny**	**Felicity**	**Lucy**
Duration of treatment in weeks	6/40 – nausea / worry re-repeat PTL	-	Preconceptual acupuncture 3	-	-
Number of treatments per week	1	-	1	-	-
Total number of treatments	10	-	3	-	-
After threatened preterm labour	**Sue**	**Levi**	**Jenny**	**Felicity**	**Lucy**
Duration of treatment in weeks	34-37 weeks	32–41 weeks	1-39 weeks	31-36 weeks	20-38 weeks
Number of treatments per week	3	1	20-40 weeks (1) 25-33 weeks (fortnightly) 36-39 weeks(1)	3	20-30 weeks(1) 31-34 weeks(3) 35-38 weeks (2)
Total number of treatments	12	9 (PTL) 2 (IOL)	29	17	31

The frequency and number of acupuncture treatments each woman required depended on a number of constitutional and lifestyle factors that are considered to be disease causing in TCM. They are:

- Inherited constitution determined by:
    - age of parents at conception

    - health and constitution of parents at time of conception
    - number of siblings and age gap between them
- Pattern(s) of disharmony including:
    - underlying patterns
    - severity of patterns
    - length of time the woman had the underlying pattern (1 month of treatment for every year of pattern)
- Diet and dietary habits:
    - irregular eating patterns
    - eating on the run
    - working long hours without meal breaks
    - eating spicy, rich, sweet, cold or Damp forming foods
- Work history and sleep patterns:
    - shift work with irregular sleep patterns
    - standing for long periods
    - heavy lifting
    - studying for long periods
- Stress and emotional factors:
    - worrying and pensiveness (depletes Spleen qi)
    - panic, fear and dread (depletes Kidney qi)
    - anger and frustration (stagnates Liver qi)
- Rest and relaxation:
    - no balance between work and relaxation
    - always on the go and never sits down
- Recreational drugs, alcohol and smoking
- Exercise
    - excessive exercise (depletes Kidney qi)
    - infrequent exercise (stagnates Liver qi)

Adapted from Maciocia, 1989; Cheng, 1996; Lyttleton, 2004.

Acupuncturist's using a TCM model of health to guide their practice do not isolate the sleep patterns, digestion, diet, lifestyle or emotions of the women from the signs and symptoms of threatening preterm labour. As each part and function of our body is considered to be inter-related, all factors are considered to aid in the diagnosis of the patterns of disharmony that the women present with (Flaws, 1989).

In TCM it is recognised that for one disease there are many patterns of disharmony (Maclean & Lyttleton, 1998, 2003). Preterm labour in TCM can therefore have many different patterns and each is treated in an individual way. In my study, the women had some common patterns, but others were different (refer Table 8). Accordingly, the women were all treated individually in different ways. This contrasts with the western medical approach where preterm labour is viewed as one condition and women are treated using a standard protocol of care. The western medical treatment for threatening preterm labour involves the use of drugs in an attempt to stop uterine contractions and steroids to mature the baby's lungs. These drugs all have side effects that affect both the mother and baby (National Women's Hospital, October, 2002). The only "side effects" the women experienced and described from acupuncture treatment were positive and improved their health and wellbeing.

Experiencing improved health and wellbeing

All five women experienced a number of significant improvements to their general health and wellbeing (refer Table 11). For example, they all noticed an increase in their energy levels, a decrease in their backache and a marked reduction in anxiety levels. Just as the acupuncture "calmed" the uterus, it also calmed and settled the women.

Table 11: Perception of improvement in health and wellbeing after acupuncture treatment

Health & wellbeing factors	Sue	Levi	Jenny	Felicity	Lucy
Sleep – improved quantity & quality	✓	✓	n/a	✓	n/a
Energy – increased levels	✓	✓	✓	✓	✓
Emotional calmness/wellbeing - enhanced/improved feelings	✓	✓	✓	✓	✓
Relaxation – improved	✓	✓	✓	✓	✓
Headaches – decreased	n/a	n/a	n/a	✓	n/a
Nausea – decreased	✓	n/a	✓	n/a	n/a
Constipation – decreased	n/a	n/a	n/a	✓	n/a
Fear and anxiety – decreased	✓	✓	✓	✓	✓
Agitation – decreased	✓	✓	✓	✓	✓
Backache – decreased	✓	✓	✓	✓	✓
Reflux – decreased	✓	n/a	n/a	n/a	n/a
Sore throats – decreased	✓	n/a	✓	n/a	n/a
Foggy head - decreased	✓	n/a	✓	✓	n/a
Vision - improved	n/a	n/a	✓	n/a	n/a
Sensation of cold - lessened	✓	n/a	✓	✓	✓
Fluid retention - decreased	n/a	n/a	✓	✓	n/a
Aching bones - improved	n/a	n/a	✓	n/a	n/a
Nocturia - decreased	n/a	✓	✓	✓	✓

Once again the women's experiences were validated by the women's LMCs, their husband's feedback and acupuncture and midwifery clinical notes (refer previous chapter). For example, Levi said of her husband's reaction "He was very impressed with how I was when I came home and noticed that my energy levels were much higher. He said I was glowing and looking really well."

The improvements were noticed after the first acupuncture treatment by some of the women. For others, the improvements occurred more gradually as the underlying root cause (Ben) was addressed. For all the women, the improvements were sustained throughout the period of time in which they were receiving acupuncture treatment and for some time afterwards. Bensoussan & Myers (1996) in their discussion of the physiological effects of acupuncture, state that there seems to be some build up of effect that occurs and results in a lasting change away from a pattern of illness.

The women's previous preterm labour and birth experiences were described by all the women as being very stressful. Stress has been identified by a number of authors as a risk factor for preterm labour (Mamelle, Seguiella, Munoz and Berland, 1997). All five knew they were considered "high risk" for a repeat preterm labour and birth experience. Their LMCs had discussed their previous history with them at their booking visit. A consultation with an obstetrician had also been recommended as per the referral guidelines (Ministry of Health, 2002). They all experienced a high level of anxiety every time their uterus tightened up, their back ached, they felt any pelvic pressure or their baby's head was low. These signs and symptoms were recognised by the women as threatening and a reminder that they could go into labour at anytime. The women developed a heightened sense of awareness of their own bodies and were in a constant state of alertness, waiting and watching for any warning signs and symptoms that preterm labour was threatening. They had no desire to repeat this experience and it was something they wanted to avoid occurring again.

It is important to note that any emotional upset, stressful event, frustration, anger or repressed emotions will disrupt the flow of Liver qi. The Liver in TCM, is responsible for the smooth and harmonious flow of qi throughout the entire body (Flaws, 1989; Maclean & Lyttleton, 1998). If this situation is sustained for a period of time and is compounded by other lifestyle factors, a cascade of worsening patterns can occur. This was the situation with the five women in my study. Acupuncture, however, was described by the women as a form of treatment that enabled them to feel less anxiety, agitation and stress. What the women described and experienced was the unblocking and smooth flowing of their Liver qi.

This experience was described by the women in various ways. Levi described feeling "strong" and that she had "taken something peaceful and good away" after her treatment. Felicity said that she "felt so much more relaxed and would be able to get off to sleep in a flash" after acupuncture. Jenny commented that the acupuncture "made life easier, smoother and happier and I knew that mentally and physically I could get through this". Lucy felt that the acupuncture had "helped in my head, it got rid of a lot of the stress and relaxed me". Sue felt that when she is pregnant she "worries a lot and thinks about things a lot" and that "the acupuncture stopped me worrying and thinking about things".

What is significant about the women's descriptions of their experiences is that they did not only describe changes to their physical health and wellbeing. Their mental, emotional and spiritual wellbeing was also affected. Their experiences of the improvements were described in a complete and holistic way. Acupuncturists using a TCM philosophy to guide their practice are interested in all changes experienced and noticed, as this guides future treatments and informs them of improvements in their client's pattern/s.

Conclusion

All five women believed that acupuncture had contributed significantly to completing a full term pregnancy and keeping their babies in. They were totally happy with their entire acupuncture experience (refer Table 12). Life seemed to flow better, they felt more in control and their general health and wellbeing improved. Three of the women are still having acupuncture for ongoing health care, health promotion and maintenance. They have all recommended acupuncture as a treatment to pregnant friends. All of the women said if they got pregnant again they would definitely have acupuncture to ensure they didn't have another preterm birth. The women's acupuncture experience contrasted strongly with their previous preterm labour and birth experience. This previous experience was described by the women and their partners as being very stressful, and an experience to be avoided at all costs. The women's LMCs also believed acupuncture had played a key role. They had confidence in acupuncture and would refer other women again for preterm labour.

Table 12: Maternal and neonatal outcomes for case study women

Pregnancy & birth outcomes	**Sue**	**Levi**	**Jenny**	**Felicity**	**Lucy**
Length of previous pregnancy	34/40	35/40 LSCS	34/40, 26/40, (D) 24/40. (D)	36/40	35/40
Pregnancy length with acupuncture	37+3/40	41+3/40	38 + 5/40	39/40	38 +5/40
Hospital admissions once acupuncture commenced	None	-	-	None	-
Birth outcome	NVD at home	VBAC NVD	NVD	NVD waterbirth	LSCS – 9cm, mat. pyrexia, fetal distress
Maternal satisfaction with acupuncture	✓	✓	✓	✓	✓
Husband satisfaction with acupuncture	✓	✓	✓	✓	Not reported
LMC satisfaction with acupuncture	✓	✓	Not interviewed	✓	✓
Neonatal outcomes	**Sue**	**Levi**	**Jenny**	**Felicity**	**Lucy**
Birth weight	3450gms	4475gms	3180gms	3370gms	3750gms
Apgar scores	10/10	7/10	9/10	9/10	9/10

Women and LMCs can have confidence in acupuncture. In my study a group of five women at high risk for a repeat preterm birth experience described and experienced a disappearance of the signs and symptoms usually associated with threatening preterm labour, and all five completed a full-term pregnancy.

Implications for practice

The findings from this study are new, innovative and promising. Acupuncture as a possible treatment for women at risk of a preterm birth is not widely understood or recognised. It is, therefore, important that:

- The findings are disseminated to women, midwives, obstetricians, acupuncturists, general practitioners and other CAM practitioners
- Women are educated about the signs and symptoms of threatening preterm labour so that early intervention, including acupuncture as a treatment option, may occur
- Women are educated by LMCs and acupuncturists about the importance of a "conscious conception" for the short and long-term health and wellbeing of their future child. This involves both parents addressing any underlying patterns of disharmony prior to conception, especially if there is a history of miscarriage or preterm labour and/or birth. This may require lifestyle changes around diet, exercise and relaxation as well as acupuncture treatment.
- Pilot studies in outpatient clinics in maternity hospitals are conducted. Examples of midwifery/acupuncture clinics in practice are available (Yelland, 1996; West, 2001)

Channels for the dissemination of information include:

- Conferences- women's health, midwifery, acupuncture, CAM
- Publications- women's and health magazines plus midwifery, acupuncture and CAM journals

Implications for education

To be widely effective, acupuncture for threatening preterm labour needs to be well understood. The following educational courses are a means to achieve this:

- Short courses in acupuncture for midwives with a prescribed scope of practice including treatment of common pregnancy conditions, labour and intra-partum care and some common post-natal conditions
- Teachings about acupuncture in midwifery practice to students in health professional undergraduate and postgraduate degree programmes

Implications for future research

Acupuncture as an effective intervention for threatening preterm labour has not been extensively researched. Further research is needed so that women can be offered more choice about the healthcare options available. It may also enable health professionals to have confidence in acupuncture as an alternative treatment for threatened preterm labour. Possible options for future research could include the following:

- Randomised controlled trials (RCTs) could be done where one group was offered standardised western treatment protocols and another had acupuncture treatment. It would not be possible to double-blind in this situation. There are also problems with standardising treatment protocols as TCM practitioners treat each person differently based on their individual pattern of disharmony
- A prospective study could be done using different acupuncture practitioners to see whether they get similar results. This would eliminate any possible continuity of care effect as different acupuncturists would be providing the treatment
- A study looking at different acupuncture treatment protocols could investigate whether using point selection based on TCM diagnosis and pattern differentiation achieved similar results to a specific-point-only acupuncture treatment. In the previously discussed study, conducted by Tsuei et al, (1977), excellent outcomes were achieved using electro-acupuncture only on one point (Gongsun/Sp.4)
- Very little research has been done looking at the relationship between "qi sensation" and treatment outcomes (Bensoussan & Myers, 1996). My reading of acupuncture and midwifery textbooks (Cheng, 1996, West, 2001), my acupuncture education and personal experience of clinical practice both in New Zealand and China, have led me to believe that the obtaining of a qi sensation on needle insertion is closely collated to the success of the treatment. There may be other treatment protocols using acupuncture that achieve successful outcomes. Research could be designed to investigate and compare outcomes using a variety of treatment protocols where:
    - needles are stimulated and a qi sensation is always obtained, and
    - needles are not stimulated and a qi sensation is not obtained.

A number of authors, (Zollman & Vickers, 1999, Consumer magazine, 1997) identify a variety of possible factors limiting research in complementary and alternate medicine (CAM). They suggest that: lack of funding, lack of research skills, lack of academic infrastructure, insufficient patient numbers, difficulty undertaking and interpreting systematic reviews and methodological issues relating to unstandardised treatment protocols are all factors that will need to be considered and/or overcome before high quality CAM research can make a contribution to our existing knowledge base.

Financial cost as a barrier

Currently the situation in New Zealand is that acupuncture treatment can generally be claimed under health insurance policies if the practitioner providing the care is a medical doctor. However, these medical doctors make up only 10% of practitioners providing acupuncture care. Therefore, the majority of acupuncture clients must pay for their treatment. The need for women with threatening preterm labour to have frequent treatment (refer this study Tsuei, 1997 and West, 2001) results in the accumulation of a significant cost for these families. For some, this is a barrier to preventative treatment. The removal of this barrier is essential to make acupuncture a more accessible and available option to all women.

Safety

When providing acupuncture treatment to pregnant women additional special safety considerations are required (refer Chapter 1). Both acupuncture practitioners involved in this study specialise in administering acupuncture to pregnant women and are very aware of these considerations. Furthermore, they have both completed relevant educational programmes and are members of a professional body which has standards of care, a code of ethics and a process for dealing with complaints. In their practices, appropriate consideration is given to the prevention of adverse effects from cross infection due to blood-borne infective agents such as Hepatitis and HIV by the use of sterile and disposable needles.

The women in this study reported no adverse effects from the acupuncture treatment.

Limitations of this study

This was a retrospective study where the five women were interviewed some time after having had acupuncture treatment, the birth of their baby and the beginning of this study. Four of the women were interviewed within two years and one (Jenny) was interviewed after a period of six years. Recall of the events occurring at the time could be considered a limiting factor. However, the women remembered their acupuncture treatment for threatened preterm labour as a significant experience in their lives and had no difficulty in recalling this experience. A future prospective study has however been suggested as a strategy to deal with the possible limiting factor of recall bias.

There is always the possibility that some of these women may have completed their pregnancies without acupuncture treatment. However, they all had numerous risk factors in both western medicine and Chinese medicine for a repeat preterm birth experience. Sue's obstetrician was "stunned and gobsmacked" when told that she had completed a full-term pregnancy. There had been a very strong expectation by all the women, their husbands and their LMCs that they would give birth early again. This did not happen in any of the five women's pregnancies despite their numerous risk factors.

Four of the women in this study were clients in my acupuncture practice. Claims could be made that these women told me that acupuncture made a positive difference because they thought it was what I wanted to hear. However, another acupuncturist achieved a similar outcome with a different woman. Other researchers (Tsuei et al, 1977 & West, 2001) also achieved similar outcomes with other women in other cultures and other geographical locations.

Further to the above point, physical and emotional changes noticed by both acupuncturists during the women's treatment were documented at the time of each acupuncture treatment. This was at a time when no research was contemplated. This documentation of changes noticed during and after each treatment is a usual practice by both acupuncturists for all clients in their respective practices. Outcomes of all acupuncture treatments are also recorded for all clients at the time of treatment.

The women in this study were selected purposively and therefore this group of women may not be representative of other women in the population. This type of research does not set out to generalise findings to other settings. In case study research generalisability is to the case/cases and not the total population (Stake,1995).

Due to the time constraints imposed by academic institutions on students to complete research, there was no time for me to investigate and explore other data (e.g. analysis of LMC's narratives, interviews with husbands), other contexts (acupuncturists in different practices), and different cultures. These are areas for further research as it was beyond the scope of this study to do so.

Strengths of this study

Yin (1994) identified four basic techniques for case study as a research method:

- using a case study protocol
- maintaining a chain of evidence
- establishing a case study data base
- collecting multiple sources of evidence

Each one of these was used in my study. They were discussed in depth in Chapter 3: The Research Process (Table 5: Overview of strategies used to ensure trustworthiness in my study). However, to be an exemplary case study the use of these techniques is not sufficient. Yin (1994) describes five key characteristics that must be present. The case study must:

- be significant:
    - the cases are unusual or of general public interest
    - the underlying issues are nationally important, either in theoretical or practical terms
- be "complete":
    - boundaries must be defined
    - exhaustive effort must go into collecting the relevant evidence
    - time or financial constraints must not limit the study
- consider alternative perspectives:
    - cultural views

- different theories
- variety in people or decision makers in the study
- anticipation of alternative interpretation of the facts

- display sufficient evidence:
  - including the participant's narratives
- be composed in an engaging manner:
  - clarity of writing
  - engagement of the reader.

To a large extent, these characteristics are found in this study. For example and as evidenced in the literature review (Chapter 2), the subject of this study is unusual and therefore the study is significant. Further, because the cost of neonatal intensive care is considerable, the subject is of national interest. Boundaries of the case were clearly defined. Rich and descriptive data was collected from the interviews based on the trust and rapport between the researcher the participants. Large sections of the women's and LMC's narratives were displayed in their own words. I must leave it to the reader to decide if this makes compelling reading.

Final thoughts

"The mind has been separated from the body; the disease from the person who has it; the specific pathogen from the disease process as a whole; the parts from each other; the symptom from the source of the ailment; and the patients from their self-responsibility and self-power" (Beinfield & Korngold,1991 p.26).

This quote describing western medicine, paints a picture of separation, isolation, randomness and powerlessness. It is not a picture of integration, completeness, being in control or balance and harmony.

Preterm labour is a complex and multifactorial problem that western medicine has wrestled with for at least 25 years. In this study five women with a high probability for a repeat preterm birth experience all achieved full-term pregnancies and were completely satisfied with the outcomes and the total experience. They all believed acupuncture had prolonged their pregnancies and kept their babies inside their bodies.

Healthcare professionals have a responsibility to offer pregnant women choices so the women can choose the most appropriate healthcare option for their particular situation. To achieve the best possible outcome for women and their babies, healthcare professionals need to respect each other's areas of knowledge and expertise and work alongside each other.

Acupuncture based on the philosophy of TCM, with its holistic and broad worldview may be one way forward in addressing "one of the greatest challenges in obstetric care this decade" (Bocking, 1998, p. 151).

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Appendix A

Differential diagnosis of patterns of disharmony for case study women

Differential diagnosis of patterns of disharmony for case study women

Pattern of disharmony	Aggravated by	Relieved by	Other signs and symptoms	Characteristics of woman	Pulse & tongue
Kidney deficiency	Excessive physical work, heavy lifting, prolonged standing, chronic fear	Rest, interpregnancy interval > 2 yrs & avoidance of aggravating factors	Painful, weak, aching lower back, tinnitus deafness, urinary frequency, nocturia, aching bones, listlessness, fatigue	Tired and fearful	Tongue: body pale Pulse: deep, weak & thready
Kidney yang deficiency	Chronic illness, fatigue, overwork, excessive sex for constitution	Rest & avoidance of aggravating factors	Lower back cold to touch, aversion to cold, cold limbs, aching and cold knees, low libido, female infertility (cold uterus)	Intolerant of cold	Tongue: pale, wet & swollen Pulse: slow, deep & thready
Kidney yin deficiency	Fever associated with chronic illness, coffee, childbirth, miscarriage & abortion, aging	Rest & avoidance of aggravating factors	Heat in the 5 hearts ♥ Malar flush & facial flushing, nights sweats, dry mouth, restlessness & irritability	Intolerant of heat & restless nature	Tongue: body red with little or no coating Pulse: rapid & thready
Spleen qi deficiency	Cold or raw foods, cold-natured medications	Bland, light, well cooked food, small meals, applications of warmth or pressure	Poor appetite, loose stools, fatigue, anorexia, weak tired limbs, abdominal and epigastric distension after eating	Pale complexion, puffy eyes, poor muscle tone	Tongue: pale body, may have tooth marks, thin white coat Pulse: weak thready and deficient

Pattern of disharmony	Aggravated by	Relieved by	Other signs and symptoms	Characteristics of woman	Pulse & tongue
Spleen & Kidney yang deficiency	Cold or damp natured substances like dairy food, uncooked food, juices, antibiotics, sugar, worry, fatigue, over-exertion	Avoidance of aggravating factors, warm easily digested food, pressure & warmth applied to abdomen	Maybe woken early in morning with urgent need to open bowels (cock-crow diarrhoea)	Pale, run down, possibly overweight or tending towards oedema, intolerant of cold	Tongue: body pale & swollen maybe moist Pulse: deep slow and weak
Spleen qi deficiency with Damp	Consumption of dairy, sugar, greasy or rich foods	Simple bland diet	Symptoms often worse in morning, foggy head, heaviness and nausea	Sleepy, sluggish, maybe overweight	Tongue: body maybe swollen, thick, greasy white coating Pulse: slippery or wiry
Spleen qi sinking	Spleen qi or yang deficiency causes Spleen qi to be unable to hold things up	Rest & avoidance of aggravating factors	Prolapse of one or more organs, anorexia, tired and heavy limbs, loose stools, shortness of breath, abdominal & gastric distension after eating	Sallow complexion,	Tongue: body pale and flabby, may have tooth-marks, white coating Pulse: soft and thready
Liver qi stagnation	Emotional upset and stress	Contentment, relaxation and following exercise	Moodiness, depression, premenstrual symptoms, alternating bowel habits	Tense, nervy, more common in females aged 20-50	Tongue: body normal or dark with red edges Pulse: wiry
Liver qi invading Spleen	Emotional upset and stress, eating while upset	Relaxation and following exercise	Moodiness, depression, headaches, general muscle tension, alternating bowel habits	Tense, nervy, more common in females aged 20-50	Tongue: body normal or dark with red edges Pulse: wiry

Table adapted from: Differential Diagnosis Tables in Clinical Handbook of Internal Medicine, Vol 2, Stomach & Spleen, Maclean W. & Lyttleton J., University of Western Sydney, 2003.

Appendix B

1. Wellness Assessment Form

2. Treatment Programme Form

Wellness Assessment Form

Name:	Date of birth:
Address:	Weight: Height: BP:
Telephone:	Children:
Occupation:	Partner / relationship:
Referred by:	Next of kin:
GP name:	GP contact:

Presenting complaint: _____
_____
_____
_____

Medical & surgical history: _____
_____
_____
_____
_____
_____

Medications: _____
_____

Allergies: _____

Family history: _____
_____
_____
_____
_____
_____

Consent: I _____ agree to treatment as appropriate with all procedures and risks having been explained to me.

Signed _____ Date _____

Appearance: _____
Emotional / mental: _____
Sleep: _____
Digestion / bowel: _____
Urinary tract: _____
Lungs / cough: _____
Skin: _____ Nails: _____ Hair: _____
Eyes: _____ Ears: _____ Nose: _____
Thirst:
Hot: _____ Cold: _____
Pain: _____
_____

Menstrual history: Menarche: _____ Regular: _____ Clots: _____
Breasts: _____ Pain: _____ Mood: _____
Cravings: _____ Skin: _____ Bowels: _____
Colour of blood: _____ Bloating: _____
Headaches: _____

Contraception: Pill: _____ IUCD: _____ Diaphragm _____
Other: _____

Obstetric history: G. __ P. __ Pregnancies: _____
_____
Labour: _____
Birth: _____ BF: _____

Diet: Dairy: _____ Sweet: _____ Raw: _____ Cold: _____ Spicy: _____
Regular: _____ Takeaways: _____ Alcohol: _____ Smoking: _____

Exercise: _____

Stress: _____
_____

Pulse: _____

Tongue:
Diagnosis:
Treatment plan:

Treatment Programme Form

Date and time	Treatment programme	Fee

Appendix C

Fundamental concepts and frameworks in traditional Chinese medicine

Fundamental concepts and frameworks in traditional Chinese medicine

Introduction

The traditional concepts introduced in Chapter One are defined here as they relate to the context of traditional Chinese medicine. These concepts are historical, philosophical, theoretical and contextual. They enable a traditional acupuncturist to make linkages between philosophy, medicine theory, observation and clinical practice.

The fundamental concepts and frameworks include: yin and yang, five phase (wu xing), zang fu organs, fundamental substance, channel systems, “four examinations”, “pattern identification”, “eight principles”, needling, moxibustion, tuina, and cupping.

Yin and yang

Yin and yang was originally included in ancient Chinese philosophy. The most ancient expression of this concept seems to have been whether a place faces the sun or not (Kaptchuk, 2000). The place being exposed to the sun is yang, whereas the place not having sun exposure is yin. The meaning of yin and yang was then extended to represent the two opposite but interrelated aspects.

According to the theory of yin yang, yang is associated with qualities such as active, bright, external, functional, upward, hot, and hyperactive; yin is associated with qualities such as passive, dark, internal, substantial, downward, cold, and hypoactive, belong to yin. The concept of yin yang can be used to describe two closely related aspects that form a unit. (Refer to “Polar opposites in yin / yang theory” table below)

Polar opposites in yin / yang theory table

Yin	Yang	Yin	Yang
Dark	Light	Zang organ	Fu organ
Interior	Exterior	Blood	Qi
Deficiency	Excess	Substance	Function
Cold	Hot	Lower part of body	Upper part of body
Stillness	Movement	Dull pain	Sharp pain
Winter	Summer	Dampness	Dryness
Night	Day	Heavy	Light
Falling	Rising	Slow	Rapid
Hard	Soft	Weakness	Strength

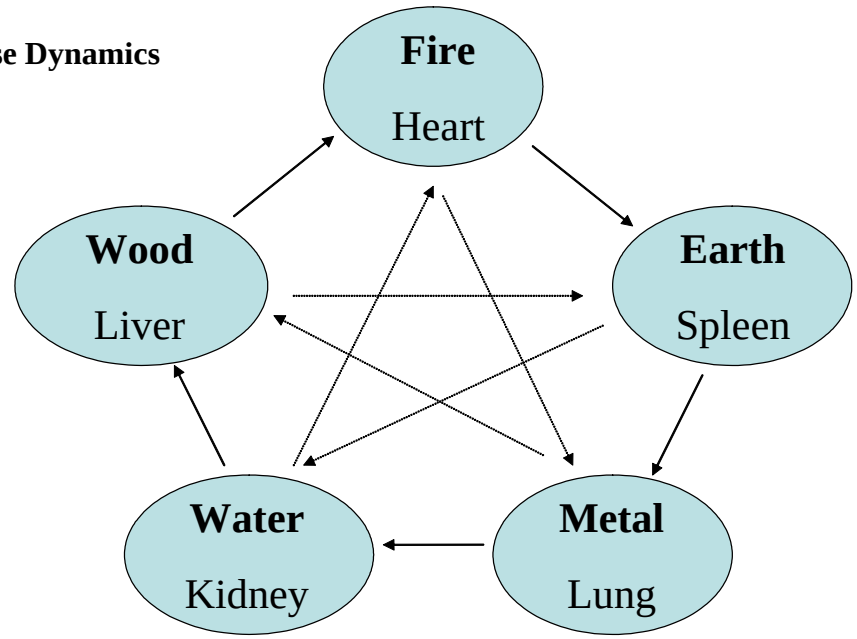
(Beinfield & Korngold, 1992; Campbell, 2002)

The relationship between yin and yang can be described briefly as follows: opposition, inter-dependence, mutual consumption and support, inter-transforming, and infinite divisibility (Cheng, 1996).

Five phase theory (Wu xing)

Five phase theory refers to the five categories of which wood, fire, earth, metal and water interact with each other to maintain a state of constant motion and change (Campbell, 2002; Cheng, 1996). The harmony of interaction within five phase theory is based on the promoting (sheng cycle) and controlling relationships (ke cycle).

Five Phase Dynamics



Classification and correspondences according to five phase theory

	Wood	Fire	Earth	Metal	Water
Season	Spring	Summer	Late Summer	Autumn	Winter
Climatic Qi	Wind	Heat	Damp	Dryness	Cold
Yin Organ	Liver	Heart	Spleen	Lungs	Kidneys
Yang Organ	Gallbladder	Small Intestine	Stomach	Large Intestine	Bladder
Sense Organ	Eyes	Tongue	Mouth	Nose	Ears
Body Tissue	Tendons	Blood Vessels	Muscles	Skin	Bone
Manifestation	Nails	Complexion	Lips	Skin	Hair
Human Sound	Shout	Laugh	Sing	Weep	Groan
Emotion	Anger	Joy	Worry	Sadness	Fear
Taste	Sour	Bitter	Sweet	Spicy	Salty
Colour	Green	Red	Yellow	White	Blue

(Campbell, 2002; Cheng, 1996; Kaptchuk, 2000)

In TCM, five phase theory is applied to explain and analyse the relationships within the internal organs, and the relationships between human beings and the natural world. In the context of the five phase theory, illness is considered a process, not a static entity.

Zang fu organs

The concepts of the internal or zang fu organs in TCM have been developed mainly on the basis of observation of their outward physiological and pathologic manifestations. The zang organs are yin in character and have the functions of storage and transformation of fundamental substances (qi, xue, jin yue, jing, and shen). By contrast, the fu organs are yang in character and have the functions of receiving and transporting food and substances. According to the theory of yin yang, each zang organ is associated with its paired fu organ.

Zang (solid organ)	Fu (hollow organ)
Spleen	Stomach
Liver	Gallbladder
Kidney	Bladder
Heart	Small intestine
Lung	Large intestine
Pericardium	San jiao

Although the organs are identified by their western anatomical names, TCM views their function on a far broader scope. For example, the "Liver" in TCM is as closely related to its emotional function as its digestive function, while the "Heart" not only promotes blood circulation but also has the function of "governing" mental and spiritual activity.

The main function and syndromes of zang fu organs

	Functions	Syndromes
Spleen	Transporting, distributing and transforming nutrients; keeps blood circulating within the vessels; holds organs in place.	Weakness and fatigue, indigestion, constipation or loose stools, haemorrhages, prolapse of internal organs and heaviness in limbs.
Liver	Stores the blood; ensures the smooth flow of qi in the entire body.	Migraine, symptoms worsen with anger and frustration, or pressure, premenstrual tension, irregular or painful menstruation, irregular bowel movement, propensity to anger and frustration.
Kidney	Stores the Essence; promotes growth and development, fertility; governs water metabolism; controls reception of qi.	Back pain, knee pain, low libido, diminished hearing, miscarriage, retarded growth, premature menopause, frequent urination and weak bones.
Heart	Controls blood circulation; houses the spirit or shen.	Disturbed sleep, nervousness, palpitations, intermittent pulse and mental disturbance.
Lung	Governs qi and respiration; dominates dispersing and descending movement of qi; regulates the water pathways; regulates vessels; controls the rhythmic movements of the lung.	Shortness of breath, wheezing, coughing, dryness of nose and throat, respiratory symptoms and skin allergies, fatigue and anaemia.

(Beinfield & Korngold, 1992; Campbell, 2002; Cheng, 1996; Kaptchuk, 2000)

The concepts in TCM suggest that each internal organ is a system in its own right (Campbell, 2002). The internal organs can also be seen as a network of relationships (Beinfield & Korngold, 1992). Harmony among the zang fu organs is mainly based on the theories of yin yang, and five phase theory. Equilibrium between the external and internal environments is maintained through the connection between the channels and the zang fu organs.

Fundamental substances: qi, blood (xue), body fluids (jin ye), essence (jing) and spirit (shen). Qi has been casually translated with the term “energy” or ‘life force”, but the concept of qi extends considerably further. Everything in the universe is composed of qi, including the fundamental substances and the phenomena of their changes or motions. In TCM, qi refers to a range of dynamic physiological process, in which the idea of movement is paramount (Campbell, 2002), such as activation, warming, defence, transformation, and containment.

Blood (xue) is mainly composed of nutritive qi and body fluids and formed by the functional activities of zang fu organs such as the spleen, stomach, kidney, liver, heart and lung (Cheng, 1996). This is in contrast to the western medicine concept that blood is produced by the bone marrow. The main function of blood is to nourish the whole body. As well, in TCM the function of blood is also regarded as the material basis for spiritual and mental activities (shen).

Body fluids (jin ye) refer to all fluids normally secreted in the body that serve to lubricate, moisten and nourish the body. Fluids can be separated into humour (ye) and liquid (jin). Liquid is thin and moistens the skin, nose, eyes, mouth, muscles and other orifices. Humour is thick and sticky and lubricates the joints, nourishing and moisturising the brain, spinal cord and bone marrow.

Qi, blood and body fluids are closely related to each other. The activities of qi transform food and water into nutritive qi and body fluids and ultimately into blood. Blood and body fluids are yin substances which are motionless in nature and depend on qi for their movement. Both blood and body fluids are derived from food and water, hence they are said to have "a common source”, and can be transformed into each other.

Essence (jing) is an essential part of the body that determines marrow, bone, growth, reproduction, development, and basic constitution. It has no equivalent in western medicine. By contrast to qi, Essence can be considered to be closely associated with slow developmental change of the individual throughout life (Kaptchuk, 2000).

Spirit (shen) in Chinese, encompasses human consciousness, healthy mental and physical function. Jing, qi, and shen are referred to in Chinese tradition as "the three treasures" (Campbell, 2002). In TCM, shen and the body are inseparable and part of the unity of the cosmos. Different aspects of shen, which are known as five spirits and seven emotions, are linked to specific organs in TCM. For example, "Kidney" is responsible for the will (zhi); "Liver" is responsible for the ethereal soul (hun); anger is related to the "Liver"; joy is related to the Heart; intellect belongs to the "Spleen".

Channel systems (jing luo)

The channel systems consist of the channels (jing mai) and collaterals (luo mai) and their connective parts. The channels include the twelve regular channels and their branches, the divergent, the musculotendinous, the cutaneous, and the eight extraordinary channels. The twelve regular channels include three yin and three yang channels of the hand and foot. The eight extraordinary channels intersect with the main channels at special connecting points known as master or confluent points and by this connection are able to influence flows within the main channel system. The collaterals are the connecting branches between the channels including fifteen collaterals, minute collaterals and superficial collaterals.

The twelve regular channels are responsible for the main circulation of qi, blood, and body fluids. Qi and blood in the channels are regulated and controlled by the eight extraordinary channels. Through the connection of the collaterals qi and blood are transported throughout the body.

The "four examinations", "pattern identification" and "eight principles"

The "four examinations" include inspection, listening and smelling, inquiry and palpation, which can be summarised as followed:

- Inspection of the client's overall physical condition including complexion, tongue, secretions and emotional state
- Listening to the client's voice and respiration, and smelling of any body or breath odours
- Inquiry for information on present and past conditions including: childhood and family health history; allergies; sensations of hot or cold; headaches and dizziness; quality, nature and location of pain; thirst; appetite and tastes; bowel movement; patterns of sleep; work and lifestyle stress and emotional state
- Palpation of the body to determine sensitivity or pain, including taking of the pulses. (Kaptchuk, 2000).

After the four examinations, the data is gathered and integrated into TCM theory in order to understand the aetiology, location and nature of patho-physiological changes. This process is called "**pattern identification**". The "**eight principles**" (ba gang) is a general method by which this process happens (Campbell, 2002; Cheng, 1996; Kaptchuk, 2000). The "eight principles" refer to four pairs of syndromes: yin and yang; interior and exterior; cold and hot and deficiency and excess.

Needling, moxibustion, massage (tuina) and cupping

The common methods of acupuncture point stimulation include needling, moxibustion, massage (tuina) and cupping. Needling method refers to insertion of fine stainless steel needles into acupuncture points accompanied by manipulation of the needles. Moxibustion is a therapeutic approach which involves applying heat to points through burning a herb Artemisia Vulgaris (moxa) in the form of a cone or stick. Tuina massage applies pressure to the points or the channels and may be called acupressure. Cupping is attaching small jars to the skin surface to move stagnation qi and blood and to balance yin and yang.

Adapted and taken from Wang (2004), Appendix 1.

AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Information Sheet (Women)

Study Title

Multiple case studies of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour

Introduction

You are invited to participate in this study that aims to describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour. My name is Anneke Robinson. I am a lecturer in midwifery and an acupuncturist. I am very interested in this area of pregnancy. I have the opportunity to undertake this research as part of my studies for a Master of Health Science degree through Auckland University of Technology. My supervisor for this study is Dr Elizabeth Smythe (PhD).

What is the research study about?

In New Zealand and overseas, 7 – 10% of babies are born preterm (less than 37 completed weeks of pregnancy). The study in which you are invited to participate will describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour.

You are invited to participate if:

1. You have a previous history of having had a baby at less than 37 completed weeks of pregnancy.
2. You had acupuncture in a subsequent pregnancy related to preterm labour
3. Your lead maternity carer was either an independent midwife or general medical practitioner (GP)
4. You carried one baby only (not twins or more)
5. You are able to speak and read English
6. You live within a two-hour drive of central Auckland.

Non-participation and/or withdrawal

1. Your participation is entirely voluntary (your choice). You do not have to take part in this study. If you decide not to participate this will not affect any future care or treatment.
2. If you do agree to take part you are free to withdraw from the study at any time, without having to give a reason and this will in no way affect any future care or treatment.

What you are asked to do

As part of this study you are being asked to participate in an interview, likely to take 60 minutes, with me alone as the researcher. You may stop this interview at any time. You will be one of 4 to 8 women taking part in the study. Each woman will be interviewed separately and confidentially. The interview will be audiotape recorded and I will employ a transcriber to document the recording for me. This person will sign a confidentiality agreement stating that the content of the interview will remain confidential and that they will not discuss any aspect of the research with any other person than myself. I will give you a copy of the transcript to allow you to delete any portion or make any changes.

Private Bag 92006 Auckland 1020 New Zealand
Facsimile 64-9-917 9796 Telephone 64-9-917 9999 Extension 7735

Faculty of Health Studies

I will also ask to conduct and record an interview with your lead maternity carer, review your midwifery clinical notes and review your acupuncture clinical notes. This is important to ensure consistency of findings and analysis of the findings in this research study.

Benefits, Risks and Safety

Through your participation in this study you will know that you have contributed to a growing body of knowledge that may assist you and other women in the future.

Through participation, you could possibly experience some emotional stress as a result of revisiting the previous preterm birth experience. Should you experience any emotional distress as a result of participating, counselling will be provided free of charge by Auckland University of Technology Health Counsellors.

If you have any concerns about the nature of this research, you should first contact the research Supervisor identified below.

If you have any queries or concerns about your rights as a participant in this study, you may wish to contact Northland to Franklin – Health Advocates Trust – 0800 20 555 050.

Confidentiality

All materials and your identity will be kept confidential. All transcripts and other related documents, including the audiotapes, will be kept in a safe place for a period of 10 years after which they will be confidentially destroyed or, if you wish, given to you once the study has been completed. A copy of the data will also by securely stored at Auckland University of Technology. No material that could personally identify you will be used in any reports on this study. Pseudonyms will be used in any reporting of results, publications or presentations to protect the confidentiality of you as a participant.

Results

If you wish to receive a copy of the results of this research, please indicate this by answering question 11 on the study Consent Form. Please note that there will be a delay between the time of the interviews and the time the study results are available. Copies of the research results (thesis) will be lodged in libraries. Journal articles may be written for publication. Presentations at midwifery and acupuncture conferences may be made.

Statement of Approval

This study has received ethical approval from the Auckland Ethics Committee and Auckland University of Technology. Please feel free to contact the researcher if you have any questions about this study.

Compensation

In the unlikely event of a physical injury as a result of your participation in this study, you will be covered by the accident compensation legislation with its limitations. If you have any questions about ACC please feel free to ask the researcher for more information before you agree to take part in this research study.

Principal Researcher:

Anneke Robinson. Senior Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, Phone (09) 307 9999, Ext 7312. Acupuncturist, Auckland, phone (09) 520 1187.

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, phone (09) 307 9999, Ext 7196.

AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Consent Form (Women)

Study Title: Multiple case studies of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour

1. I have read and I understand the information sheet dated 1 July 2002 for volunteers taking part in the study designed to describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour.

2. I have had the opportunity to discuss this study. I am satisfied with the answers I have been given.

3. I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time and this will in no way affect my future and continuing health care.

4. I understand that my participation in this study is confidential and that no material that could identify me will be used in any reports on this study.

5. I have had time to consider whether to take part.

6. I understand the compensation provisions of this study.

7. I know whom to contact if I have any questions about the study.

8. I agree to the Researcher interviewing my Lead Maternity Carer; audio taping the interview, having the results transcribed and reviewing my midwifery clinical notes. YES/NO

9. I agree to the Researcher (where applicable) contacting my acupuncturist and reviewing my acupuncture clinical notes. YES/NO.

10. I consent to my interview being audiotaped and transcribed. YES/NO

11. I wish to receive a copy of the results YES/NO

I ---------- (full name) hereby consent to take part in this study.

Signature ---------- Date ----------

Principal Researcher:

Anneke Robinson. Senior Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, Phone (09) 307 9999, Ext 7312. Acupuncturist, Auckland, phone (09) 520 1187.

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, phone (09) 307 9999, Ext 7196.

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AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Information Sheet (Lead Maternity Carer - LMC)

Study Title

Multiple case studies of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour

Introduction

You are invited to participate in this study that aims to describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour. My name is Anneke Robinson. I am a lecturer in midwifery and an acupuncturist. I am very interested in this area of pregnancy. I have the opportunity to undertake this research as part of my studies for a Master of Health Science degree through Auckland University of Technology. My supervisor for this study is Dr Elizabeth Smythe (PhD).

What is the research study about?

In New Zealand and overseas, 7 – 10% of babies are born preterm (less than 37 completed weeks of pregnancy). Despite major advances in neonatal and obstetrical technology and care the rate of preterm birth, both in New Zealand and overseas, has remained the same for the last 20 years. The causes of preterm labour are not clearly understood and therefore the best approach to preventing and treating preterm labour is not known. However, in a study of women in preterm labour conducted in a hospital in Hawaii in 1977, 12 women were treated with acupuncture. Eleven of the 12 women got to full term (more than 37 completed weeks).

The study in which you are invited to participate will describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour. It will also identify areas that have potential for further research.

You are invited to participate if you have been the LMC for any woman who has agreed to be in this study, have her midwifery clinical notes reviewed and meets the following inclusion criteria:

1. Has had a previous history of having had a baby at less than 37 completed weeks of pregnancy.
2. Has had acupuncture in a subsequent pregnancy related to preterm labour
3. You were either the independent midwife or general medical practitioner (GP)
4. The woman had a singleton pregnancy
5. The woman was able to speak and read English (this also applies to you as LMC)
6. The woman lived within a two-hour drive of central Auckland (this also applies to you as LMC).

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Faculty of Health Studies

Non-participation and/or withdrawal

1. Your participation is entirely voluntary. You do not have to take part in this study. If you decide not to participate this will in no way affect the professional relationship you have with the researcher or your clients.
2. If you do agree to take part you are free to withdraw from the study at any time, without having to give a reason and this will in no way affect the professional relationship you have with the researcher or your clients.

What you are asked to do

As part of this study you are being asked to participate in an interview, likely to take 60 minutes, with me alone as the researcher. You may stop this interview at any time. You will be one of 4 to 8 LMCs taking part in the study. Each LMC will be interviewed separately and confidentially. The interview will be audiotape recorded and I will employ a transcriber to document the recording for me. This person will sign a confidentiality agreement stating that the content of the interview will remain confidential. I will give you a copy of the transcript to allow you to delete any portion or make any changes.

I will also ask to conduct and record an interview with the woman for whom you were the LMC and review her midwifery clinical notes. This is important to ensure consistency of findings and analysis of the findings in this research study.

Benefits, Risks and Safety

Participation in this study may contribute to a growing body of knowledge that may assist women in the future.

If there are any concerns about the nature of this research, first contact the research Supervisor identified below.

If there are any queries or concerns about rights as a participant in this study, please contact Northland to Franklin – Health Advocates Trust – 0800 555 050.

Confidentiality

All materials and your identity will be kept confidential. All transcripts and other related documents, including the audiotapes, will be kept in a safe place for a period of 10 years after which they will be confidentially destroyed or, if you wish, given to you once the study has been completed. If you agree, information from this study may be kept for use in a future study. However, any future study will require approval by an accredited ethics committee. The data will by securely stored in a locked cabinet at Auckland University of Technology. No material that could personally identify you will be used in any reports on this study. Pseudonyms will be used in any reporting of results, publications or presentations to protect the confidentiality of you as a participant.

Results

If you wish to receive a copy of the results of this research, please indicate this by answering question 11 on the study Consent Form. Please note that there will be a delay between the time of the interviews and the time the study results are available. Copies of the research results (thesis) will be lodged in libraries. Journal articles may be written for publication. Presentations at midwifery and acupuncture conferences may be made.

Statement of Approval

This study has received ethical approval from the Auckland Ethics Committee and Auckland University of Technology. Please feel free to contact the researcher if you have any questions about this study.

Compensation

In the unlikely event of a physical injury as a result of your participation in this study, you will be covered by the accident compensation legislation with its limitations. If you have any questions about ACC please feel free to ask the researcher for more information before you agree to take part in this research study.

Principal Researcher:

Anneke Robinson. Senior Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, Phone (09) 307 9999, Ext 7312. Acupuncturist, Auckland, phone (09) 520 1187 (work).

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, phone (09) 307 9999, Ext 7196.

AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Consent Form (Lead Maternity Carer)

Study Title: Multiple case studies of women who have received traditional Chinese acupuncture treatment for threatened preterm labour

1. I have read and I understand the information sheet dated 1 July 2002 for volunteers taking part in the study designed to describe and explore the experience of women who have received traditional Chinese acupuncture for threatened preterm labour

2. I have had the opportunity to discuss this study. I am satisfied with the answers I have been given.

3. I understand that taking part in this study is voluntary and that I may withdraw from the study at any time and this will in no way affect the professional relationship you have with the researcher or your clients.

4. I understand that my participation in this study is confidential and that no material that could identify me will be used in any reports on this study.

5. I have had time to consider whether to take part.

6. I understand the compensation provisions of this study.

7. I know whom to contact if I have any questions about the study.

8. I agree to the Researcher reviewing my midwifery clinical notes for the women participating in the study (subject to receipt of prior consent from the women). Yes/No

9. I consent to my interview being audio-taped and transcribed Yes/No

10. I wish to receive a copy of the results Yes/No

I ..... (full name) hereby consent to take part in this study.

Signature ..... Date .....

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Faculty of Health Studies

Principle Researcher:

Anneke Robinson. Senior Lecturer – Midwifery, Auckland University of Technology, Faculty of Health Studies, phone 09 307 999 ex 7312. Acupuncturist, Auckland, phone 09 520 1187.

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer – Midwifery, Auckland University of Technology, Faculty of Health Studies, phone 09 307 999 ex 7196.

AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Information Sheet (Acupuncturist)

Study Title

Multiple case studies of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour

Introduction

You are invited to participate in this study that aims to describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour. My name is Anneke Robinson. I am a lecturer in midwifery and an acupuncturist. I am very interested in this area of pregnancy. I have the opportunity to undertake this research as part of my studies for a Master of Health Science degree through Auckland University of Technology. My supervisor for this study is Dr Elizabeth Smythe (PhD).

What is the research study about?

In New Zealand and overseas, 7 – 10% of babies are born preterm (less than 37 completed weeks of pregnancy). Despite major advances in neonatal and obstetrical technology and care the rate of preterm birth, both in New Zealand and overseas, has remained the same for the last 20 years. The causes of preterm labour are not clearly understood and therefore the best approach to preventing and treating preterm labour is not known. However, in a study of women in preterm labour conducted in a hospital in Hawaii in 1977, 12 women were treated with acupuncture. Eleven of the 12 women got to full term (more than 37 completed weeks).

The study in which you are invited to participate will describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour. It will also identify areas that have potential for further research.

You are invited to participate if you have been the acupuncturist for any woman who has agreed to be in this study, have her acupuncture clinical notes reviewed and meets the following inclusion criteria:

1. Has had a previous history of having had a baby at less than 37 completed weeks of pregnancy.
2. Has had acupuncture in a subsequent pregnancy related to preterm labour
3. You were either the acupuncturist administering the acupuncture during the subsequent pregnancy
4. The woman had a singleton pregnancy
5. The woman was able to speak and read English (also applies to you as the acupuncturist)
6. The woman lived within a two-hour drive of central Auckland (also applies to you as the acupuncturist).

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Faculty of Health Studies

Non-participation and/or withdrawal

1. Your participation is entirely voluntary. You do not have to take part in this study. If you decide not to participate this will in no way affect the professional relationship you have with the researcher or your clients.
2. If you do agree to take part you are free to withdraw from the study at any time, without having to give a reason and this will in no way affect the professional relationship you have with the researcher or your clients.

What you are asked to do

As part of this study you are being asked to make available to the researcher, the participating women's acupuncture clinical notes for review (subject to receipt of prior consent from the women). This is important to ensure consistency of findings and analysis of the findings in this research study. Four to 8 women and their LMCs will take part in the study. Each woman and LMC will be interviewed separately and confidentially. The interview will be audiotape recorded and I will employ a transcriber to document the recording for me. This person will sign a confidentiality agreement stating that the content of the interview will remain confidential. I will give a copy of the transcripts to the women and the LMCs to allow them to delete any portion or make any changes.

Benefits, Risks and Safety

Participation in this study may contribute to a growing body of knowledge that may assist women in the future.

If there are any concerns about the nature of this research, first contact the research Supervisor identified below.

If there are any queries or concerns about rights as a participant in this study, please contact Northland to Franklin – Health Advocates Trust – 0800 555 050.

Confidentiality

All materials and your identity will be kept confidential. All transcripts and other related documents, including the audiotapes, will be kept in a safe place for a period of 10 years after which they will be confidentially destroyed or, if you wish, given to you once the study has been completed. If you agree, information from this study may be kept for use in a future study. However, any future study will require approval by an accredited ethics committee. The data will by securely stored in a locked cabinet at Auckland University of Technology. No material that could personally identify you will be used in any reports on this study. Pseudonyms will be used in any reporting of results, publications or presentations to protect the confidentiality of you as a participant.

Results

If you wish to receive a copy of the results of this research, please indicate this by answering question 11 on the study Consent Form. Please note that there will be a delay between the time of the interviews and the time the study results are available. Copies of the research results (thesis) will be lodged in libraries. Journal articles may be written for publication. Presentations at midwifery and acupuncture conferences may be made.

Statement of Approval

This study has received ethical approval from the Auckland Ethics Committee and Auckland University of Technology. Please feel free to contact the researcher if you have any questions about this study.

Compensation

In the unlikely event of a physical injury as a result of your participation in this study, you will be covered by the accident compensation legislation with its limitations. If you have any questions about ACC please feel free to ask the researcher for more information before you agree to take part in this research study.

Principal Researcher:

Anneke Robinson. Senior Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, Phone (09) 307 9999, Ext 7312. Acupuncturist, Auckland, phone (09) 520 1187 (work).

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, phone (09) 307 9999, Ext 7196.

AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Consent Form (Acupuncturist)

Study Title: Multiple case studies of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour

1. I have read and I understand the information sheet dated 1 July 2002 for volunteers taking part in the study designed to describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour.

2. I have had the opportunity to discuss this study. I am satisfied with the answers I have been given.

3. I understand that taking part in this study is voluntary and that I may withdraw from the study at any time and this will in no way affect the professional relationship you have with the researcher or your clients.

4. I understand that my participation in this study is confidential and that no material that could identify me will be used in any reports on this study.

5. I have had time to consider whether to take part.

6. I understand the compensation provisions of this study.

7. I know whom to contact if I have any questions about the study.

8. I agree to the Researcher reviewing my acupuncture clinical notes for the women participating in the study (subject to receipt of prior consent from the women). YES/NO

9. I consent to information being kept for use in a future study approved by an accredited ethics committee YES/NO

10. I wish to receive a copy of the results YES/NO

I ---------- (full name) hereby consent to take part in this study.

Signature ---------- Date ----------

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Faculty of Health Studies

Principal Researcher:

Anneke Robinson. Senior Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, Phone (09) 307 9999, Ext 7312. Acupuncturist, Auckland, phone (09) 520 1187 (work).

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, phone (09) 307 9999, Ext 7196.

AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Information Sheet (Women)

Study Title

Multiple case studies of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour

Introduction

You are invited to participate in this study that aims to describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour. My name is Anneke Robinson. I am a lecturer in midwifery and an acupuncturist. I am very interested in this area of pregnancy. I have the opportunity to undertake this research as part of my studies for a Master of Health Science degree through Auckland University of Technology. My supervisor for this study is Dr Elizabeth Smythe (PhD).

What is the research study about?

In New Zealand and overseas, 7 – 10% of babies are born preterm (less than 37 completed weeks of pregnancy). The study in which you are invited to participate will describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour.

You are invited to participate if:

1. You have a previous history of having had a baby at less than 37 completed weeks of pregnancy.
2. You had acupuncture in a subsequent pregnancy related to preterm labour
3. Your lead maternity carer was either an independent midwife or general medical practitioner (GP)
4. You carried one baby only (not twins or more)
5. You are able to speak and read English
6. You live within a two-hour drive of central Auckland.

Non-participation and/or withdrawal

1. Your participation is entirely voluntary (your choice). You do not have to take part in this study. If you decide not to participate this will not affect any future care or treatment.
2. If you do agree to take part you are free to withdraw from the study at any time, without having to give a reason and this will in no way affect any future care or treatment.

What you are asked to do

As part of this study you are being asked to participate in an interview, likely to take 60 minutes, with me alone as the researcher. You may stop this interview at any time. You will be one of 4 to 8 women taking part in the study. Each woman will be interviewed separately and confidentially. The interview will be audiotape recorded and I will employ a transcriber to document the recording for me. This person will sign a confidentiality agreement stating that the content of the interview will remain confidential and that they will not discuss any aspect of the research with any other person than myself. I will give you a copy of the transcript to allow you to delete any portion or make any changes.

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Faculty of Health Studies

I will also ask to conduct and record an interview with your lead maternity carer, review your midwifery clinical notes and review your acupuncture clinical notes. This is important to ensure consistency of findings and analysis of the findings in this research study.

Benefits, Risks and Safety

Through your participation in this study you will know that you have contributed to a growing body of knowledge that may assist you and other women in the future.

Through participation, you could possibly experience some emotional stress as a result of revisiting the previous preterm birth experience. Should you experience any emotional distress as a result of participating, counselling will be provided free of charge by Auckland University of Technology Health Counsellors.

If you have any concerns about the nature of this research, you should first contact the research Supervisor identified below.

If you have any queries or concerns about your rights as a participant in this study, you may wish to contact Northland to Franklin – Health Advocates Trust – 0800 20 555 050.

Confidentiality

All materials and your identity will be kept confidential. All transcripts and other related documents, including the audiotapes, will be kept in a safe place for a period of 10 years after which they will be confidentially destroyed or, if you wish, given to you once the study has been completed. A copy of the data will also by securely stored at Auckland University of Technology. No material that could personally identify you will be used in any reports on this study. Pseudonyms will be used in any reporting of results, publications or presentations to protect the confidentiality of you as a participant.

Results

If you wish to receive a copy of the results of this research, please indicate this by answering question 11 on the study Consent Form. Please note that there will be a delay between the time of the interviews and the time the study results are available. Copies of the research results (thesis) will be lodged in libraries. Journal articles may be written for publication. Presentations at midwifery and acupuncture conferences may be made.

Statement of Approval

This study has received ethical approval from the Auckland Ethics Committee and Auckland University of Technology. Please feel free to contact the researcher if you have any questions about this study.

Compensation

In the unlikely event of a physical injury as a result of your participation in this study, you will be covered by the accident compensation legislation with its limitations. If you have any questions about ACC please feel free to ask the researcher for more information before you agree to take part in this research study.

Principal Researcher:

Anneke Robinson. Senior Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, Phone (09) 307 9999, Ext 7312. Acupuncturist, Auckland, phone (09) 520 1187.

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, phone (09) 307 9999, Ext 7196.

AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Consent Form (Women)

Study Title: Multiple case studies of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour

1. I have read and I understand the information sheet dated 1 July 2002 for volunteers taking part in the study designed to describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour.

2. I have had the opportunity to discuss this study. I am satisfied with the answers I have been given.

3. I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time and this will in no way affect my future and continuing health care.

4. I understand that my participation in this study is confidential and that no material that could identify me will be used in any reports on this study.

5. I have had time to consider whether to take part.

6. I understand the compensation provisions of this study.

7. I know whom to contact if I have any questions about the study.

8. I agree to the Researcher interviewing my Lead Maternity Carer; audio taping the interview, having the results transcribed and reviewing my midwifery clinical notes. YES/NO

9. I agree to the Researcher (where applicable) contacting my acupuncturist and reviewing my acupuncture clinical notes. YES/NO.

10. I consent to my interview being audiotaped and transcribed. YES/NO

11. I wish to receive a copy of the results YES/NO

I ---------- (full name) hereby consent to take part in this study.

Signature ---------- Date ----------

Principal Researcher:

Anneke Robinson. Senior Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, Phone (09) 307 9999, Ext 7312. Acupuncturist, Auckland, phone (09) 520 1187.

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, phone (09) 307 9999, Ext 7196.

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AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Information Sheet (Lead Maternity Carer - LMC)

Study Title

Multiple case studies of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour

Introduction

You are invited to participate in this study that aims to describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour. My name is Anneke Robinson. I am a lecturer in midwifery and an acupuncturist. I am very interested in this area of pregnancy. I have the opportunity to undertake this research as part of my studies for a Master of Health Science degree through Auckland University of Technology. My supervisor for this study is Dr Elizabeth Smythe (PhD).

What is the research study about?

In New Zealand and overseas, 7 – 10% of babies are born preterm (less than 37 completed weeks of pregnancy). Despite major advances in neonatal and obstetrical technology and care the rate of preterm birth, both in New Zealand and overseas, has remained the same for the last 20 years. The causes of preterm labour are not clearly understood and therefore the best approach to preventing and treating preterm labour is not known. However, in a study of women in preterm labour conducted in a hospital in Hawaii in 1977, 12 women were treated with acupuncture. Eleven of the 12 women got to full term (more than 37 completed weeks).

The study in which you are invited to participate will describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour. It will also identify areas that have potential for further research.

You are invited to participate if you have been the LMC for any woman who has agreed to be in this study, have her midwifery clinical notes reviewed and meets the following inclusion criteria:

1. Has had a previous history of having had a baby at less than 37 completed weeks of pregnancy.
2. Has had acupuncture in a subsequent pregnancy related to preterm labour
3. You were either the independent midwife or general medical practitioner (GP)
4. The woman had a singleton pregnancy
5. The woman was able to speak and read English (this also applies to you as LMC)
6. The woman lived within a two-hour drive of central Auckland (this also applies to you as LMC).

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Faculty of Health Studies

Non-participation and/or withdrawal

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2. If you do agree to take part you are free to withdraw from the study at any time, without having to give a reason and this will in no way affect the professional relationship you have with the researcher or your clients.

What you are asked to do

As part of this study you are being asked to participate in an interview, likely to take 60 minutes, with me alone as the researcher. You may stop this interview at any time. You will be one of 4 to 8 LMCs taking part in the study. Each LMC will be interviewed separately and confidentially. The interview will be audiotape recorded and I will employ a transcriber to document the recording for me. This person will sign a confidentiality agreement stating that the content of the interview will remain confidential. I will give you a copy of the transcript to allow you to delete any portion or make any changes.

I will also ask to conduct and record an interview with the woman for whom you were the LMC and review her midwifery clinical notes. This is important to ensure consistency of findings and analysis of the findings in this research study.

Benefits, Risks and Safety

Participation in this study may contribute to a growing body of knowledge that may assist women in the future.

If there are any concerns about the nature of this research, first contact the research Supervisor identified below.

If there are any queries or concerns about rights as a participant in this study, please contact Northland to Franklin – Health Advocates Trust – 0800 555 050.

Confidentiality

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Results

If you wish to receive a copy of the results of this research, please indicate this by answering question 11 on the study Consent Form. Please note that there will be a delay between the time of the interviews and the time the study results are available. Copies of the research results (thesis) will be lodged in libraries. Journal articles may be written for publication. Presentations at midwifery and acupuncture conferences may be made.

Statement of Approval

This study has received ethical approval from the Auckland Ethics Committee and Auckland University of Technology. Please feel free to contact the researcher if you have any questions about this study.

Compensation

In the unlikely event of a physical injury as a result of your participation in this study, you will be covered by the accident compensation legislation with its limitations. If you have any questions about ACC please feel free to ask the researcher for more information before you agree to take part in this research study.

Principal Researcher:

Anneke Robinson. Senior Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, Phone (09) 307 9999, Ext 7312. Acupuncturist, Auckland, phone (09) 520 1187 (work).

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, phone (09) 307 9999, Ext 7196.

AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Consent Form (Lead Maternity Carer)

Study Title: Multiple case studies of women who have received traditional Chinese acupuncture treatment for threatened preterm labour

1. I have read and I understand the information sheet dated 1 July 2002 for volunteers taking part in the study designed to describe and explore the experience of women who have received traditional Chinese acupuncture for threatened preterm labour

2. I have had the opportunity to discuss this study. I am satisfied with the answers I have been given.

3. I understand that taking part in this study is voluntary and that I may withdraw from the study at any time and this will in no way affect the professional relationship you have with the researcher or your clients.

4. I understand that my participation in this study is confidential and that no material that could identify me will be used in any reports on this study.

5. I have had time to consider whether to take part.

6. I understand the compensation provisions of this study.

7. I know whom to contact if I have any questions about the study.

8. I agree to the Researcher reviewing my midwifery clinical notes for the women participating in the study (subject to receipt of prior consent from the women). Yes/No

9. I consent to my interview being audio-taped and transcribed Yes/No

10. I wish to receive a copy of the results Yes/No

I ..... (full name) hereby consent to take part in this study.

Signature ..... Date .....

Private Bag 92006 Auckland 1020 New Zealand
Facsimile 64-9-917 9796 Telephone 64-9-917 9999 Extension 7735

Faculty of Health Studies

Principle Researcher:

Anneke Robinson. Senior Lecturer – Midwifery, Auckland University of Technology, Faculty of Health Studies, phone 09 307 999 ex 7312. Acupuncturist, Auckland, phone 09 520 1187.

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer – Midwifery, Auckland University of Technology, Faculty of Health Studies, phone 09 307 999 ex 7196.

AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Information Sheet (Acupuncturist)

Study Title

Multiple case studies of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour

Introduction

You are invited to participate in this study that aims to describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour. My name is Anneke Robinson. I am a lecturer in midwifery and an acupuncturist. I am very interested in this area of pregnancy. I have the opportunity to undertake this research as part of my studies for a Master of Health Science degree through Auckland University of Technology. My supervisor for this study is Dr Elizabeth Smythe (PhD).

What is the research study about?

In New Zealand and overseas, 7 – 10% of babies are born preterm (less than 37 completed weeks of pregnancy). Despite major advances in neonatal and obstetrical technology and care the rate of preterm birth, both in New Zealand and overseas, has remained the same for the last 20 years. The causes of preterm labour are not clearly understood and therefore the best approach to preventing and treating preterm labour is not known. However, in a study of women in preterm labour conducted in a hospital in Hawaii in 1977, 12 women were treated with acupuncture. Eleven of the 12 women got to full term (more than 37 completed weeks).

The study in which you are invited to participate will describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour. It will also identify areas that have potential for further research.

You are invited to participate if you have been the acupuncturist for any woman who has agreed to be in this study, have her acupuncture clinical notes reviewed and meets the following inclusion criteria:

1. Has had a previous history of having had a baby at less than 37 completed weeks of pregnancy.
2. Has had acupuncture in a subsequent pregnancy related to preterm labour
3. You were either the acupuncturist administering the acupuncture during the subsequent pregnancy
4. The woman had a singleton pregnancy
5. The woman was able to speak and read English (also applies to you as the acupuncturist)
6. The woman lived within a two-hour drive of central Auckland (also applies to you as the acupuncturist).

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Facsimile 64-9-917 9796 Telephone 64-9-917 9999 Extension 7735

Faculty of Health Studies

Non-participation and/or withdrawal

1. Your participation is entirely voluntary. You do not have to take part in this study. If you decide not to participate this will in no way affect the professional relationship you have with the researcher or your clients.
2. If you do agree to take part you are free to withdraw from the study at any time, without having to give a reason and this will in no way affect the professional relationship you have with the researcher or your clients.

What you are asked to do

As part of this study you are being asked to make available to the researcher, the participating women's acupuncture clinical notes for review (subject to receipt of prior consent from the women). This is important to ensure consistency of findings and analysis of the findings in this research study. Four to 8 women and their LMCs will take part in the study. Each woman and LMC will be interviewed separately and confidentially. The interview will be audiotape recorded and I will employ a transcriber to document the recording for me. This person will sign a confidentiality agreement stating that the content of the interview will remain confidential. I will give a copy of the transcripts to the women and the LMCs to allow them to delete any portion or make any changes.

Benefits, Risks and Safety

Participation in this study may contribute to a growing body of knowledge that may assist women in the future.

If there are any concerns about the nature of this research, first contact the research Supervisor identified below.

If there are any queries or concerns about rights as a participant in this study, please contact Northland to Franklin – Health Advocates Trust – 0800 555 050.

Confidentiality

All materials and your identity will be kept confidential. All transcripts and other related documents, including the audiotapes, will be kept in a safe place for a period of 10 years after which they will be confidentially destroyed or, if you wish, given to you once the study has been completed. If you agree, information from this study may be kept for use in a future study. However, any future study will require approval by an accredited ethics committee. The data will by securely stored in a locked cabinet at Auckland University of Technology. No material that could personally identify you will be used in any reports on this study. Pseudonyms will be used in any reporting of results, publications or presentations to protect the confidentiality of you as a participant.

Results

If you wish to receive a copy of the results of this research, please indicate this by answering question 11 on the study Consent Form. Please note that there will be a delay between the time of the interviews and the time the study results are available. Copies of the research results (thesis) will be lodged in libraries. Journal articles may be written for publication. Presentations at midwifery and acupuncture conferences may be made.

Statement of Approval

This study has received ethical approval from the Auckland Ethics Committee and Auckland University of Technology. Please feel free to contact the researcher if you have any questions about this study.

Compensation

In the unlikely event of a physical injury as a result of your participation in this study, you will be covered by the accident compensation legislation with its limitations. If you have any questions about ACC please feel free to ask the researcher for more information before you agree to take part in this research study.

Principal Researcher:

Anneke Robinson. Senior Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, Phone (09) 307 9999, Ext 7312. Acupuncturist, Auckland, phone (09) 520 1187 (work).

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, phone (09) 307 9999, Ext 7196.

AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Consent Form (Acupuncturist)

Study Title: Multiple case studies of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour

1. I have read and I understand the information sheet dated 1 July 2002 for volunteers taking part in the study designed to describe and explore the experience of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour.

2. I have had the opportunity to discuss this study. I am satisfied with the answers I have been given.

3. I understand that taking part in this study is voluntary and that I may withdraw from the study at any time and this will in no way affect the professional relationship you have with the researcher or your clients.

4. I understand that my participation in this study is confidential and that no material that could identify me will be used in any reports on this study.

5. I have had time to consider whether to take part.

6. I understand the compensation provisions of this study.

7. I know whom to contact if I have any questions about the study.

8. I agree to the Researcher reviewing my acupuncture clinical notes for the women participating in the study (subject to receipt of prior consent from the women). YES/NO

9. I consent to information being kept for use in a future study approved by an accredited ethics committee YES/NO

10. I wish to receive a copy of the results YES/NO

I ---------- (full name) hereby consent to take part in this study.

Signature ---------- Date ----------

Private Bag 92006 Auckland 1020 New Zealand
Facsimile 64-9-917 9796 Telephone 64-9-917 9999 Extension 7735

Faculty of Health Studies

Principal Researcher:

Anneke Robinson. Senior Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, Phone (09) 307 9999, Ext 7312. Acupuncturist, Auckland, phone (09) 520 1187 (work).

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, phone (09) 307 9999, Ext 7196.

Appendix E

Interview Template

Interview Template

Introduction

Information was obtained from the women and the lead maternity carers by semi-structured, audio-taped interviews. The following is a template of the questions that were asked of the women and lead maternity carers.

Women

This research study is about women's experiences of traditional Chinese acupuncture treatment for threatened preterm labour.

- Can you tell me why you were referred for acupuncture?
- Do you think that the acupuncture made a difference?
- If so, how and to what?
- What was it like having acupuncture?
- How did it feel at the time?
- How did it feel afterwards?

Further questions were based on what the women said and consisted mostly of clarification and probing for details. This is because each woman's experience was unique to them.

Lead maternity carer

- Why did you refer (participant) for acupuncture?
- Did you expect (participant) to give birth in this pregnancy before 37 weeks?
- If so, why?
- Do you think the acupuncture made a difference?
- If so how and to what?

Appendix F

Ethics Committee Approvals:

1. Auckland Ethics

2. AUT Ethics

Auckland
Ethics Committees

Private Bag 92522
Wellesley Street
Auckland
Delivery Address:
C/O Ministry of Health
3rd Floor, Unisys Building
650 Great South Road, Penrose
Phone (09) 580 9105
Fax (09) 580 9001
Email: pat_chainey@moh.govt.nz

Please include the reference no. and study title in all correspondence/telephone calls.

31 July 2002.

Ms Anneke Robinson
16 Garden Road
Remuera
Auckland

Dear Anneke,

AKY/02/00/157 Multiple case studies of women who have received traditional Chinese acupuncture treatment for threatened preterm labour: PIS/ V#2, 28/7/02.

We are pleased to inform you that this study has received ethical approval until 30 November 2003. Approval is given on condition that the Committee is advised that the study has been completed and that they receive an End of Study Report for consideration. It is certified as not being conducted principally for the benefit of the manufacturer and will be considered for coverage under ACC.

It should be noted that Ethics Committee approval does not imply any resource commitment or administrative facilitation by any healthcare provider, within whose facility the research is to be carried out. Where applicable, authority for this must be obtained separately from the appropriate manager within the organisation.

A progress report is required by 31 July 2003. Approximately two months prior to the end of this period you should receive a progress report form off our data base that needs to be completed and submitted to the Ethics Committee one month before the expiry date. However, it is your responsibility to ensure that a yearly progress report is submitted to the Ethics Committee.

The Committee wishes you well with your research.

Yours sincerely,

Pat Chainey
Administrator

Auckland
Ethics Committees

Private Bag 92522
Wellesley Street
Auckland
Delivery Address:
C/O Ministry of Health
3rd Floor, Unisys Building
650 Great South Road, Penrose
Fax (09) 580 9001

Please include the reference no. and study title in all correspondence/telephone calls.

Monday, 21 June 2004

Ms Anneke Robinson
16 Garden Road
Remuera
Auckland.

Dear Anneke

AKY/02/00/157 **Multiple case studies of women who have received traditional Chinese acupuncture treatrnent for threatened preterm labour: PIS/ V#2, 28/7/02.**

Thank you for your progress report, received 30 June 2004.

The Chairperson of Ethics Committee Y has reviewed the report for this study.

The study has received ongoing ethical approval for the next twelve months. The next progress report is due 31 July 2005.

It should be noted that Ethics Committee approval does not imply any resource commitment or administrative facilitation by any healthcare provider, within whose facility the research is to be carried out. Where applicable, authority for this must be obtained separately from the appropriate manager within the organisation.

Yours sincerely,

Sparks

Sandra Sparks
Administrator, Committee Y

e-mail: Sandra.sparks@moh.govt.nz

M E M O R A N D U M

Academic Registry - Academic Services

To: Elizabeth Smythe

From: Madeline Banda

Date: 3 September 2002

Subject: 02/79 Multiple case studies of women who have received traditional Chinese acupuncture treatment for threatened preterm labour

Dear Elizabeth

Thank you for providing amendment and clarification of your ethics application as requested by AUTEC.

Your application is approved for a period of two years until 3 September 2004.

You are required to submit the following to AUTEC:

- A brief annual progress report indicating compliance with the ethical approval given.
- A brief statement on the status of the project at the end of the period of approval or on completion of the project, whichever comes sooner.
- A request for renewal of approval if the project has not been completed by the end of the period of approval.

Please note that the Committee grants ethical approval only. If management approval from an institution/organisation is required, it is your responsibility to obtain this.

The Committee wishes you well with your research.

Please include the application number and study title in all correspondence and telephone queries.

Yours sincerely

Madeline Banda
Executive Secretary
AUTEC

From the desk of ...
Madeline Banda
Academic Services
Academic Registry

Private Bag 92006, Auckland 1020
New Zealand
E-mail: madeline.banda@aut.ac.nz

Tel: 64 9 917 9999
ext 8044
Fax: 64 9 917 9812

Appendix G

Transcriber Declaration of Confidentiality

AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Transcriber Declaration of Confidentiality

Study Title: Multiple case studies of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour

I ..... hereby declare that any information I am privy to in the course of my being employed as a transcriber for the research being carried out by Anneke Robinson, will remain confidential. I will not discuss any aspect of the research with any person other than the researcher. Such discussion will be focused on seeking clarification for the purpose of transcribing only.

Signed by transcriber: ----------

Name: ---------- Date: ----------

Witnessed by: ----------

Name: ---------- Date: ----------

Principal Researcher:

Anneke Robinson. Senior Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, Phone (09) 307 9999, Ext 7312. Acupuncturist, Auckland, phone (09) 520 1187 (work).

Research Supervisor:

Dr Elizabeth Smythe (PhD). Principal Lecturer - Midwifery, Auckland University of Technology, Faculty of Health Studies, phone (09) 307 9999, Ext 7196.

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Faculty of Health Studies

Appendix H

Letter of Support - Maria Rameka

AUT
AUCKLAND UNIVERSITY OF TECHNOLOGY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Memorandum

To: Ethics Committee

From: Maria Rameka –School of Nursing and Midwifery Kawa whakaruruhau Committee

Date: 30/05/2002

Re: Application for Ethics Approval

I have read Anneke's ethics application re: Multiple case studies of women who have received Traditional Chinese Acupuncture treatment for threatened preterm labour. I support her study and offer guidance in relation to Maori clients and Treaty issues.

Anneke is a midwifery lecturer at AUT and has undertaken Treaty workshops and knows the cultural safety needs of the Maori client. When the Kawa Whakaruruhau committee next meets in June, I will seek their endorsement of this study.

I wish Anneke well with this study. Kia kaha Anneke.

Maria Rameka

Appendix I

Patterns of disharmony, treatment principles and some appropriate points used for case study women

Patterns of disharmony, treatment principles and some appropriate points used for case study women

Pattern of disharmony	Treatment principles	Some appropriate points
Kidney xu	Support and strengthen the lower back Tonify the Kidneys	Shenshu / Bl.23 + Dachangshu / Bl.25 + Mingmen / Du.4 + Zhishi / B1.52 + Taixi / Kid.3 +
Kidney yang xu	Tonify the Kidneys and support yang	Above points ▲
Kidney yin xu	Tonify the Kidneys and nourish yin	Shenshu / Bl.23 + Dachangshu / Bl.25 + Zhishi / Bl.52 + Taixi / Kid.3 + Zhaohai / Kid.6 +
Spleen qi xu	Strengthen the Spleen	Zhongwon / CV.12 Zusanli / St.36 Quchi / LI.11 Neiguan / PC.6 Pishu / B1.20 Weishu / B1.21 (R+) Gongsun / Sp.4 (L+) Lieque / Lu.7 Ear points: Spleen, Stomach, Lung, Shenmen, Pancreas
Spleen yang xu	Strengthen the Spleen, supplement qi and yang Harmonise the Stomach and warm the middle jiao	Above points ▲
Spleen qi xu with Damp	Strengthen the Spleen and resolve Damp	Zusanli/St 36 Taibai/Sp 3 Sanjiaoshu/Bl 22 Pishu/Bl 20 Yinlinquan/Sp 9 -
Spleen and Lung qi xu, sinking qi	Strengthen the Spleen and Lungs, supplement qi, promote the elevation of yang qi	Baihui/Du 20 Zusanli/St 36 + ▲ Chengshan/Bl 57 Pishu/Bl 20 + ▲ Dachangshu/Bl 25 ▲ Ear points Prolapse, Spleen, Lung, Adrenal, Shenmen

Pattern of disharmony	Treatment principles	Some appropriate points
Spleen qi sinking	Tonify and raise Spleen qi	Baihui / Du.20+▲ Zusanli / St.36+▲ Pishu / Bl.20+▲ Taibai / Sp.3+▲ Ear points: Spleen, Large Intestine, Shenmen
Liver qi stagnation	Soothe the Liver and regulate qi	Zhigou / SJ.6 – Taichong / Liv.3 Ganshu / Bl.18 Yanglingquan / GB.34 – Neiguan / PC.6 – Xingjian / Liv.2 Ear points: Liver, Shenmen
Liver qi invading the Spleen	Harmonise the Liver and Spleen Support and strengthen the Spleen	Zhongwon / CV.12 Neiguan / PC.6 Zusanli / St.36 Taichong / Liv.3 Ganshu / B1.18 Pishu / Bl.20 Weishu / Bl.21 Yintang – extra Ear points: Shenmen, Liver, Spleen, Stomach, Large Intestine

Adapted from: Deadman, Al-Khafaji & Baker, 1998; Maciocia, 1998; Maclean & Lyttleton, 1998 & 2003.

Moxibustion ▲

Moxibustion prevents and treats conditions by applying heat to acupuncture points or specific locations on the human body. A herb, Artemisia Vulgaris, is used in the form of a cone or a stick and held either over the treatment point or area or applied to the point. It also warms, expels cold, induces smooth flow of qi and blood and strengthens yang (Cheng, 1996).

Key to symbols used in acupuncture treatment

	No symbol = even method
+	Tonifying method
-	Reducing method
▲	Use moxa, either stick, warm needle or rice grain
©	cupping

Appendix J

Treatment modalities:

Actions and indications for acupuncture points

Treatment modalities: Actions and indications for acupuncture points

Treatment modality	Actions *	Indications for use
Acupuncture needles		
Baihui (Du.20)	Raises yang and counters prolapse, calms the spirit (Shen)	Headache, tinnitus, nasal obstruction and prolapses and early descent of the fetal presenting part
Zhubin (Kid.9)	Xi-Cleft point of the Yin Linking vessel, clears the Heart and transforms phlegm, calms the mind, tonifys Kidney yin, opens the chest and regulates yin Linking vessel	Anxiety and mental agitation, back ache, palpitations. Reputed to have a role in pregnancy to relax the Uterus if irritable
Yintang (Extra)	Pacifies wind and calms the shen	Headache, insomnia, heaviness in the head, nasal congestion, anxiety
Taichong (Liv.3)	Yan-Source, Shu-stream and Earth point. Spreads Liver qi, nourishes Liver blood and Liver yin, regulates the lower jiao, subdues Liver yang and extinguishes wind	Headache, insomnia, dizziness, leg cramps and facial tics, relieving tension, frustration and anger, low iron stores and anaemia
Shenmen (Ht.7)	Yuan-Source and Shu-stream point. Calms the spirit, regulates and tonifies the heart and nourishes heart blood	Irritability, insomnia, anxiety, poor memory, palpitations
Yanglingquan (GB.34)	Benefits tendons and joints, spreads Liver qi, clears liver and Gall Bladder damp heat	Hyperchondrial pain, bitter taste in the mouth, vomiting, pain of the lower extremities
Jianshi (PC.5)	Transforms phlegm, settles and calms the spirit, descends rebellious qi and regulates the stomach.	Vomiting, irritability, palpitations,
Shenmai (Bl.62)	Confluent point of the Yang Motility vessel. Sun Si-miao Ghost point. Calms the spirit. Pacifies interior wind and	Backache, insomnia, headache

	expels exterior wind. Opens and regulates Yang Motility vessel.	
Shenting (Du.24)	Benefits the brain, nose and eyes. Calms the spirit and eliminates wind.	Anxiety, insomnia, headache
Pishu (Bl.20)	Tonifies spleen qi and yang, resolves dampness, raises spleen qi and holds the blood, regulates and harmonises the qi of the middle jiao.	Epigastric pain, vomiting, diarrhoea, abdominal distension, oedema, anorexia, backache
Shenshu (Bl.23)	Tonifies Kidneys and fortifies yang, benefits essence, nourishes kidney yin, firms Kidney qi, strengthens the lumbar region, benefits and warms the Uterus, regulates the water passages and benefits urination	Low back pain, weakness of the knees, blurred vision, dizziness, tinnitus, oedema, diarrhoea, sexual dysfunction
Dachangshu (Bl.25)	Back-Shu point of the Large Intestine. Strengthens the lower back, promotes the function of the Large Intestine,	Lower back pain, sciatica, abdominal distension, diarrhoea, constipation
Gongsun (Sp.4)	Confluent point of the Chong Mai, fortifies the Spleen and harmonises the middle jiao, regulates qi and resolves dampness, calms the spirit, benefits the Heart and chest, regulates Chong Mai	Gastric pain, vomiting, abdominal pain and distension, diarrhoea. Anecdotal observation that it calms the pregnant Uterus, through the action of the Chong Mai
Neiguan (PC.6)	Confluent point of the Yin Linking vessel, unbinds the chest and regulates qi, regulates the heart and calms the spirit, harmonises the stomach and alleviates nausea and vomiting, clears heat, opens theYin Linking vessel	Palpitations, stomach ache, nausea and vomiting, insomnia, irritability, congestion in the chest, hiccup, mental disorders
Mingmen (Du.4)	Clears heat, regulates governing vessel, tonifies Kidney yang, benefits essence and nourishes original qi. Strengthens the lower back	Feeling cold and chilled, frequent urination, fatigue and lack of vitality, depression, stiff and painful back, diarrhoea, indigestion, leucorrhoea
Fenglong (St.40)	Transforms phlegm and dampness, clears phlegm from the Lung and alleviates cough and wheeze. Clears phlegm from the Heart and calms spirit.	Headache, dizziness and vertigo, cough

Tanzhong (Ren.17)	Front-Mu point of the pericardium, Influential point of qi. Regulates qi and unbinds the chest, descends rebellious Lung and Stomach qi. Benefits the Breasts and promotes lactation.	Tightness of the chest, breathlessness, chronic cough,
Zhishi (Bl.52)	Tonifys the Kidneys and benefits Essence, strengthens the back, reinforces will power.	Back pain and stiffness, oedema and lack of will power
Taixi (Kid.3)	Shu-Stream, Source point, Earth point. Tonifys the Kidneys, benefits Essence, strengths lower back and knees, regulates Uterus	Chronic back pain, menstrual problems, frequent urination, coldness of the lower limbs, pain of the legs and ankles, insomnia, headache
Zhaohai (Kid.6)	Confluent point of the Yin Motility vessel. Nourishes Kidney /and yin, calms the spirit, promotes the function of the Uterus	Insomnia, sadness, fright, nightmares, anxiety, restlessness, hot hands and feet, frequent urination, oedema
Zhongwon (CV.12)	Front-Mu point of the Stomach, Hui-Meeting point of Fu organs. Tonifys Stomach and Spleen, resolves dampness, regulates Stomach qi	All disorders of the Stomach and Spleen like indigestion, reflux, diarrhoea caused by improper diet or emotional factors such as worry, anxiety and over thinking
Zusanli (St.36)	He-Sea and Earth point of the Stomach channel and command point. Benefits the Stomach and Spleen, tonifys qi, blood and yin, dispels cold, resolves dampness, calms the spirit, regulates the Intestines, regulates nutritive and defensive qi and strengthens the body. Rises yang qi	Epigastric pain, nausea and vomiting, poor appetite, diarrhoea, constipation, tiredness and fatigue, prolapses and early descent of the presenting part
Taibai (Sp.3)	Shu-stream, Yuan – source and Earth point. Strengthens the Spleen and Spine, resolves damp, harmonises Stomach and Spleen, regulates qi	Constipation, diarrhoea, vomiting, , heavy limbs, haemorrhoids, poor memory, confused thinking, foggy head, chronic back ache
Zhigou (SJ.6)	Jing-River and Fire point. Regulates qi and clears heat in three Jiao, removes obstruction for the Large Intestine and moves stagnant Liver qi	Constipation, vomiting, pain of the lateral costal region

Weishu (Bl.21)	Back-Shu point of Stomach. Regulates and tonifys the Stomach and descends qi, resolves damp and relieves tension of food	Epigastric pain, fullness of lateral costal region, vomiting, diarrhoea, oedema
Ganshu (Bl.18)	Back-Shu point of Liver. Benefits the Liver and Gall Bladder, regulates and nourishes Liver blood, eliminates wind, cools fire and clears damp heat, improves vision	Rigidity of the Neck and Spine, lumbar pain, anger and frustration, blurred and poor vision
Lieque (Lu.7)	Luo-connecting point of the Lung channel, Confluent of Conception vessel, command point for back of head/neck Descends Lung qi, pacifies wind and phlegm, benefits head and nape of neck, opens and regulates the Conception vessel, regulates water passages, communicates with the Large Intestine	Colds and flu, nasal congestion, shortness of breath, headache and neck stiffness, poor memory, sinus infection, emotional problems caused by worry, grief or sadness
Xingjian (Liv.2)	Ying-spring and fire point of the Liver channel. Clears Liver fire, spreads Liver qi, cools the blood, benefits the lower jio	Headache, anger, frustration and sadness. Lumbar pain with difficulty in flexing and extending the back and aggravated by emotional upset
Ear points (Ballbearings)		
Shenmen	Calms the Heart, soothes the mind	Insomnia, anxiety
Heart	Tranquilises the mind, clears heat of the heart, harmonises blood	Insomnia, anxiety
Spleen	Maintains functions of the Spleen, keeps blood in vessels, aids in transportation and transformation of ying qi, raises spleen qi and resolves dampness	Early decent of the presenting part, swelling and oedema, backache and worry
Liver	Regulates Liver function, nourishes yin and blood, restrains yang	Frustration, agitation, headache and backache
Kidney	Tonifies and nourishes Kidney, reinforces the Kidney to hold qi, regulates Bladder function	Irritable uterus, oedema, nocturia and backache

Actions and Indications adapted from: Deadman, P., Al-Khafaji, M., Baker, K., (1998). A Manual of Acupuncture. *Journal of Chinese Medicine Publications*; Maciocia, G. (1989). *The Foundations of Chinese Medicine.*

Appendix K

Aetiology of patterns of disharmony for case study women

Aetiology of patterns of disharmony for case study women

Liver qi stagnation

Emotions such as resentment, frustration, anger, repressed emotions and prolonged stress all interfere with the flow of qi which stagnates in the liver and may cause pain. Chronic stagnation of qi, depending on the intensity and duration of the causative factors, can generate heat which may rise to the head. The woman may then present with headaches, a flushed face, red painful eyes or high blood pressure **(Liver fire flaring up).**

Long term qi stagnation can also cause blood stagnation. TCM believes that qi and blood have a special and unique relationship. It is said that: "Qi is the commander of blood and blood is the mother of qi" (Cheng, 1996). This means that blood cannot be separated from qi in its formation and circulation.

Stagnant Liver qi can also "invade" the Spleen weakening it and after a period of time may lead to the development of "Dampness". This is more likely to occur if the Spleen has already been weakened by an inappropriate diet and eating habits, excessive worry and mental activity (**Liver qi invading Spleen and Spleen qi with Damp).**

Backache associated with liver qi stagnation is aggravated by stress and emotional upset. This is because long term qi stagnation leads to generalised hypertonic skeletal and smooth muscles. This situation further restricts the flow of qi and blood to the body's tissues. The muscles of the lumbar spine become less elastic due to nutritional deprivation caused by inadequate nourishment of qi and blood. Therefore chronic muscular tension predisposes the lower back to injury (Maclean & Lyttleton, I998, 2003).

Other general signs and symptoms associated with Liver qi stagnation could be irritability, headaches, digestive upset, a feeling of fullness in the chest, premenstrual syndrome and irregular menstruation. The tongue body may be normal or dark or have red edges and the pulse will be wiry.

Differential diagnosis: Liver patterns of disharmony for case study women

Liver qi stagnation	Liver invading spleen
• Lower back pain aggravated by emotional upset and stress • Pain comes and goes • Irritability • Headaches • Irregular menstruation • Premenstrual syndrome • Generalised muscular tension	• Liver qi stagnation with the addition of digestive symptoms • Labile mood • Depression, irritability • General muscle tension • Alternating bowel habits (constipation/diarrohea) • Fullness or discomfort in chest • Frequent sighing and belching • Poor appetite • Abdominal distension
Tongue – darkish or normal pink colour, thin white coat, red edges.	Tongue – darkish or normal with thin white coating and red edges
Pulse – Wiry and thready or deep and wiry	Pulse – wiry
	Frequently associated with underlying spleen qi deficiency

Adapted from: McDonald & Penner, 1994; Maciocia, 1998; Maclean & Lyttleton, 1998, 2003.

Kidney Deficiency

Certain lifestyle factors such as excessive physical work, heavy lifting, bending, prolonged standing, chronic fear and sexual activity excessive for an individual's constitution, may all deplete kidney qi. This lifestyle combined with constitutional factors (refer Appendix L), over a period of time will lead to **Kidney yin deficiency.** Obstetric factors, such as pregnancies close together or without adequate recuperation after childbirth, miscarriage or termination of pregnancy, may also weaken kidney qi predisposing the women to backache. These factors will further aggravate any existing patterns of **kidney yin or yang deficiency.**

Weak kidney qi makes the back more susceptible to invasion by pathogenic factors such as cold and damp and therefore may predispose it to injury. This situation will be aggravated

if a diet of cold and raw food and drinks are consumed. Kidney qi with the addition of cold signs and symptoms is **Kidney yang deficiency**. A balance between exercise, adequate nutrition and rest is critical as excessive activity of any kind will deplete the kidney qi, as the kidney is responsible for storing all the body's qi. Kidney qi is also naturally consumed by the process of living our lives and as we advance in years (Maclean & Lyttleton, 1998, 2003).

Other general signs and symptoms associated with Kidney qi deficiency are: copious clear urine, urinary frequency or nocturia, oedema of the lower extremities, sore aching knees and a pale lustreless complexion. The tongue body may be pale or pink with a thin white coat and the pulse may be deep and thready.

A differential diagnosis of the three Kidney patterns of disharmony is presented below.

Differential diagnosis: Kidney patterns of disharmony for case study women

Kidney xu	Kidney yang xu	Kidney yin xu
• Painful lower back, weak & aching. • Tinnitus/deafness • Urinary frequency/nocturia • Aching bones • Listlessness & fatigue • Sexual dysfunction • Tongue body - pale • Pulse - deep, weak & thready	• Kidney Xu & cold signs & symptoms. • Lower back cold to touch • Aversion to cold • Cold limbs • Knees feel cold & aching • Low libido • Female infertility (cold uterus) • Tongue – pale, wet & swollen • Pulse – slow, deep & thready	• Heat in the 5 hearts ♥ • Malar flush & facial flushing • Night Sweats • Dry Mouth • Restlessness & irritability • Tongue body – red • Tongue coating – little or none • Pulse – rapid & thready

Adapted from: McDonald & Penner, 1994; Maciocia, 1998; Maclean & Lyttleton, 1998, 2003.

Spleen qi deficiency

Eating on the run, irregular meals, excessive consumption of cold or raw foods, prolonged illness, overwork, excessive worry and mental activity all deplete Spleen qi. When the above lifestyle factors interfere with the transformation and transportation functions of the Spleen, inadequate qi and blood are produced with resulting under-functioning of all the body's organ systems.

Prolonged Spleen qi deficiency may also lead to many other patterns of disharmony. Consumption of cold or damp natured substances such as dairy, uncooked food, juices, antibiotics and sugar will aggravate an already weak and deficient Spleen and may lead to **Spleen yang deficiency.** This pattern often occurs together with **Kidney yang deficiency** as Kidney yang provides the "digestive fire" to aid the Spleens function of transforming and transporting. The fatigue associated with these patterns will increase as the source of "postnatal" qi cannot work in an effective and efficient way. Spleen yang deficiency may also lead to **Spleen qi with Damp**. This is attributed to the damp natured substances identified for Spleen Yang deficiency. A further progression of Spleen qi deficiency and Spleen yang deficiency is **Spleen qi sinking**. This pattern is a more extreme one and is aggravated by multiple pregnancies and insufficient rest and recovery between these pregnancies. Contributing constitutional and lifestyle factors are identified in Appendix L).

When backache is associated with Spleen qi deficiency, it is usually the result of poor nutrition, nutritional habits and lack of exercise. These factors damage the Spleen qi causing generalised hypotonic smooth and skeletal muscle. This is caused by a lack of circulating qi and blood being provided to the muscles. A resulting loss of muscle tone leading to loss of mechanical support and hyper-mobility of the lumbar spine develops (Maclean & Lyttleton, 1998, 2003).

Other general signs and symptoms associated with Spleen qi deficiency are fatigue, anorexia, sallow complexion and lips, weak and tired limbs, abdominal and epigastric distension after eating, nausea, loose stools, shortness of breath and puffiness around the eyes and in the fingers. The tongue body may be pale with tooth marks and a white coat. The pulse may be weak, thready and deficient.

Differential diagnosis: Spleen patterns of disharmony for case study women

Spleen qi xu	Spleen yang xu	Spleen qi sinking
• Shallow, pale complexion & pale lips • Fatigue • Anorexia • Heavy, tired limbs • Abdominal & epigastric distension after eating • Loose stools • Shortness of breath • Puffiness around the eyes or in fingers • Quick weight fluctuations Tongue – pale & flabby, - may have tooth marks - white coat Pulse – even, forceless and empty	• Spleen qi xu plus cold signs & symptoms: • Cold intolerance & cold extremities • Loss of appetite • Fatigue, tiredness, exhaustion • Diarrhoea / sluggish Bowels • Abdominal distension, worse when cold or tired Tongue – pale & wet, swollen with tooth marks Pulse – weak & slow, deep Frequently associated with Kidney yang xu	• Sp qi xu signs & symptoms plus: • Prolapses • Heavy & tired limbs • Dragging or bearing down sensation • Chronic, long-standing vaginal discharges • Frequency & slight incontinence of urine • Early descent of fetal presenting part • Depression & low mood (mental & emotional level) Tongue – pale & flabby, may have tooth marks, white coat Pulse – soft & thready or even

Adapted from: McDonald & Penner, 1994; Maciocia, 1998; Maclean & Lyttleton, 1998, 2003.

Appendix L

Possible contributing constitutional and lifestyle causative factors for TCM patterns of disharmony

Possible contributing constitutional and lifestyle causative factors for TCM patterns of disharmony

Prenatal qi/genetics/inherited constitution (Kidney qi and Jing stored in Kidney)

Determined by:

- Age of parents at conception (aging uses up prenatal Jing)
- Parental history of Kidney xu
- Parental history of chronic illness
- Maternal history of miscarriage and termination and time interval between them
- Poor maternal nutrition during pregnancy
- Inadequate maternal rest and recovery after labour and birth
- Number of siblings and age gap between them
- Length of time between conceptions
- Length of time mother breastfed each child
- Time between cessation of breast feeding and next conception
- Parental depletion of Jing by excessive sexual activity for constitution

Ideally women with chronic imbalances should address these before conceiving another child. These women are more likely to feel unwell during their pregnancy (West, 2001). From a TCM perspective, miscarriage and termination of pregnancy are as demanding on the body's Qi and Blood as child-birth (Lyttleton, 2004).

Patterns of disharmony

- Underlying patterns
- Severity of patterns
- Length of time the woman had the underlying pattern (one month of treatment for every year of pattern)

Diet and dietary habits

- Irregular eating patterns and eating on the run damages Spleen qi
- Eating while angry or emotionally upset may stagnate qi and transform into fire
- Overeating damages Stomach qi
- Excessive eating of hot, spicy or rich foods may generate heat in the Stomach
- Excessive eating of fatty and sweet foods and dairy causes dampness and heat in the Spleen & Stomach
- Eating cold raw foods and drinks damages Spleen Yang
- Alcohol overindulgence generates internal dampness and heat in the Spleen & Stomach
- Caffeine is a yang tonic and depletes Kidney yin
- Food cravings

Ideally meals should be eaten at regular intervals, when relaxed and not on the run, chewed thoroughly and should be warm especially in winter (Flaws, 1997).

Work history

- Shift work and irregular hours
- Heavy lifting and standing for long hours depletes Kidney Qi
- Studying for long periods
- Working excessive and long hours

Emotions

The five emotions in TCM are: pensiveness and worry, anger and frustration, fear and fright, joy, grief and melancholy.

> "A*nger causes the qi to rise up, joy causes it to move slowly, grief drastically consumes it, fear causes it to decline, fright causes it to be deranged and worry causes it to stagnate"* (Cheng, 1996, p.248).

- Excessive thinking, study and worry depletes Spleen qi
- Worry also inhibits qi from flowing, causing the blood to stagnate and the Chong and Ren channels will not function properly. (West, 2001).

- Panic, fear and dread depletes Kidney qi
- Fear may cause the qi to sink which may result in miscarriage. (West, 2001)
- Excessive grief may cause Lung qi xu
- Emotional frustration and repressed anger cause Liver qi Stagnation
- Long-term Liver qi stagnation transforms into fire. This will affect all the Zangfu organs
- Excesses of the five emotions especially fear, sadness and joy, transfer into fire and damage yin (McDonald & Penner, 1994).

Sleep

- Irregular sleep patterns (shift work) will stagnate Liver qi
- Shortened or irregular night time sleep has an effect on the body and interferes with the way glucose, stress and thyroid hormones are metabolised. This contributes to fatigue, short-term memory loss and the ability to concentrate effectively. These functions in TCM are attributed to the Spleen and indicate Spleen qi xu.
- Insufficient and poor quality sleep, deplete Kidney yin, Kidney Jing and Kidney yang (Lyttleton, 2004).
- Hours of sleep before midnight help to tonify Kidney Yang (Lyttleton, 2004).
- After the age of 30 deep sleep and production of growth hormone start to decline. This corresponds in TCM, to a decline in both Kidney Yin and Kidney Yang.

Ideally one should be asleep before midnight, have a regular sleep pattern, and have 8-9 hours of sleep per night (Lyttleton, 2004).

Relaxation

- Always on the go and never sits down.
- No balance between work and relaxation

Exercise

- Over exercising depletes Kidney Yin & Jing. (Triathlons and marathons)
- Infrequent exercise contributes to Liver qi stagnation.
  Ideally exercise should move the qi but not deplete it.

Stress

- Liver qi obstructs when a person is stressed.
- This is expressed by irritability, frustration and anger with day to day life challenges.
- Liver qi is responsible for the smooth flow of qi in the whole body. The qi of other channels may be affected if the Liver qi is obstructed.

Acupuncture, exercise, meditation, massage, yoga and t'ai chi are beneficial coping strategies that will move Liver qi and alleviate stress and prevent further complications.