

Self-care, midwifery and medicine:
Women's perspectives on negotiating a healthy reproductive experience

by

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ABSTRACT

This thesis presents the results of a qualitative study of self-care in pregnancy, birth and lactation within a non-random sample of 27 women in British Columbia, Canada. The women were interviewed in the third trimester of pregnancy, and 23 of the participants were re-interviewed post-partum. Interviews were tape recorded, transcribed, and subjected to thematic analysis. Results were discussed in the context of the social science literature on the medicalization of pregnancy and childbirth.

All but one woman used herbal medicine while pregnant. In the post-partum interviews, nearly half reported using galactagogue herbs. The safety and efficacy of each herbal remedy are discussed here. Most of the herbs are considered safe and effective according to the herbal literature, but clinical reports are largely lacking.

While many of the women were cautious about using herbs during pregnancy, as a general rule, they considered them to be safer than pharmaceutical drugs. In choosing to self-medicate with herbs, the women said they were guided by prior knowledge (32%), trusted sources of advice (56%), and intuition (12%). Trusted sources of advice included books, friends, family members, maternity care providers, herbalists, herbal shops, and internet. The majority of herbal advice (69%) was received by word-of-mouth.

Prolonged pregnancy also proved to be an interesting situation. Many women said they were opposed to labour induction at the time of the first interview, yet all but one woman who went beyond 40 weeks gestation used self-help measures to stimulate labour. This appeared to be a response to pressure from maternity care providers, friends, and family members. Though the medical definition of prolonged pregnancy is 42+ weeks gestation, in the social context, 40+ weeks was cause for concern.

Health care professionals, partners, family members, friends, and co-workers all affected self-care behaviour, and their influence could be positive or negative. After an overwhelmingly negative experience with a maternity care provider, over half of the women went to another care provider, or forewent formal maternity care entirely.

These findings did not support the hypothesis that childbearing is almost completely medicalized, at least for the sample population. Rather, women negotiated

their maternity care within several frameworks, including the medical, midwifery, and self-care models. Medical language was used to describe birth stories, but only by women in physician care. There was an almost universal effort among the women to normalize the childbearing experience.

The findings of this study point to a need for: (1) clinical investigation of herbal medicines used in pregnancy, birth and lactation; (2) public and care-provider education regarding social and psychological aspects of prolonged pregnancy; (3) broad-scale inquiry into the phenomena of medicalization/normalization of the childbearing experience, and (4) further investigation into women's preferences for empowering styles of maternity care.

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Dedication

For Bela

I carry you out
Into the light
Soft, yellow light
Capture your dream
In my hands
And throw it out
Into the snow¹

And for Ursula

Dawn rays steal in
Through the blinds
To touch your cheek
For the first time
I love you child²

¹ Excerpted from RE Westfall, Night mares. *The Mother Magazine*. 2002 (4):43.

² Excerpted from RE Westfall, Water birth. *The Mother Magazine*. 2002 (4):44.

Chapter 1.

Introduction

This study documents the stock of knowledge and personal experiences of childbearing women who use herbal medicine in pregnancy, childbirth, and early infant care. By focusing primarily on the use of herbal medicine by childbearing women in British Columbia (BC), this project addresses the need for formal documentation of herbal use within this group in our society.

The research presented here involved a qualitative investigation of herbal medicine use as a manifestation of self-care behaviour in pregnancy, birth and lactation. Several research questions underlie this study: what is the role of herbal medicine in pregnancy, birth and lactation? What other aspects of self-care are important to the women themselves? Are there social, cultural and environmental aspects that facilitate or hinder self-care behaviour?

Pregnancy, childbirth and the postpartum period make up a particularly interest-rich interval in a woman's life, in part because they are times of enormous physical, emotional, hormonal and social upheaval, but also because of the huge importance of self-care in supporting the health of both the mother and the child. These are times when one might expect health and healing to be at the forefront of a woman's mind, as she will encounter novel health situations, and will be presented with an opportunity for acquiring new healing skills.

The processes of conceiving, gestating and giving birth to a baby are profoundly affected by women's physical and emotional health. Hence it seems only natural to

assume that the most important care a pregnant woman can receive comes from her immediate environment: access to a healthy lifestyle, peaceful surroundings, and the company of supportive friends and family. These are factors over which women have varying degrees of control, depending on their life circumstances. With these elements in place, the childbearing woman is in a better position to care for herself as needed.

Women also have ways of exerting influence over some of the more technical aspects of pregnancy and birth: nutritional ways of preventing health problems such as anemia and gestational diabetes; physical exercises for optimal fetal positioning and easier birthing; herbal remedies for common complaints of pregnancy. All these are aspects of self-care; they are deliberate acts performed with the intention of promoting health and wellness.

This project is grounded in the following concepts:

- herbal medicine use is a quantifiable aspect of self-care,
- self-care knowledge is the intellectual property of ordinary people, and
- a body of self-care knowledge could be studied and documented in collaboration with a community.

The most appropriate way to begin a study of herbal medicine use by childbearing women is therefore to ask the women themselves to share their experiences.

An underlying philosophy of this research is that each woman is unique. Ideally, as she matures, each woman becomes an expert in knowing her body and maintaining her health. The knowledge and confidence gained through the practice of self-care enables and empowers women, along with their partners, to act as the primary care providers for their families. However, each woman is unique not only in her own body's individuality,

but also in her personal and social circumstances which affect the degree to which she is able to practice self-care and provide health care for her children. Her health care knowledge also depends upon her unique set of circumstances and life experiences. Knowledge of herbal medicine is thus expected to vary from individual to individual.

The use of herbal medicine in pregnancy, childbirth and lactation has received scant investigation (Murphy et al., 1999; Yarnell, 1997). Most of our knowledge about North American herbal use for pregnancy is derived from old publications such as those of the Eclectic Physicians¹, particularly the 1898 volume “King’s American Dispensatory” (Felter and Lloyd, 1992). Contemporary herbalists still use the herbs popularized by the Eclectics, even though their movement had virtually died out by the middle of the 20th century. There have been virtually no new herbs to the *materia medica* since then, and in many cases, our collective knowledge about the safety and efficacy of the herbs made popular by the Eclectics has not increased over the past hundred years (Westfall, 2001).

Eric Yarnell (1997) recently appealed to midwives and herbal practitioners to publish their observations, so that the public and health care providers may have a better understanding of the beneficial or adverse effects of natural remedies. Others have also called for a research agenda on the uses of complementary medicine in maternity care (Murphy et al., 1999). This project serves as a beginning in response to this call, as it documents the experiences of a select group of women regarding self-care and herbal medicine use in pregnancy, birth and lactation.

¹ Eclecticism was a medical sect dedicated to reforming medical practice in America in the 19th century. The Eclectics made extensive use of North American medicinal plants.

The concepts of self-care and herbal medicine are integral to this work. For the sake of clarity, they are defined in detail here.

1.1 Self-care

Self-care is, literally, the care we provide for ourselves. Self-care is a fundamental aspect of health care; in fact, we provide the vast majority of our own health care. According to one study, in the United States most illnesses are treated in the home, including as much as 89-96% of acute illnesses (Green, 1990); other researchers have made similar observations (Brown and Marcy, 1991; Kleinman, 1980). Canadian data on home health care are lacking, but one might surmise that self-care and home healing strategies are responsible for the bulk of all health care occurring in this country as well.

Self-care falls neither in the sphere of conventional medicine, nor is it alternative medicine *per se*. Much of self-care is bound in day-to-day household activity, and its aim is often not to specifically prevent or heal illness, but rather to nurture the body, mind, spirit, and family environment (Weed, 1989).

In the words of Dorothea Orem, self-care theorist in the field of nursing, “Self-care is the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health, and well-being” (Orem, 2001:43). Virtually everyone practices at least some aspect of self-care. There is a balance between self-care and dependent-care, wherein dependent care picks up the slack when there is a self-care deficit (Orem, 2001). Dependent care is that which is provided by an outside ‘care provider’. As I see it, there is a third element, a void-of-care, which occurs when needed

care is provided neither by the individual nor by a dependent care provider. When there is a void-of-care, the result is deterioration in health.

According to Orem, to perform self-care, one must have the power (agency) to influence certain health-determining factors in one's life. Orem uses the term health to refer to the "state of a person that is characterized by soundness or wholeness of developed human structures and of bodily and mental functioning" (Orem, 2001:186). She contrasts health with well-being, which is "characterized by experiences of contentment, pleasure, and kinds of happiness; by spiritual experiences; by movement toward fulfillment of one's self-ideal; and by continuing personalization" (Orem, 2001:186). To maintain good health, an individual must have the knowledge, the means, and the will to make decisions around his or her personal health care. For instance, to support one's health through good nutrition, one must have a theory of what constitutes good nutrition (or ready access to that information), access (material and financial) to nutritious foods, and the means to prepare them. Without these things, or without a dependent-caregiver to provide formal health care, there will be a void-of-care.

Self-care behaviour is usually assumed to be health-promoting. However, there is always the possibility that the behaviour will be harmful. For instance, self-medication with a noxious substance can cause iatrogenic (medically-induced) illness. Accordingly, all self-care behaviour should be subjected to a risk-benefit analysis. In this study, all herbs used are subjected to a concise review of the literature in an effort to confirm or refute their safety and efficacy. Due to limitations on time, funding and research facilities, clinical and laboratory testing were not performed as a part of this project.

1.2 Herbal medicine

This research focused on the issue of self-medication with herbal medicine in pregnancy, birth and lactation. It is important therefore to clearly define what is meant here by the term ‘herbal medicine’.

Plants support animal life on this planet by oxygenating the air we breathe, converting the sun’s rays and the earth’s nutrients into forms we can eat, and providing us with complex organic molecules that can act as both medicine and poison. Every human culture relies heavily on plants for food, medicine, and technology, and plants are an integral part of ritual. It is often a matter of personal judgment whether to categorize a plant as food, medicine, or of ceremonial value.

Herbs are used as antiseptics, coagulants, analgesics, diuretics, and emetics; they aid digestion, lower fevers and staunch bleeding, whilst their ceremonial use eases the transitory moments of dying and being born.

(Stapleton, 1995:156).

By definition, ‘herbal medicine’ includes both herbal tonics and plant-derived drugs. In biomedical terms, a medicine is “any drug or preparation that is used for the treatment or prevention of disease” (Bantam, 2000:298), so an herbal medicine is any plant-derived drug or preparation used for disease prevention or treatment. A drug is “any substance that affects the structure or functioning of a living organism. Drugs are widely used for the prevention, diagnosis, and treatment of disease and for the relief of symptoms” (Bantam, 2000:148). Hence the term ‘medicine’ includes drugs, which directly affect an organism’s structure or functioning; it also includes tonics and substances used ceremonially for health promotion.

Tonic herbs are frequently referred to in this thesis. Tonics and ceremonially used substances are important aspects of lay healing. Tonics are not part of the biomedical repertory, though they make up a large part of herbal medicine worldwide. According to the Bantam Medical Dictionary (Bantam, 2000:492), a tonic is “a medicinal substance taken to increase vigor and liveliness and produce a feeling of well-being. Beneficial effects of tonics are probably due to their placebo action.” It is true that tonic herbs do not affect human physiological or neurological function in the manner of pharmaceutical drugs. However, tonic herbs are a part of lay healing systems with good reason.

Bartram’s Encyclopedia of Herbal Medicine defines tonics as follows:

Herbs that increase the tone of the body tissues. To assist oxygen-bearing elements in the blood, augmenting metabolic processes and promoting nutrition. They impart added strength and vitality. (Bartram, 1998:426).

In the contemporary Western approach to herbal medicine, tonic herbs are usually thought of in terms of their specific biological or nutritional function. For instance, a uterine tonic is an herb that strengthens uterine muscle by stimulating mild muscular contractions. Raspberry leaf is an example of a uterine tonic. Stinging nettle is a blood tonic; it provides many nutrients that strengthen the blood and blood-bearing tissues, including iron, calcium and vitamin K (clotting factor) (Westfall, 2001).

Other herbal healing systems interpret tonics rather differently. For comparison, Chinese medicine makes use of herbal tonics to replenish Qi, or vital energy. (Holmes, 1997).

Chinese medicine relates Qi deficiency to a weakness of the zong qi arising in the chest, this individual energy being an important aspect of the

zhen qi, the individual's authentic, useable energy. In Western physiological terms, Qi deficiency represents a lack of tissue tone (hypotonia, atonicity) or stimulation (hyposthenia, hypofunctioning), usually involving reduced innervation. It may include deficient nervous and endocrine functioning, often with insufficient neuromuscular activity and low immunity. Because it doesn't present any organic lesions, Qi deficiency from the biomedical perspective is a preclinical state. (Holmes, 1997:270)

In Western herbalism, tonic herbs treat conditions that would likely be identified by a Chinese medicine practitioner as Qi deficiencies or other energetic imbalances. A tonic herb has the "therapeutic ability to nourish, harmonize, support, and invigorate stagnant and deficient conditions of Qi, Blood, Essence (Jing), Spirit (Shen), Fluids, and Organs" (Molony, 1998:261). In contrast, Western herbalists define a tonic as anything that "nourishes the functioning (tonus) of a muscle, organ, or system; invigorates and strengthens all activity" (Weed, 1989:283).

For the purpose of this study, tonic herbs are thought of as lying somewhere in between food and drugs; they are used therapeutically, to treat sub-clinical conditions or to prevent health degeneration. They are used to strengthen, nourish and support the body, to prevent rather than cure disease. Nourishment is a fundamental aspect of preventative medicine, yet it often goes unnoticed. "Prevention is invisible. If I drink nettle infusion while pregnant and don't hemorrhage, I haven't done anything visible or noticeable." (Weed, 1986:10).

In addition to tonic herbs, there are many herbal medicines that directly treat disease, relieve symptoms, or otherwise affect body function. There are the more obviously 'medicinal' herbs, and they often have some chronic toxicity if used in high doses or over an extended period of time. The pharmacologically active constituents may be poisonous if the dosage is not carefully controlled, or the plant may contain toxins in addition to the medicinal compounds. On the food- drug continuum, these herbs lie closer to the drug end of the scale, whereas tonic herbs are closer to food. These herbal medicines are of greater interest to the medical community, for their activities can be understood in biomedical terms; they are more likely to have undergone some clinical evaluation. In contrast, tonic herbs have rarely been investigated in a clinical setting. Both forms of herbal medicine are investigated in this study.

To clarify where an herb ends and a drug begins, pharmaceutical drugs must also be defined. Pharmaceutical drugs may contain botanical ingredients; approximately 25% of all pharmaceutical drugs in use in North America contain "at least one active constituent still extracted from plant sources (not synthesized)" (Griggs, 1981:ix.) This figure was established by Farnsworth and Bingel (1977) and purported to be stable over a twenty-year period (Farnsworth et al., 1985). Duke (1993) contends that plant derivatives comprise only 10% of the most important major drugs used in the United States. He states that it is true that "25% of modern prescription drugs contain at least one compound now *or once* derived *or patterned after compounds derived* from higher plants" (emphasis his; Duke, 1993:664). For the purpose of this study, if a medicinal substance is highly refined or synthetic and contains specified levels of active ingredients in a controlled-dose form, and is not a vitamin or mineral supplement, it is described here

as a 'pharmaceutical drug'. Whole plant parts or crude plant extracts are called 'herbal medicines'.

Here, the use of herbal medicine, as defined above, has been investigated. Pharmaceutical drugs are only mentioned in passing, in order to establish relative usage rates of herbs and drugs, and to elucidate women's views on using herbs and drugs while pregnant.

Self-medication is discussed in the context of women's everyday lives, and also within the framework of formal health care services. The following chapter is a discussion of how these health care services can affect women's reproductive experiences through medicalization.

Chapter 2.

The medicalization of pregnancy and childbirth

Social scientists have shown considerable interest in the social construction of women's reproductive health care experiences. In particular, researchers have centred their discussion upon the concept of *medicalization*, which, according to sociologist Peter Conrad (1992:11): "consists of defining a problem in medical terms, using medical language to describe a problem, adopting a medical framework to understand a problem, or using a medical definition to "treat" it." The sociological critique of medicalization is that certain 'natural' biological processes, including pregnancy and childbirth, have been claimed by the medical professions in order to legitimize the medical control and supervision of such processes. Researchers from outside the field of sociology, including medical anthropologists such as Robbie Davis-Floyd, have contributed to this critique.

The concept of medicalization has itself been the target of some criticism. P.M Strong (1979) contests that sociologists may derive some personal benefit from a more sociological perspective on health and illness; ulterior motives may lie behind the medicalization hypothesis. Medicalization theorists have also been accused of failing to recognize the merits of modern medicine: of throwing the baby out with the bath water, so to speak (Williams, 2001). In addition, writings on the medicalization of childbirth have been criticized for their tendency to portray childbirth before medicalization as wholly natural, and largely trouble and intervention-free (Macintyre, 1977). Indeed, historical records confirm that health complications and human interventions have been

an ever-present element of childbirth over centuries, though only affecting a minority of births.

In spite of its weaknesses, the concept of medicalization has fuelled a vast body of literature. Medicalization theorists (i.e. Conrad, 1992) suggest that pregnancy and childbirth have been fully medicalized, such that decision-making lies in the hands of the health professions, largely doctors. The medicalization hypothesis contrasts with the ‘self-care’ model of reproductive care that is defined in Chapter 1, which assumes that health care decision-making lies in the hands of the pregnant woman. It also contrasts with the midwifery model of care, which emphasizes joint decision-making.

This chapter addresses several issues relating to the medicalization of pregnancy and childbirth. Considered first are the images of medicalized pregnancy and childbirth contained in the literature, and the criticism of medicalization held therein. Second is a concise review of how the medicalization of pregnancy and childbirth has been challenged, and in what ways. Finally, the main sociological research problem relating to medicalization and underlying this thesis is articulated.

2.1. The medicalization of childbearing

The historical picture of childbearing and its modern counterpart were presented and contrasted in such pivotal works as Ehrenreich and English’s “Witches, Midwives and Nurses: A History of Women Healers” (1973), and Suzanne Arms’ “Immaculate Deception” (1975). Academic writers also compared the historical picture to modern childbearing, in works such as Wertz and Wertz’s “Lying in: A History of Childbirth in America” (Wertz and Wertz, 1989). Other writers have presented historical data, and

made no deliberate comparison with modern childbirth, (i.e. King, 1990). Still others have turned a critical eye upon the process of medicalization of pregnancy and childbirth and the formation of the profession of obstetrics (i.e. Arney, 1982; Barker, 1998; Donegan, 1978; Strong-Boag and McPherson, 1986).

As described in the social science and historical literature, knowledge specific to pregnancy and birth traditionally belonged to the women themselves. Births were often attended by neighbourhood women, who built up a body of knowledge around healing and childbirth through a combination of personal experience and oral tradition. Speaking of the Canadian situation prior to the routine hospitalization of birthing women, Strong-Boag and McPherson (1986:154) describe how “women had often looked to collective solutions to the rigours of childbirth. Female relatives, neighbours and friends regularly pooled resources and knowledge in efforts at mutual aid.” Women shared the stories of their birth experiences, and in this way tried-and-true techniques and remedies were passed on. But perhaps most importantly, women also gave each other support and advice. Charles King described the circumstances faced by pioneer women on the Western frontier of North America.

More important than available professionals was a close circle of other women and female friends, who provided a social and personal support system for the pregnant women and a ready source of medical advice handed down from the oral tradition and continued in manuals of domestic medicine. (King, 1990: 83)

According to the historical literature, childbearing was often though not always a social affair, supported by a regime of self-care, in which women utilized a mix of folk and medical advice, learned- by and large- from other women in their communities.

Judging from the literature on the medicalization of pregnancy and childbirth, in North America, childbirth is no longer a community affair. It is argued that women are no longer the primary keepers of knowledge relating to pregnancy and birth; medical professionals now hold the key to knowledge. Critics of medicalization attest that pregnancy and birth have in fact been almost completely medicalized in North American society (Conrad, 1992). The theory holds that two distinct but concurrent processes have facilitated medicalization. Firstly, childbirth has been defined as a potentially hazardous process, requiring medical supervision and often intervention (Arney, 1982). Secondly, there has been a shift in birthplace from the home (where the birth attendants are guests of the family) to hospital (where the birthing woman is a guest, and has to follow the 'house rules') (Rothman, 1982).

The process of medicalization is said to have begun over a century ago, when in Britain and North America it became trendy among the upper classes to have physician-attended birth (Donegan, 1978); the trend spread among those who could afford it. This care, at first provided in the woman's home, later came to be centralized in hospitals, particularly as new technological aids and pain relieving drugs were developed. Well-heeled women followed their doctors to the hospitals, where they could benefit from all the conveniences of modern medicine (Wertz and Wertz, 1989). And in Canada, with the advent of a state-sponsored medical insurance plan, working class women had access to medical care in childbirth as well. Universal health insurance, which came to be known

as Medicare, became available to all Canadians when the Medical Care Act of 1968 was enacted in 1972 (Wrede et al., 2001).

Pregnant women in Canada now had access to physician and hospital services at no cost.... [T]he medical profession in general- and obstetricians in particular- gained much by the new welfare state policy.... Medicare solidified physicians' dominance over maternal health services, granting them a monopoly over the provision of care to pregnant women. (Wrede et al., 2001: 42)

What were the reasons for increasing medical dominance over childbearing? According to Wertz and Wertz (1989), it was in part a response to societal demands for greater certainty in childbirth outcomes. They consider American society's dependency on medicalized childbirth as contingent upon the desire to produce the 'perfect child', beginning with "the decrease in the size of middle-class families after the [American] Civil War and the sentimentalizing of family relationships.... As children began to lose their economic value, they gained an emotional value"(Wertz and Wertz, 1989:236).

At first, there was medical involvement only in birth; the sphere of medicine later came to encompass the whole of pregnancy. By means of a lengthy public health campaign, women were convinced of the need for 'medical' prenatal care (Barker, 1998). In the words of K.K. Barker (1998: 1067-8):

It was not until well into the twentieth century that the notion of medically monitored pregnancy evolved, even among obstetricians.... As late as the 1940s most pregnant women [in the United States] received no medical prenatal care.

In contrast, the majority of North American women today receive some medical prenatal care, and in Canada, this care is fully covered by state sponsored medical insurance.

According to K.K. Barker, as the medical management of pregnancy and birth came to be the norm, biomedical definitions of the pregnant body have become mainstream; these redefinitions were initially part of the campaign to medicalize pregnancy (Barker, 1998). “[C]urrent prenatal care utilization rates make evident that a biomedical understanding of pregnancy has become hegemonic in the twentieth century” (Barker, 1998: 1068). Today, biomedical terms guide and shape women’s experiences of pregnancy and birth, and also stress the importance of medical supervision. The proliferation of these terms has been matched by the disappearance of folk wisdom about childbearing (Barker, 1998).

Barker’s ‘conspiracy theory’ on the medicalization of pregnancy contrasts sharply with the public health model of prenatal care described in the medical literature. Barker betrays a strong disapproval of the medicalization of pregnancy, and seems to favour a self-care model in which intuitive knowledge and folk wisdom guide a woman safely through her pregnancy. Certainly, self-care issues such as nutrition and adequate rest can affect maternity outcomes. If medical prenatal care has truly supplanted prenatal self-care, as Barker portrays it, there may be measurable health costs associated with medicalization. In addition, medicalization has social and psychological costs, many of which have been documented.

2.2 Social and psychological consequences of medicalization

Critics of medicalized childbirth observe that when women began seeking out medical care for pregnancy and childbirth, they stopped relying on their friends and neighbours as birth attendants. What was once a community affair became a private interaction between a woman and her maternity care provider, and consequently, women lost the opportunity to gain experience as lay birth attendants.

In North America, the neighbourhood self-help network was reportedly disappearing by the 1940s (Relyea, 1992), when the hospital became the primary place of birth. Records confirm that in British Columbia, between 1926 and 1940 the rate of hospitalization increased from 48.3% to 84.4% of live births (Strong-Boag and McPherson, 1986); hospitalizations rates are now in the realm of 99%.

As childbirth became a medical concern, the responsibility for the birth shifted from the woman to her doctor. Women called for relief from the pain of childbirth; they were increasingly sedated or anaesthetized (for which they had to be hospitalized). This could be problematic, as sometimes women were still called upon to assist the births of their relatives and neighbours, as illustrated by Gould (1975:119):

In some areas, women without nursing experience found themselves called upon to assist at deliveries as Jenny Lawson Turnbull did when she became a “ranching wife” at Chilco near Vanderhoof [British Columbia] in the 1920s. Her own memories of child delivery were vague since she had given birth to daughter Peggy in a New Zealand hospital, helped by a doctor, a nurse, and by considerable whiffs of chloroform.

Critics of medicalization point out how popular knowledge about birthing- and about healing in general- was thus lost as women missed opportunities for experiential learning. Specialized obstetric knowledge increased the gap between 'ordinary' people and medical professionals. Adults- and particularly women- are believed to have lost many of the skills they had in previous generations as empirical healers for themselves and their families (McClain, 1989).

Nonetheless, some critics of medicalization suggest that women's control over their birth experiences may have been affected far more profoundly by the changing birthplace than by the change in birth attendants (Gorham, 1984).

The most significant change in twentieth-century maternity care was the movement of the place of birth from the home to large hospitals.... All the other major trends in maternity care... are intimately related to this move from home to hospital. (Declercq et al., 2001:7)

The critical literature paints a mostly negative picture of the hospital birth environment. In hospitals, the traditional roles of friends and neighbours in providing self-care and community support for birthing women childbearing have all but disappeared. Birthing women must rely on their medical caregivers to meet many of their physical and emotional needs. (Fox and Worts, 1999) describe how medicine deals with the practical aspects of labour and delivery, and though medical care substitutes for more general support of the childbearing woman, it fails to do so effectively.

Women who enter the hospital to have their babies are 'patients'. This term implies sickness; those who believe their bodies and their labours are healthy are encouraged to think otherwise. Various authors have described how this is done

symbolically; in the hospital the woman's 'outside' persona is deconstructed and her 'patient' persona is constructed in its place by means of a series of hospital procedures. Depending on the historical timeframe and the individual hospital, these procedures can include any or all of a number of things, such as the use of an identity armband, removal of street clothing and its replacement with a hospital gown, insertion of an IV tube, enema, and so on. This process makes it clear that the hospital staff is 'in charge', encouraging the woman to take on a passive role, while reinforcing the notion that childbirth has pathological potential. Feminist writers have responded to such practices with outrage. Barbara Katz Rothman (1982:16) puts it like this:

You do not put someone in a hospital gown, place her on a hospital table under hospital lights, and affix little bracelets to her arm so that you can always tell whose baby is whose, and not create the image of "patient". A woman cannot view herself as healthy while all the external cues proclaim illness.

In her book "Birth as an American Rite of Passage", Robbie Davis-Floyd (1992:77) describes how disempowering hospital procedures could be to a labouring woman. As one of her research participants describes:

I can remember just almost being in tears by the way they would wheel you in. I would come to the delivery or into the hospital on top of this, breathing, you know, all in control. And they slap you in this wheelchair! It made me suddenly feel like maybe I wasn't in control anymore.

Other hospital procedures have been condemned by female authors. In the words of Laura Shanley (1994:16), the use of an intravenous tube reinforces this sense of the mother as a helpless child:

IV's are inserted into the arms of approximately 80 percent of all laboring women [in the United States] after they are admitted to hospital.... There is no research to show there is any benefit to placing an IV in a woman's arm before there is an actual emergency.... [P]lacing an IV in a woman's arm is above all a symbolic gesture designed to reinforce the concept that women are totally dependent on physicians, machines, and institutions for the successful outcome of their labors. The intravenous tubes are a symbolic umbilical cord; and the woman, a helpless dependent infant.

In a more general sense, medicalized pregnancy and childbirth are considered by some critics to be a source of psychological harm to childbearing women. It is argued that medicalized childbearing alienates women from their unique bodily experiences. Young (1984:45) describes how the unique bodily experience of bearing children has been neglected in Western society.

Pregnancy does not belong to the woman herself. It either is a state of the developing foetus, for which the woman is a container; or it is an objective, observable process coming under scientific scrutiny; or it becomes objectified by the woman herself, as a "condition" in which she must "take care of herself."

Robbie Davis-Floyd contends that for some women, this sense of alienation is welcome; the visceral experience of pregnancy and birth is an unwelcome intrusion upon their

usually well-ordered, sleek, professional physical self-image (Davis-Floyd, 1992; Davis-Floyd, 1994). For others, there is a psychological cost to this alienation. Some of her respondents reported feeling deprived of their dignity, humiliated, disempowered, and even robbed of the full experience of birth; in short, their self-esteem suffered (Davis-Floyd, 1992). The same phenomenon was reported by Suzanne Arms, in her book, “Immaculate Deception” (Arms, 1975:xii).

I have spent many hours listening to other women recall their own birth experiences. Most mothers are eager to share the smallest and most intimate details of their experience, and initially they describe their births as good and satisfying. But with rare exceptions, women who have given birth in hospitals become upset the longer they talk about it. They recount incident after incident of loneliness, fear, frustration, humiliation, loss, and a deep and guilt-ridden belief that they have missed the most profound experience of their lives.

Davis-Floyd (1992:238) notes that women whose personal beliefs about the childbearing experience are most in conflict with the medical model, yet who have highly medicalized birth experiences, may experience post-partum depression, and later, feel angry about how they were treated.

This depression seemed to be the result of their inability to merge the new, devalued self-images and sets of meanings arising out of their birth experiences with the self-images of enhanced competence and ability which they needed to foster as mothers.

Davis-Floyd goes on to cite the work of psychologists, who attribute this type of post-partum depression to learned helplessness, the process by which the medical system encourages passivity in its patients (Catano and Catano, 1981). Other writers have noted the occurrence of learned helplessness in medical patients. Makoul (1998:233) reported that the physician-patient relationship itself fosters passivity in the patient, thereby discouraging self-reliance.

Accommodating the passive orientation of physician-reliant patients is likely to diminish patients' chances for maintaining control in the medical encounter, which has implications for health outcomes, cost, and compliance.

Passivity can lead to higher rates of medical intervention, as well as causing psychological problems in the post-partum period (Davis-Floyd, 1992). Psychologist Albert Bandura (1997:18) states that when people are:

cast in subordinate roles or are assigned inferior labels, implying limited competence, they perform activities at which they are highly skilled less well than when they are not labeled negatively or placed in a subordinate role.... Offering unnecessary help can also detract from a sense of competence and thereby impair the execution of skills.

2.3 Challenges to the medicalization of childbearing

Given the anger and frustration of feminist writers who have researched the medicalization of pregnancy and childbirth from a variety of angles, it is perhaps unsurprising that medicalization has been challenged on several fronts. In a general sense, medical dominance has declined since the early 1960s partly as a result of public scepticism about the ability of medicine to solve health problems (Griggs, 1981), and partly because of increased competition with 'alternative' health occupations, the involvement of the state with health insurance (Coburn et al., 1983), and an increasingly health-literate populace.

The trend towards alternatives to medicalized pregnancy and birth is paralleled by a generalized revival in self-care in Western societies, observable over the past several decades. This revival has apparently stemmed from- and contributed to- a decline in medical dominance in society at large (Coburn et al., 1983; Truant and Bottorff, 1999). The women's health movement has played an important part in this revival; women's self-care has been guided by revived community healing networks, workshops, women's health collectives, and groundbreaking publications such as *Our Bodies, Ourselves* (Boston Women's Book Collective, [1976] 1992). In this self-help guide to women's health, we see prenatal care defined quite differently from the medical model: "Prenatal care is the care you give yourself, as well as the care you receive from friends and family. We no longer believe that it is enough just to 'see the doctor regularly' or 'leave it all to the doctor.'" (401). However, a more recent edition of the book (*Our Bodies, Ourselves for the New Century*) takes a less confrontational stance: "Prenatal care consists of three interrelated 'programs': the care you give yourself, the

care you receive from friends and family, and regular visits to your midwife or doctor” (Boston Women’s Health Collective, 1998:443).

Since the publication of the original edition of *Our Bodies, Ourselves* in 1976, a large number of self-help and natural health guides have appeared on the shelves of book stores and libraries, addressing with everything from mental health to yoga, fitness, herbal medicine and nutrition. By and large, these guides represent pregnancy and birth as natural, healthy processes, affected by the physical, social, emotional and spiritual environments in which women live. Accordingly, women now have access to a wealth of information that parallels the medical model of women’s reproductive health, while simultaneously providing tips and tools that can be used to reduce one’s reliance on medical care.

In some sectors of North American society there has been a deliberate movement towards demedicalization or *healthicization* (Conrad, 1992) of childbearing. As a first step away from medical dominance over women’s reproductive experiences, there has been a revival of midwifery, and the development of a unique midwifery model of childbearing (Romalis, 1981; Rothman, 1982). According to the midwifery model, women make health care decisions in partnership with their midwives (Rothman, 1982), who are women trained to assist uncomplicated labours and deliveries and provide emotional support and self-care advice, in addition to facilitating and interpreting medical diagnostic testing and childbirth support.

Though midwifery care has remained the norm in many European countries over the past century (Devries et al., 2001), it is only now becoming re-established in Canada, following its near eradication as childbirth became medicalized. In British Columbia,

midwives have been a part of the formal, Medicare-sponsored health care system since 1998. The occupation of midwife reappeared in the 1970s, in response to some women's demands for an alternative to medicalized childbirth (Relyea, 1992). Nearly three decades passed before midwifery became legalized and publicly funded in BC. Prior to legalization, only licensed physicians could legally practice midwifery in BC; lay midwives risked prosecution by catching the babies of a growing number of dedicated home-birthers (Burtch, 1994). Midwives worked for the most part outside of the health care system, without access to hospital facilities, diagnostic tools and prescription drugs. They reportedly found ways to work effectively, by developing low-tech ways of detecting risk factors (such as twins or malpresentation; Lyons, 1981). They also shared tried-and-true home remedies with each other.

Today, midwifery care provides women with an alternative to medicalized pregnancy and childbirth by providing longer prenatal visits (and hence, enhanced opportunities for non-medical counselling), and where permitted by legislation, by supporting birth outside of the hospital setting² (Shroff, 1997). The midwifery model of care encompasses social, personal, and biological aspects of childbearing, and emphasizes shared decision-making, unlike the medical model of care, whereby the care provider is more likely to make most maternity care decisions unilaterally.

The inclusion of midwifery in the health care system has not satisfied the needs of all women for non-medical maternity care, however. In British Columbia and elsewhere, a small number of lay birth attendants (who are no longer permitted to use the title of

² In British Columbia, midwives attend both home and hospital births, and indeed they are required to do so by their regulatory body (CMBC, 2003). Registered midwives have the authority to order diagnostic tests and prescription drugs, and have been granted hospital privileges.

‘midwife’; CMBC, 2003) continue to attend home births, and are paid by their clients out-of-pocket. In addition, a small number of women forego professional birth attendance entirely. One can speculate about the reasons for an ongoing underground birth movement. Midwifery services are primarily available in urban areas, leaving most rural women with few choices for maternity care services. Lay birth attendance and unassisted birth are the only viable alternatives to non-medically attended birth for these women. In addition, not all women are satisfied with the degree of monitoring and rates of intervention associated with state-sanctioned midwifery care. Unlike lay birth attendants, who share the responsibility for outcomes with their clients and back-up physicians, registered midwives are fully accountable and must carry liability insurance. The possibility of litigation, combined with increased access to obstetric technology and hospital facilities, may lead to an increased use of defensive medicine, whereby actions are justified by a fear of litigation rather than being based on sound evidence (Bassett et al., 2000).

Indeed, statistics show that rates of intervention have climbed since midwives became regulated in 1998. The Homebirth Demonstration Project, conducted in British Columbia over a 24-month period beginning January 1, 1998, reported an overall 8.6% rate of Caesarean section among clients of registered midwives (HBDP, 2000); this was more than double the pre-regulation rate of approximately 4% (Burtch, 1994; Harvey et al., 1996; Tyson, 1989). The Homebirth Demonstration Project also showed that rates of intervention were substantially higher among women who chose hospital birth, as compared to home birth. There was a 6.4% Caesarean section rate among midwifery clients who chose to give birth at home, as compared to 11.9% of women choosing

midwife-assisted hospital birth and 18.2% of women in the care of physicians (HBDP, 2000:43). There were also significantly higher rates of forceps deliveries and vacuum extraction among women choosing hospital birth; rates of assisted vaginal birth were 13.5% and 12.3% for physicians and midwives, respectively, as compared to 3.2% of women choosing home birth.

Options to medical and midwifery care have received little attention from researchers. However, lay birth attendance has been the focus of attention for the College of Midwives of British Columbia, who had an injunction placed against birth attendant Gloria Lemay in 2000, preventing her from practicing as a midwife in this province (Vancouver Sun, 2002). While not a legal issue, the trend towards unassisted birth has attracted the attention of a few authors (i.e. Shanley, 1994) and social science researchers (Holley and Brewster, 1999), and has been featured in recent issues of *Midwifery Today* magazine (Hessel, 2002; Shanley, 2002), but otherwise remains unstudied.

This research project allows for an investigation of women's perspectives on negotiating a healthy reproductive experience. The methodology is outlined in Chapter 3, then the results are presented and discussed in Chapters 4-6. Chapter 6 returns to the three models of reproductive health care presented here, the medical, midwifery and self-care models, in an interpretation of the study data.

Chapter 3.

Methodology

What is the role of herbal medicine in pregnancy, birth and lactation? What other aspects of self-care are important to the women themselves? Are there social, cultural and environmental aspects that facilitate or hinder self-care behaviour? These questions were addressed in this qualitative study of self-care and herbal medicine use among childbearing women in British Columbia.

3.1 Women's perspectives

This project was designed to explore women's experiences of self-care and health care services in pregnancy and childbirth. With this objective in mind, I conducted two sets of semi-structured interviews with 27 pregnant women in BC. Twenty-three of the original participants were available for a second (post-partum) interview, for a total of 50 interviews.

Participants were recruited by means of a recruitment flyer asking women to speak with the researcher on the subject of 'self-care and health care in pregnancy' (Appendix 1). Accordingly, it was women who had an interest in self-care who volunteered to take part. Herbal medicine was not mentioned on the flyer. It was posted in several high-traffic locations in Vancouver and Victoria, distributed through the offices of midwives, circulated through the Home Birth Association of BC, and distributed through the Best Babies program in Victoria (a government-sponsored program that

targeted women who were at risk of having low birth-weight babies due to poverty or substance abuse).

The sampling method targeted women with an interest in pregnancy self-care. This type of sampling is known as purposeful sampling (Patton, 1990).

The logic and power of purposeful sampling lies in selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term purposeful sampling -(Patton, 1990:169).

Lincoln and Guba, who call it purposive or theoretical sampling, indicate that it "increases the scope or range of data exposed (random or representative sampling is likely to suppress more deviant cases) as well as the likelihood that the full array of multiple realities will be uncovered" (Lincoln and Guba, 1985:40).

It should be noted that due to the non-random design and geographic specificity of the study, few generalizations could be made from the results, beyond the participants themselves. To its favour, the study design allowed for an interest-rich data set to be gathered, and it facilitated personal rapport, trust and two-way exchange of information between the participants and the researcher.

The sample size was not predetermined; a sample of 27 women was found to be appropriate and manageable. Twenty-three of these women were interviewed twice, and 4 women had moved or were otherwise unavailable for the second interview. In quantitative analysis, the sample size "is usually determined by... the degree of statistical confidence one wishes to be able to place on the resulting generalizations" (Lincoln and Guba, 1985:202). However:

...there are no rules for sample size in qualitative inquiry... The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected and the observational/analytical capabilities of the researcher than with sample size (Patton, 1990:184-5).

Since the purpose of this study was to gather as much information as possible on herbal medicine use without too much redundancy, I stopped recruiting participants when themes and regularities emerged from the data. I felt that I had reached saturation, the point where “continuing data collection produces tiny increments of new data in comparison to the effort expended to get them” (Lincoln and Guba, 1985:350). This type of sampling is termed naturalistic sampling by Lincoln and Guba, who state that

Naturalistic sampling is... based on informational, not statistical, considerations. Its purpose is to maximize information, not facilitate generalization... the criterion invoked to determine when to stop sampling is informational redundancy, not a statistical confidence level (Lincoln and Guba, 1985:202).

In addition to concerns about informational redundancy, time and research funds were both exhausted at this point.

Primary interviews were conducted with the women during their third trimester of pregnancy; follow-up interviews took place within 4 months of the birth. The 45 to 90 minute long interviews were tape recorded and transcribed. Any researcher runs the risk of filtering out important information that does not match his or her preconceptions. For this reason, I chose to tape record the interviews and transcribe them verbatim, then ask the participants to review the transcriptions with me and be re-interviewed after their

babies are born. The experiences of anthropologist Brigitte Jordan come to mind. Her field notes and her memories of the births she attended were clearly affected by her own cultural biases, as she discovered when she viewed videos of the births afterwards (Jordan, 1981).

In the long run, it may well be that the greatest benefit of the technology has been that it had shaken, again and again, our confidence in, and complacency about, what we thought we know as fact... [Recordings] serve as an objective check on the investigator's memory (Jordan, 1981: 200).

In order to provide some longitudinal data and information on herbal use both prenatally and post-partum, follow-up interviews were conducted with 23 of the 27 original participants after the birth of their babies. The interview transcripts from the first interviews were reviewed with the women at the second visit. The second interview was also tape recorded and transcribed, and the participants were given the transcriptions by mail or email and invited to make changes as they saw fit. Only minor changes were requested, such as the correction of transcribing errors.

3.2 Content of the interviews

The interviews were guided by a set of two interview schedules: one for the primary interview, and a second for the post-partum interview (see Appendices 2 and 3). The interview schedules included items relating to the following issues, which were addressed in a conversational style and in no particular order:

- socio-demographic characteristics;
- main aspects of self-care, including details about self-medication;

- the woman's experiences with maternity care, including how the care provider was chosen, and his/her attitude towards self-care;
- her perspective on issues such as herbal medicine, pharmaceutical drugs, and induction of labour;
- her primary sources of self-care information and support;
- her birth experience, and sense of satisfaction with it; and
- advice she would give to others.

Ann Oakley provided me with some food for thought on the use of interviews in this type of research (Oakley, 1981). Oakley has found in her own research that the interview cannot or should not be one-sided; the interviewee is likely to ask questions as well, and may wish to discover the researcher's opinions. She says she finds it unconscionable to avoid answering these questions "as honestly and fully as I could" (Oakley, 1981: 43). She points out that it is particularly hard to remain detached with repeated interviews, when friendships start to form. Oakley's writings influenced me in favour of an informal interview format, with two-way sharing of information whenever it seemed appropriate. As a researcher, I often found myself sharing my own experiences with the participants, and I made some lasting friendships through this project.

3.3 Research ethics

This project received prior approval from the Human Research Ethics Committee at the University of Victoria. The participants signed a consent form at the time of the first interview. For the sake of anonymity, each woman was asked to choose the name

she would go by in my reports, and whenever possible, she received draft copies of any articles in which she was quoted before the articles were submitted for publication.

3.4 Demographic characteristics

Of the 27 women who participated in the study, 10 lived in the metropolitan Vancouver area, and the remainder lived on Vancouver Island, mostly in the capital city of Victoria. They ranged in age from nineteen to forty-three, and number of pregnancies ranged from one (including the current pregnancy) to four (Table 3.1.). Age and number of pregnancies were only weakly correlated in the sample population ($r = 0.31$). A range of birthplace, socio-economic backgrounds and racial backgrounds were represented in this group of women (Tables 3.2-3.4).

The participants utilized various styles of maternity care. At the time of the initial interview, approximately half of the women were planning home births (Table 3.5). Seven women were receiving their primary maternity care from family practitioners or obstetricians, 11 had registered midwives (who are part of the health care system in this province), 5 had hired lay midwives (who are outside of the health care system in this province), and 4 were unassisted (Table 3.6).

Table 3.1. Age and pregnancy # of participants (carried beyond 1st trimester).

	Range	Average
Age	19-43	30
Pregnancy #	1-4	2

Table 3.2. Highest education attained by participants.

Education	Number of participants
High school	5
Professional certificate	6
Some undergrad courses	6
Bachelor's degree	5
Some graduate courses	2
Graduate degree	3

Table 3.3. Birthplace of participants.

Birthplace	Number of participants
Canada	22
USA	2
Germany	1
Japan	1
China	1

Table 3.4. Racial background of participants.

Racial background	Number of participants
Caucasian	20
Asian	2
Métis ³	2
Asian/Caucasian	2
Other mixed	1

Table 3.5. Planned birthplace.

Birthplace	Number of participants
Home	14
Hospital	13

Table 3.6. Planned birth attendance (at 1st interview).

Birth attendant	Number of participants
Obstetrician	2
Family doctor	5
Registered midwife	11
Lay birth attendant	5
Unassisted	4

³ Métis people are of mixed French Canadian and aboriginal heritage.

3.5 Herbal inventory

An inventory of all medications used was extracted from the interview transcripts. The focus of this report is on herbal medicines, which comprised the vast majority of all medications used. Other medications (homeopathic preparations, flower essences, probiotics and pharmaceutical compounds) are mentioned in passing, but are not reviewed here in detail. Each herbal medication is reviewed in Chapter 4.

3.6 Thematic analysis

In the health sciences, thematic analysis is frequently used to process qualitative data (i.e. Kitzinger and Willmott, 2002; Phipps, 2001; Webb, 1999; Weiner et al., 2001). Thematic analysis well suits interdisciplinary research such as that involved in this project. One of the strengths of thematic analysis is its ability to bridge positivist (hypothesis-testing) and interpretive (hypothesis-generating) methodologies by translating qualitative data into forms that can be interpreted and evaluated by ‘hard’ scientists (Boyatzis, 1998; Denzin et al., 1994; Miller and Crabtree, 1992).

Thematic analysis is a process for encoding qualitative information. The encoding requires an explicit “code.” This may be a list of themes; a complex model with themes, indicators, and qualifications that are causally related; or something in between these forms. A theme is a pattern found in the information that at the minimum describes and organizes possible observations or at the maximum interprets aspects of the phenomenon. (Boyatzis, 1998:vi-vii)

The interview data, transcribed, comprised a rich textual data set that provided far more than a catalogue of herbal medicines used. It allowed a window on women's experiences of pregnancy, birth and lactation and maternity care. The lengthy process of transcribing the interviews gave me an intimate knowledge of the data, and I was able to recognize patterns. These patterns formed the foundations of thematic analysis.

Observation precedes understanding. Recognizing an important moment (seeing) precedes encoding it (seeing it as something), which in turn precedes interpretation. Thematic analysis moves you through these three phases of inquiry. (Boyatzis, 1998:1)

In short, one sees a pattern, applies a label to it, then interprets it. A computer program designed for this purpose may assist thematic analysis, or it may be done manually using highlighters or cut-and-paste technology. I chose to use the manual approach, given the relatively small size of this data set and my previous inexperience with analyzing qualitative data. The manual approach has been recommended in situations like mine, as it allows the novice researcher to "gain insight into the intuitive aspects of analysis which are the essential basis of any method of analysis, including computerized forms" (Webb, 1999:323).

The interpretation of qualitative data may be grounded in the academic literature, in the experience of the researcher or other researchers (deductively generated), or in the words of the research subjects themselves (inductively generated) (Boyatzis, 1998). In this case, coding and analysis were used to test the themes I sensed while transcribing the data (inductive) and reviewing the literature (deductive). A written code was kept for cross-checking by other researchers. I also had access to a supplementary source of

interpretation: the minds of mentors within the community I was studying. This aspect of the research is detailed below.

3.7 Feedback from the mentors

The women who took part in this study received self-care advice from a number of sources in the community. In many cases, women relied on the same sources of information, which included elder members of the childbearing community (mentors)-midwives, authors, and herbalists.

Six mentors were approached and asked to take part in an interview, wherein they commented upon the major themes that had evolved from the primary set of interviews with childbearing women (see Appendix 4). Any individual who had been identified as a valuable source of self-care information by a minimum of three participants was included as a mentor. The mentors gave their permission to have their names used. This feedback from the mentors was very helpful in the analysis of the data and explanations for the themes, for it allowed the themes to be viewed from diverse perspectives, not just from the researcher's perspective. These mentors included:

- Jeannine Parvati Baker, of Joseph, Utah; author of 'Prenatal Yoga and Natural Childbirth,' and 'Hygieia: A Woman's Herbal,' teacher of yoga and lay midwifery.
- Gloria Lemay, of Vancouver, BC; author, educator (doula, midwifery, and childbirth education), and former midwife;
- Leilah McCracken, of Coquitlam, BC; author, creator of the BirthLove website (www.birthlove.com);

- Carol McGrath, of Victoria, BC; herbalist, teacher of herbal medicine;
- Angela Spencer, of Victoria, BC; registered midwife;
- Susun Weed, of Woodstock, NY; author of 'the Wise Woman Herbal for the Childbearing Year,' herbalist, teacher of herbal medicine.

The interviews with mentors were each approximately an hour long. Ms. Baker and Ms. Weed were interviewed over the phone; Ms. Spencer was interviewed in her office; Ms. McGrath was interviewed in her home; Ms. Lemay and Ms. McCracken were interviewed in a restaurant. The interviews were taped and transcribed, and the participants were then given an opportunity to review and edit the transcripts. These interviews were subject to the ethical procedures described above, with the exception that the mentors were not anonymous.

Chapter 4.

Results: herbal medicine use

What is the role of herbal medicine in pregnancy, birth and lactation? Of the 27 childbearing women interviewed, all used some form of home medicine to support their health while pregnant or lactating, and herbal medicines were used by 26 of the 27 women. Herbal medicine was one of many self-care tools used. Other important aspects of self-care included trying to get enough rest, paying attention to nutrition, quitting smoking, minimizing the use of pharmaceutical or recreational drugs, and surrounding oneself with supportive people.

In the primary interviews, the women were asked, ‘what do you focus on when taking care of yourself?’ While the answers were varied, they fell into several categories. These included:

- Health care aspects such as paying attention to nutrition, exercise, trying to get enough rest, dealing with health challenges, avoiding toxins, and minimizing the use of recreational and pharmaceutical drugs (76%);
- Psychological aspects such as keeping a positive outlook and avoiding stress (20%); and
- Social aspects such as fostering good relationships with friends and family (4%).

These concerns are documented in Table 4.1.

Table 4.1. Participants' key concerns regarding self-care.

Issue	Frequency
Nutrition	16
Getting enough rest	6
Staying active	7
Proactive towards health challenges	8
Dealing with addictions	3
Avoiding toxins	2
Mental health/ positive outlook	5
Minimizing stress	2
Listening to her body	3
Getting informed	1
Fostering healthy relationships	1
Finding community	1

Health care aspects such as nutrition made up the bulk of the women's key self-care concerns. Herbal medicine played a role in nutrition (particularly tonic herbs), rest (relaxants and substitutes for caffeine-containing beverages), and minimizing the use of drugs (therapeutic herbs used to counteract health problems or induce labour). The herbs used by the women are catalogued and reviewed in this chapter, which is laid out in three sections: herbs used during pregnancy, herbs used for childbirth and post-partum healing, and herbs used to support lactation. Each herb is discussed in the context for which it was used, and its historical use, safety and efficacy are examined.

4.1 Pregnancy

Among the 27 pregnant women interviewed for this study, herbal remedies were used far more commonly than over-the-counter and prescription drugs (a 4.4:1 ratio). Homeopathic remedies were also infrequently used. The herbal remedies these women

used included traditional sleep and digestion aids, cold and flu remedies, tonics, Candida yeast therapies, and remedies for pregnancy-induced nausea and vomiting. Many of these remedies were not specific to pregnancy, and the women had used the remedies to treat similar conditions when not pregnant. Only the tonic herbs and the nausea remedies were used specifically to support the pregnancy. All of these remedies are itemized in Table 4.2, and reviewed in detail below.

4.1.1 Tonic and nutritional herbs

Tonic herbs were most commonly used during pregnancy, accounting for 57% of all herbal medicines used. These provide nutrition and strengthen the body systems (particularly but not exclusively the reproductive system). In this study, tonics were primarily used to strengthen and support the female reproductive system and to provide vitamins and minerals.

There have been few clinical reports of benefits or adverse effects of using tonic herbs while pregnant. Of the tonic herbs used by the women who took part in this study, only one- raspberry leaf- has been studied in a clinical setting. The others remain unstudied; these include stinging nettle, partridge berry, yellow dock, alfalfa, oatstraw, dandelion, lemon balm, and broccoli.

Table 4.2. Herbal medicines used internally during pregnancy.

Common name	Latin binomial name	Purpose	# of users
Alfalfa	<i>Medicago sativa</i> L. [Fabaceae]	Nutritional tonic	4
Blue cohosh	<i>Caulophyllum thalictroides</i> (L.) Michx. [Berberidaceae]	Uterine stimulant	3
Broccoli	<i>Brassica oleracea</i> L. [Brassicaceae]	Nutritional tonic (calcium)	1
<i>Cannabis</i>	<i>Cannabis sativa</i> L. [Cannabaceae]	Anti-emetic	1
Castor bean oil	<i>Ricinus communis</i> L. [Euphorbiaceae]	Uterine stimulant	2
Chamomile	<i>Matricaria chamomilla</i> L. [Asteraceae]	Digestive aid; sedative	2
Coconut oil	<i>Cocos nucifera</i> L. [Arecaceae]	Supplies caprylic acid (suppresses <i>Candida</i>)	1
Cranberry fruit	<i>Vaccinium macrocarpon</i> Ait. [Ericaceae]	Prevents bacterial adhesion to bladder	1
Dandelion leaf	<i>Taraxacum officinale</i> Weber [Asteraceae]	Nutritional tonic	1
Echinacea	<i>Echinacea</i> spp. [Asteraceae]	Immune stimulant	3
Evening primrose oil	<i>Oenothera biennis</i> L. [Onagraceae]	Cervical ripening agent	2
Fenugreek seed	<i>Trigonella foeniculum-graecum</i> L. [Fabaceae]	Decongestant	2
Garlic clove	<i>Allium sativum</i> L. [Liliaceae]	Anti-fungal	2
Ginger root	<i>Zingiber officinale</i> Roscoe [Zingiberaceae]	Anti-emetic	6
Lemon balm	<i>Melissa officinalis</i> L. [Lamiaceae]	Sedative	2
Nettle	<i>Urtica dioica</i> L. [Urticaceae]	Nutritional tonic	9
Oatstraw	<i>Avena sativa</i> L. [Poaceae]	Nutritional tonic	1
Partridge berry leaf	<i>Mitchella repens</i> L. [Rubiaceae]	Uterine tonic	2
Peppermint	<i>Mentha piperita</i> L. [Lamiaceae]	Relieves nausea	6
Raspberry leaf	<i>Rubus idaeus</i> L. [Rosaceae]	Uterine tonic	22
Skullcap	<i>Scutellaria laterifolia</i> L. [Lamiaceae]	Sedative	1
Valerian	<i>Valeriana officinalis</i> L. [Valerianaceae]	Sedative	1
Yellow dock	<i>Rumex crispus</i> L. [Polygonaceae]	Nutritional tonic	2

4.1.1.1 Raspberry leaf

Raspberry leaf tea was the most commonly used herbal preparation; 22 of the 27 women reported using it. Some women used it throughout the entire pregnancy; others used it only in the final months of gestation. Even the most cautious pregnant women were comfortable with using raspberry leaf. Leone and Angela both had concerns that they might miscarry, so they used this herb with caution. As Leone said, "I was only taking herbs like the raspberry tea, which is supposed to be specifically for your uterus." Angela put it like this: "When I saw [the herbalist] she suggested I not take [raspberry leaf tea] right away, because it's probably fine throughout most of your pregnancy, but can, if something starts happening, can maybe increase contractions.... After four or five months, I started drinking it a bit."

Other women considered raspberry leaf to be completely safe. Shannon said, "I drink raspberry leaf tea all the time, ever since I found out I was pregnant. Which is funny, because one website I was at was saying that you should avoid it because it can stimulate the uterus. And it just made me laugh, because I've been drinking it every day, and I haven't had any problem."

The popularity of raspberry leaf among these women is not unusual. As a pregnancy tonic, raspberry leaf is widely known, as it has a long, well-documented history of use by pregnant women in China, Europe, and North America (Lieberman, 1995). Steeped in boiling water, the fresh or dried leaves make a nutritionally rich, flavourful tea that is said to nourish and tone the gravid uterus. In addition, "for centuries, women prone to miscarriage have been urged to drink raspberry leaf tea throughout their

pregnancy to help them carry the baby to term" (Duke, 1997). This recommendation may reflect the role of nutrition in preventing complications such as miscarriage, postpartum hemorrhage, and premature or postdate labour (Cryns, 1995; Hudson, 1999; Parsons et al., 1999; Romm, 1997; Scott, 1998; Weed, 1986). The herb contains vitamins A, B complex, C, and E (Lipo, 1996; Weed, 1986) as well as calcium, iron, phosphorus, and potassium (Weed, 1986). Magnesium and manganese are also present in high levels (Pedersen, 1998; Belew, 1999) as are selenium, tin, and aluminum (Pedersen, 1998).

The tannins, polypeptides, and flavonoids in raspberry leaves account for the herb's astringent, stimulating, and soothing properties (Bartram, 1998; Grieve, 1971; Hobbs and Keville, 1998). Of particular medicinal interest is an alkaloid isolated in 1941 and identified as fragarine, an inhibitor of uterine action (Whitehouse, 1941). In the popular literature, fragarine (also called fragine, fragrine, or fragerine) is described as toning the uterine and pelvic muscles, thereby facilitating an easy childbirth (Bartram, 1998; Hudson, 1999; Lieberman, 1995; Romm, 1997; Weed, 1986).

The uterine stimulant and relaxant effects of raspberry leaf have been demonstrated in laboratory animals (Whitehouse, 1941; Burn and Withell, 1941) but have not been studied in rigorous human trials. A recent retrospective study of raspberry leaf tea in childbearing women found a decreased likelihood of premature or overdue labour and of medical intervention in labour (Parsons et al., 1999). The herb is not implicated in any childbirth complications, and no evidence of long-term toxic or teratogenic effects has been found (McFarlin et al., 1999). Nevertheless, in view of its stimulant effect on the uterus, the tea is sometimes recommended only in the third trimester (Bartram, 1998; Grieve, 1971; Hobbs and Keville, 1998); Whitehouse, 1941; (Balch and Balch, 1990;

Burn and Withell, 1941; McFarlin et al., 1999; Ody, 1999), although use throughout pregnancy, often with progressively increasing dosage, has been advocated by herbalists and midwives (Gardner, 1987; Lieberman, 1995; Romm, 1997). Brinker (1998) lists raspberry leaf as contraindicated in women who have a history of very fast labours.

4.1.1.2 Stinging nettle

The second most popular herb for pregnancy was stinging nettle; it was used by nine women, often in combination with raspberry leaf and other tonic herbs. None of the women who used this herb expressed any concerns about its safety. They considered it to be nutritious and health-promoting. In the words of Sally: “Nettles help increase levels of iron I believe, or maintain levels of iron in the body, which is really important.”

Known worldwide as food and medicine for millennia, nettles remain popular in European and North American herbal medicine. While some medicinal properties of the roots and shoots have been studied fairly extensively (Blumenthal et al., 2000), use in pregnancy, childbirth, and lactation has received little attention.

Nettle leaves as a common ingredient in herbal teas and nutritional tonics in pregnancy appear to be specific to North America, whose First Peoples used the plant to support or induce labour. Reports of its use as a gynaecological aid come from Cowlitz, Cree, Kwakiutl, Lummi, Quinault, and Squaxin nations (reviewed in Blumenthal et al., 2000).

The beneficial effects derive primarily from a high nutrient content, for nettle is one of the most nutritious herbs in common use today (Yarnell, 1998). The leaves are rich in chlorophyll, protein, vitamins A, C, D and K, phosphorus, iron, and sulphur

(Bartram, 1998; Belew, 1999; Bombardelli and Morazzoni, 1997; Lieberman, 1995; Weed, 1986) as well as some B vitamins and appreciable amounts of magnesium (Duke, 1992a). Up to 20% of the leaf constituents are mineral salts, mainly calcium, potassium, silicon, and nitrates (Blumenthal et al., 2000). According to one source, nettle leaf contains exceptionally high levels of calcium: around 2900 mg per 100 g dry weight, complemented by 860 mg of magnesium (Pedersen, 1998). Nettle extract reportedly contains all of the essential amino acids (Bombardelli and Morazzoni, 1997).

The pharmacology of nettle is not well understood (Blumenthal et al., 2000). Germany's Commission E noted no pharmacologic effects of the leaves (Blumenthal et al., 2000), and the British Herbal Compendium reported mild diuretic and hemostatic properties (Bradley, 1992). Despite (or perhaps because of) the lack of evidence for medicinal qualities, the herb is widely accepted as an effective nutritional supplement for pregnant and lactating women and is considered completely safe and nontoxic, even in high doses (Yarnell, 1998). However, Brinker (2001) recommends that pregnant women avoid using excessive amounts of nettle, due to empirical evidence that the plant is an emmenagogue and abortifacient. The herbal literature does not support this warning.

In pregnancy, the herb is primarily a therapy for anemia and malnutrition (Bartram, 1998; Belew, 1999; Burch and Sachs, 1997; Gardiner, 1992; Goldstein, 1995; Hudson, 1999; Ody, 1999). Haemostatic properties and vitamin K content make it useful in the prevention and treatment of postpartum hemorrhage (Belew, 1999; Cryns, 1995; Gladstar, 1993; Hudson, 1999; Romm, 1997; Scott, 1998; Weed, 1986) and, in combination with dandelion root and burdock, in the treatment of pregnancy induced hypertension (Belew, 1999). The herb also promotes healthy kidney function

(Lieberman, 1995; Romm, 1997; Weed, 1986) and reduces varicose veins (Hudson, 1999; Romm, 1997; Weed, 1986). Considerable experiential evidence supports the use of nettle in pregnancy (Yarnell, 1998), but clinical trials have not been conducted.

4.1.1.3 Partridge berry

A lesser-known herbal tonic is partridge berry, which was an ingredient in pregnancy tea blend used by two women. The name is somewhat misleading, for it is the plant's leaves that are used medicinally. The tea blend used here also included raspberry leaf, stinging nettle, lemon balm, alfalfa and peppermint. An herbal apothecary in Vancouver sold the tea.

Although partridge berry was not widely used among the women in this study, it has a long history of use as a uterine tonic by North America's First Peoples. The Cherokee have used it against menstrual pain, and to facilitate childbirth, and it was reputedly given to pregnant cats and their kittens as well (Hamel and Chiltoskey, 1975). Among the Delaware, it has been used as an abortifacient, emmenagogue, and uterine tonic (Tantaquidgeon, 1942; Tantaquidgeon, 1972). The Iroquois prefer the berries (Parker, 1910) or a decoction of the plant (Herrick, 1977) to promote easier, less painful childbirth, and the decoction is also used against leucorrhea (Herrick, 1977). Pregnant women also use the plant to prevent rickets in their babies, and to treat side pain (Herrick, 1977).

Partridge berry entered the *materia medica* of contemporary Western herbalists when it was adopted by the Eclectic Physicians who administered it to susceptible women to prevent miscarriage (Belew, 1999) and to prepare for labour, as its use "will

often favour a mild and speedy delivery" and is preferable to resorting to forceps (Webster, 1996).

Like raspberry leaf, partridge berry, in the form of a tea or a tincture (Bartram, 1998), is believed to tone and nourish the uterus and is recommended throughout pregnancy to prevent miscarriage (Belew, 1999; Duke, 1997; Romm, 1997) and as a late pregnancy tonic (Gardner, 1987; Hudson, 1999; Romm, 1997; Weed, 1986). The herb also can be taken throughout labour and after delivery to speed contraction of the uterus (Ody, 1999).

The pharmacologic effects of partridge berry have not been studied in a clinical setting, and its chemical composition is largely unknown. For these reasons, some herbalists recommend caution when the herb is used during pregnancy (Burch and Sachs, 1997). Nevertheless, Hobbs and Keville (1998) consider this to be one of the few medicinal plants that are safe to ingest throughout pregnancy.

4.1.1.4 Yellow dock

In European folk medicine, yellow dock root is a well-known traditional laxative, liver tonic and blood cleanser (Grieve, 1971; Pedersen, 1998). Its use as a liver tonic is likely based on the Doctrine of Signatures, whereby yellow plants are thought to treat liver and bile conditions (Pedersen, 1998).

Yellow dock has a reputation as a remedy for iron-deficiency anemia (Weed, 1986), so it is popular in pregnancy, a time when anemia is of some concern. While pregnant, a woman's blood volume increases, partly through production of more blood cells and partly through dilution. This dilution causes blood hemoglobin levels to fall

(Mahomed and Hytten, 1989; McLean, 1998) so false diagnosis of iron deficiency anemia is possible. Whether pre-existing or transitory, following a diagnosis of iron-deficiency anemia, treatment by herbal means or with iron salts is typically advised. In this study, two women reported using yellow dock root to treat anemia at the advice of their midwives.

Yellow dock may not deserve its reputation as an iron tonic. On average, it contains quite a lot of iron, 7.6 mg per 100 g dry weight according to one source (Pedersen, 1998). However, only those plants grown in iron-rich soils will be rich in iron. Its use as an iron tonic is based upon a tradition of growing the plant in iron-enriched soils.

[Yellow dock] roots possess the property to attract iron from the soil which is transmuted into organic iron in the plant tissues. An older generation of herbalists sprinkled iron-filings on soil on which they grew Yellow Dock. The plant thus became “enriched” with the metal; extracts and tinctures made from its roots made invaluable blood-enrichers for the treatment of simple iron-deficiency anemia. (Bartram, 1998:459).

While the roots are used medicinally, the leaves should be avoided because they contain oxalate salts, which can collect in the kidneys and cause organ damage. One case of fatal poisoning by yellow dock leaves was reported in the literature (Reig et al., 1990).

4.1.1.5 Alfalfa

Alfalfa was included in the herbal tonic blends used by four women, and was likely included for its nutritional value. Alfalfa is most commonly used to feed cattle; it

is less well known as a medicinal plant. It has been used in European folk medicine to treat inflammation (especially arthritis), to aid digestion, and as a blood purifier (lowering cholesterol and blood sugar levels) and bitter tonic (Pedersen, 1998). Nutritionally, it is known to be an excellent source of vitamins A, C, D, E, and K (Bartram, 1998; Gladstar, 1993), as well as vitamin B6, calcium, magnesium, phosphorus, and potassium (Bartram, 1998). The plant also contains high levels of cobalt, B-vitamins, and protein (Pedersen, 1998).

Bartram reports that alfalfa contains 20000 to 40000 units of vitamin K per 100 grams of plant; this is likely the main reason for alfalfa's inclusion in pregnancy tonic formulas (Bartram, 1998). Vitamin K is an important blood-clotting factor involved in preventing post-partum hemorrhage (Weed, 1986) and hemorrhagic disease of the newborn (Sweet, 1997).

4.1.1.6 Oatstraw

Oatstraw was included in the herbal tonic blend used by one woman, in combination with dandelion, alfalfa, and raspberry leaf. Oatstraw was likely included for its nutritional value; it is rich in calcium and magnesium (Gladstar, 1993; Pedersen, 1998). It is not well known as a tonic or medicinal herb, though Weed recommends it to strengthen capillaries and prevent varicosities (Weed, 1986), and Gladstar (1993) suggests it for calming the nerves. Oat extract and tincture have been used as nerve and uterine tonics (Lust, 1974). There are no restrictions on the amount of oatstraw tea a pregnant woman may use (Weed, 1986). In another book, Weed recommends it for use as a pregnancy tonic.

Rich in bio-active minerals, [oatstraw] is an easily digested, inexpensive source of calcium used by wise women to mend bones, build flesh, and improve circulatory and nervous system functioning. Try [oatstraw] as your ally to nourish health/wholeness/holiness during pregnancy and lactation. (Weed, 1989:202)

4.1.1.7 Dandelion

Dandelion was an ingredient in the herbal tonic blend used by one woman. It was included for its nutritional value, though dandelion root has a history of use as a diuretic and liver tonic (Bartram, 1998; Grieve, 1971; Weed, 1989). Its Latin species name means 'medicinal', pointing to a long history of dandelion's use in healing. Its roots are a liver and digestive stimulant, diuretic, nutritive tonic, and sedative (Weed, 1989). The leaves of the dandelion plant have mild medicinal properties; they are tonic, diuretic, and a digestive bitter (Blumenthal et al., 2000; Gladstar, 1993; Weed, 1989).

The German Commission E has approved the whole plant for use as a diuretic, to stimulate appetite, and to treat bile flow disorders and dyspepsia (Blumenthal et al., 2000). The British Herbal Compendium gives it similar indications (Bradley, 1992). There are no known side effects and no contraindications to its use during pregnancy and lactation (Blumenthal et al., 2000).

Dandelion is greatly valued as a nutritive tonic. Its roots are high in iron, manganese and phosphorus (Weed, 1989), and its leaves contain high levels of vitamin A, vitamin C, potassium, calcium and iron (Gladstar, 1993; Weed, 1989; Pedersen, 1998), as well as vitamin B-complex and phosphorus (Weed, 1989). Pedersen (1998)

reported iron levels of 9.6 mg and calcium levels of 614 mg per 100 g dry weight in the whole plant. Due to its high concentration of calcium and other micronutrients, Duke recommends it as a bone-strengthening herb (Duke, 1997).

4.1.1.8 Lemon balm

Lemon balm was an ingredient in the herbal tonic blend used by two women. Like dandelion, lemon balm's botanical species name means 'medicinal', indicating that it has been used in healing for centuries. Gladstar recommends lemon balm as a relaxant and anti-flatulent (Gladstar, 1993). She attributes its digestive action to a high concentration of essential oils. Weed calls the plant "an old favorite for depression, melancholy and hysteria" (Weed, 1986:83). Bartram mentions these applications, though Grieve does not (Bartram, 1998; Grieve, 1971).

Some of the medicinal properties of lemon balm have been studied fairly extensively. The essential oil was used successfully as a treatment for agitation in people with dementia in a controlled study (Ballard et al., 2002). The whole herb was shown to have sedative properties, which improved 'accuracy of attention' in sufferers of Alzheimer's disease (Kennedy et al., 2002). In vitro and in vivo studies have shown it to be an effective topical treatment for herpes (Dimitrova et al., 1993; Koytchev et al., 1999), and significant anti-HIV properties have been demonstrated in vitro (Yamasaki et al., 1998). The antidepressant and anti-flatulent properties of lemon balm remain unstudied.

4.1.1.9 Broccoli

One woman (Pauline) chose to use broccoli in capsules as a calcium supplement. “I had heart palpitations, and somebody told me to take calcium for that. I tried broccoli, because broccoli is the highest form of calcium. So I took broccoli pills and that seemed to take it away.”

Calcium and magnesium have attracted attention in recent years as therapies for heart arrhythmias. These minerals act synergistically in the body (Pedersen, 1998). Calcium is important for muscle contractility and is present in blood and muscle tissues. It is an essential nutrient for nerve function and muscle contraction (Bantam, 2000). Calcium cycling in the heart is critical for healthy functioning (Pogwizd and Bers, 2002). However, it is magnesium that has been shown clinically effective in treating arrhythmias (Gulker et al., 1989).

In addition to calcium, broccoli is high in magnesium, and it contains the anti-oxidant compounds beta-carotene (pro-vitamin A) and glutathione (Duke, 1997). It also has compounds that reduce blood pressure and regulate thyroid functioning (Duke, 1997). The natural health community has paid a fair bit of attention to broccoli and its close relatives lately, as they have cancer-preventative properties (Beecher, 1994).

100 grams of broccoli provides an average of 30 mg of calcium and 20 mg of magnesium, though there is a great deal of variation depending on where and how the broccoli was grown (Farnham et al., 2000). According to another source, 125 ml of cooked broccoli contains 47 mg of calcium. The same source recommends a consumption of 1000 mg a day are recommended for pregnant and lactating women (McKinley, 2002). Broccoli provides a highly bioavailable source of calcium, with

around half the calcium in the broccoli absorbed; this is slightly but significantly higher than the rates of calcium absorption from milk (Heaney et al., 1993).

4.1.2 Nausea, vomiting, and indigestion

One of the most common disorders of pregnancy is nausea and vomiting. Between 50 and 90 percent of all pregnant women experience some degree of nausea (Erick, 1993). Approximately 1-2% of all pregnant women experience severe nausea and vomiting, a debilitating and life-threatening condition called hyperemesis gravidarum (Curry, 2002).

In this study, virtually all the women reported some discomfort in the early months of pregnancy. The symptoms were relatively mild; none suffered from hyperemesis gravidarum. Nausea, vomiting and heartburn were most often treated with dietary adaptations: frequent small meals, bland meals, and so on, but some women felt sick enough to try herbal remedies. Over-the-counter medications such as Zantac^R and Tums^R were used by only one and two women, respectively, and two other women used the anti-emetic prescription drug Diclectin^R (a combination of doxylamine and vitamin B6). Herbal remedies for nausea, vomiting and indigestion included ginger, peppermint, *Cannabis*, and chamomile.

4.1.2.1 Ginger

Of the six women who used ginger, all considered it to be only moderately effective, if at all. Three of these women used both ginger and peppermint tea, though one who had used ginger successfully in a previous pregnancy said its smell nauseated

her now, so she discontinued its use. Of the remaining three women, two used ginger tea, and one used ginger-rich food items such as ginger ale and ginger cookies, though she developed an aversion to the flavour: “I couldn’t stand the taste of it. Anything with ginger in it was just repulsive to me.” A seventh woman specifically avoided ginger, because she had experienced warning signs of miscarriage and was advised against using it by an herbalist. An eighth woman said she “heard about ginger after the nausea went away.”

Ginger has been used for thousands of years in Asian medicine to treat indigestion, nausea, diarrhea, and stomach-ache (Blumenthal et al., 2000) and in Ayurvedic medicine to treat flatulent intestinal colic (Karnick, 1994). In the United States in the 1800s, the Eclectic physicians prescribed ginger to relieve nausea and intestinal disorders (Felter and Lloyd, 1992).

In Chinese medicine, ginger is used cautiously during pregnancy, usually in combination with other herbs, to treat nausea and vomiting (Blumenthal et al., 2000; Bone, 1997). Women in India have also used ginger to counteract morning sickness for hundreds of years, but they use it with care and only for nausea and vomiting (Reading, 1995).

The efficacy of ginger, peppermint and *Cannabis* in treating nausea and vomiting has been investigated to varying degrees. Only ginger has been studied in a clinical setting in the context of pregnancy. One double-blind, randomized trial of ginger for treatment of severe nausea and vomiting of pregnancy showed promising results (Fischer-Rasmussen et al., 1990). 30 participants were given 1 gram of powdered ginger in capsules daily for four days or a placebo (lactose), then after a two-day break, they

were given the alternate treatment. 70% of the women showed preference for the period in which they were given ginger. More recently, a second randomized controlled trial of ginger for nausea and vomiting of pregnancy has been conducted (Vutyavanich et al., 2001). Seventy women were given either powdered ginger in capsules (1g per day) or a placebo, for a period of four days. The women described the perceived severity of their nausea as well as recording the number of times they vomited. In the women who were given ginger, nausea and vomiting were significantly reduced as compared to baseline levels. --

Ginger's use as an anti-emetic has been investigated in a clinical setting in other situations, including post-operative nausea (Bone et al., 1990) and motion sickness (Mowrey and Clayson, 1982). In both cases, ginger therapy was considered effective.

With regards to ginger's use by pregnant women, there are some safety concerns based on current understanding of the herb's biochemistry and pharmacology. Some researchers have expressed concerns about the mutagenic activity of a constituent of ginger, 6-gingerol (Nakamura and Yamamoto, 1982a; Nakamura and Yamamoto, 1982b). These concerns have largely been dismissed. The whole rhizome does not appear to have a mutagenic effect; it also contains the substance zingerone that suppresses the mutagenic activity of 6-gingerol (Nakamura and Yamamoto, 1982a; Nakamura and Yamamoto, 1982b; Qian and Liu, 1992).

In other respects, ginger has been shown to inhibit platelet aggregation by inhibiting thromboxin formation (Guh et al., 1995) and to decrease serum thromboxane levels by 37% in humans (Srivastava, 1986). Backon (1991) cautioned that ginger is a potent inhibitor of thromboxin synthetase, with an effect on testosterone binding. It

could theoretically affect testosterone receptor binding and sex steroid differentiation of the fetus (Backon, 1991). However, there is no clinical evidence to suggest this is actually the case (Murphy, 1998).

Some herbalists caution women against using large doses of ginger, due to its reputation as an emmenagogue (menstrual promoter) (Burch and Sachs, 1997; Foster, 1999; Fulder and Meir, 1996; Grieve, 1971; Romm, 1997; Weed, 1986). Ginger increases the flow of blood to the uterine area (Campion, 1996; Weed, 1986) and inhibits platelet aggregation (Guh et al., 1995), possibly explaining ginger's emmenagogic effect. Ginger is contraindicated in labour because it can increase the possibility of postpartum hemorrhage (Campion, 1996; Weed, 1986). In a review of 75 non-medical sources of information on safety of herbs used in pregnancy, Wilkinson (2000) noted that 16% of her sources considered ginger to be unsafe. Though there is no clinical evidence that ginger acts as an abortifacient, herbalists routinely caution women not to use ginger if they have had signs of threatened miscarriage such as uterine cramping or bleeding.

4.1.2.2 Peppermint

This herb was used by six women during pregnancy, either alone as an anti-emetic and digestive aid (5) or in combination with tonic herbs (1). In all cases, peppermint was taken in the form of a tea. The six women who used peppermint all found it to be somewhat helpful in soothing nausea. In every case, the herb was prepared as a tea, sometimes in combination with other herbs such as raspberry leaf (n=3). As noted above, three of the six women who used peppermint were also using ginger.

Peppermint reportedly had a calmative effect on the stomach, in addition to reducing nausea, and its smell was not off-putting to any of the women.

Like ginger, peppermint has been used extensively in folk medicine. Herbalist Susun Weed (1986) considers peppermint to be a nausea remedy of moderate strength. She also notes that it is invigorating, thus she recommends its use first thing in the morning. She gives no contraindications. Grieve (1971) identifies the volatile oil as the active ingredient.

Peppermint remains clinically untested for pregnancy-induced nausea and vomiting. However, a clinical trial of peppermint oil therapy for post-operative nausea found it to be more effective than a placebo (Tate, 1997).

Like ginger, peppermint is viewed with some suspicion in the herbal literature, and is considered unsafe in 7% of Wilkinson's sources (2000), cited above. While Bartram (1998) noted peppermint's value as a remedy for nausea and vomiting, he identified the herb as an emmenagogue and lists it as contraindicated in pregnancy. In his database, Duke (2000) reported that the plant contains undisclosed levels of thujone and betain, two emmenagogic compounds. Nonetheless, the Botanical Safety Handbook lists no known contraindications for peppermint herb or oil (McGuffin et al., 1997), and Blumenthal et al. (2000) did not include thujone and betain in their list of active constituents of peppermint.

4.1.2.3 German Chamomile

Chamomile tea was used by two women as a relaxant and digestive aid, but not as a remedy for nausea and vomiting. In a review of non-medical sources that reported on

the safety of herbs used in pregnancy, it was noted that chamomile was listed as a nausea remedy in 28 out of 75 sources (Wilkinson, 2000). Seven of these sources claimed that chamomile was unsafe for use during pregnancy.

Chamomile is widely used in Europe and North America, and has been approved by the German Commission E for use against gastrointestinal spasms (Blumenthal et al., 2000). It is also a gastrointestinal anti-inflammatory and anti-peptic (Blumenthal et al., 2000). According to the Commission E, chamomile is not contraindicated during pregnancy and lactation. However, individuals who have pollen sensitivities had best avoid chamomile, as it occasionally triggers a severe allergic reaction. One case report documents an anaphylactic reaction in an 8-year-old boy who drank chamomile tea (Subiza et al., 1989).

4.1.2.4 *Cannabis*

This anti-emetic herb was kept on hand by one woman for treatment of nausea and vomiting. She kept the dried herb and a little pipe for smoking.

Cannabis has a unique history, due to its popularity as a psychoactive drug. Medicinally, it has had a number of applications in obstetrics and gynecology over centuries, traced back as far as ancient Mesopotamia (Russo, 2002). It was an ingredient in 19th century patent medicines for women (Russo, 2002), and the Eclectic Physicians of 19th century America used an extract of *Cannabis* to stimulate uterine contractions and treat post-partum hemorrhage (Felter and Lloyd, 1992). Despite its medicinal properties, possession of *Cannabis* is presently illegal in Canada and the United States and elsewhere, though the laws are gradually relaxing around medicinal use of the herb, and

there are a number of licensed medicinal *Cannabis* users in North America. *Cannabis* has gained a positive reputation as an anti-emetic, used primarily by chemotherapy and anti-HIV drug patients; many physicians support the medicinal use of *Cannabis* and isolated cannabinoids.

In terms of clinical efficacy, the anti-emetic properties of *Cannabis* are well established in the context of chemotherapy-induced nausea, for which it has been used for several decades. The active constituent delta-9-tetrahydrocannabinol (THC) was isolated in 1964, and used to treat chemotherapy patients in the 1970s (Vincent et al., 1983). Since then, THC and other natural and synthetic cannabinoids have been subjected to a number of clinical trials (Tramer et al., 2001). A systematic review that included 30 such trials (1366 chemotherapy patients) found that cannabinoids (extracts or synthetic versions, none of which were administered in smoked form) are slightly more effective than conventional anti-emetic drugs. The former are preferred over the latter by 38-90% of patients, but they have more side-effects, some positive, some negative (Tramer et al., 2001). Positive side-effects included a feeling of 'high' (30%), sedation (20%), and euphoria (15%), whereas negative side-effects included dizziness, dysphoria or depression (13%), hallucinations (6%), paranoia (5%), and arterial hypotension. In another paper, six US state trials of *Cannabis* therapy for nausea and vomiting in cancer chemotherapy patients were reviewed. These previously unpublished trials included smoked *Cannabis*, which gave 70-100% relief, whereas THC capsules gave 76-88% relief from symptoms (Musty and Rossi, 2001). *Cannabis* is also considered effective in treating nausea and anorexia in AIDS patients, according to a review of case reports (Bayer, 2001).

A survey of 1035 American oncologists found that many recommended *Cannabis* to patients, and they considered it more effective in smoked form as compared to synthetic THC (Doblin and Kleiman, 1991). A second survey of 141 American oncologists showed that the respondents considered *Cannabis* to be 50% effective as an anti-emetic for chemotherapy patients; unpleasant side effects were said to happen 25% of the time (Schwartz and Beveridge, 1994).

Though its medicinal use in pregnancy is not publicly advocated, a casual poll of women reveals widespread knowledge of the herb's use as an anti-emetic and appetite stimulant in pregnancy. A researcher and hyperemesis gravidarum sufferer conducted a small, underground pilot study of *Cannabis* therapy for this severe form of pregnancy-induced nausea and vomiting (Curry, 2002). In her article, she reported on her own experiences with *Cannabis* use for hyperemesis gravidarum, as well as those of two women who took part in her pilot study. One woman dropped out of the study; the other miscarried, so little data were available, apart from Curry's own experiences. The author describes how *Cannabis* may be smoked during pregnancy to relieve nausea- one or two puffs once or twice a day will usually be sufficient (Curry, 2002).

With regards to safety, the use of *Cannabis* in pregnancy is well-studied, and the herb does not appear to be contra-indicated. Due to the popularity of *Cannabis* as a recreational drug, considerable amounts of data have been collected on the effects of prenatal exposure. Levels of pregnancy-specific hormones appear to be normal in *Cannabis* users (Braustein et al., 1983). In some studies, maternal *Cannabis* use appeared to be associated with lower birth weight and higher rates of premature delivery; in others, birth outcomes were comparable to those of non-exposed infants. Differences

between the babies of *Cannabis* users and non-users typically disappear when the data are adjusted for other factors, such as maternal smoking; such was the case in a study involving 12885 pregnant women in Copenhagen, 0.8% of whom were identified as *Cannabis* users (Balle et al., 1999). A large, multi-site American study found no association between *Cannabis* use and premature delivery, low birth weight, or abruptio placentae (Shiono et al., 1995). Adjusted odds ratios were 1.1, 1.1, and 1.3 for premature delivery, low birth weight, and abruptio placentae, respectively, with 95% confidence intervals of 0.9 to 1.5, 0.8 to 1.3, and 0.6 to 2.8. The study included 7470 women, 11% of whom were identified as marijuana users, either in interviews or through blood serum testing. In addition, a meta-analysis of 32483 births found inadequate evidence that recreational use of *Cannabis* causes lowered birth weight (English et al., 1997). A study of perinatal deaths in Jamaica found no correlation between maternal *Cannabis* use and rates of perinatal mortality or morbidity (Greenwood and McCaw, 1994).

When a pregnant woman uses *Cannabis*, it is not known to what extent the pharmacologically active constituents cross the placental barrier, affecting the unborn child. Though *Cannabis* has been well-scrutinized as a potential teratogen, there appear to be no serious detrimental side-effects to maternal use in light or moderate doses. The World Health Organization has concluded that *Cannabis* is associated with minor negative effects on prenatal growth, and later, juvenile behaviour (SSCID, 2002; WHO, 1997). A Canadian research team working since the late 1970s noted a number of behavioural effects on children who were exposed to regular *Cannabis* in utero (Fried, 1995; Fried et al., 1999), but they relied on small numbers of children, and their findings were not conclusive (SSCID, 2002). Adverse effects on intellectual development of

Cannabis-exposed children were not significant when home conditions were factored in (Connell and Fried, 1984). A larger (n=636) longitudinal study found a significant correlation between behavioural problems in ten-year-olds and prenatal *Cannabis* exposure, but the authors considered the correlation to be, at least in part, due to the social environment in which the children lived (INSERM, 2001). In short, there is very little evidence that recreational *Cannabis* use by pregnant women is harmful to their babies, and medicinal use of *Cannabis* (which typically involves very low, chronic doses of the herb) remains unstudied in pregnancy.

In contrast to smoked *Cannabis*, the tincture (alcohol extract) should not be used during pregnancy, as it is a powerful oxytocic and may stimulate uterine contractions (Russo, 2002). Weed (1986) lists it as an emmenagogue, and notes that smoking the herb- as opposed to using a tea or tincture- can most carefully control the dosage, presumably because it enters the bloodstream more quickly when smoked and is thus easier to self-titrate.

4.1.3 *Candida* yeast overgrowth

In this study, *Candida albicans* overgrowth in the vagina was one of the most common health complaints of pregnancy. During pregnancy, hormonal changes alter the acidity of the vagina, making it more hospitable to yeast organisms, which are normally present but not overabundant. Symptoms of a yeast infection can include white discharge, itching, and skin irritation- the condition is known clinically as candidiasis (Balch and Balch, 1990).

Five women described having an overgrowth of yeast, and they used various home remedies to treat it. Remedies included washing with vinegar, boric acid suppositories, *Acidophilus* suppositories, garlic clove suppository, homeopathic *Candida*, and ingestion of *Echinacea* or coconut oil. Of these remedies, only the homeopathic *Candida* preparation was found to be highly effective and long-lasting.

4.1.3.1 Garlic

Two women used a clove of garlic as a suppository in an attempt to alleviate vaginal yeast overgrowth. In vitro studies have demonstrated the antimicrobial (and particularly, anti-*Candida*) activity of garlic (Adetumbi et al., 1986; Ghannoum, 1988; Lemar et al., 2002; Sasaki et al., 1999; Tsao and Yin, 2001; Yoshida et al., 1987). However, neither of the women who used garlic in this study found it effective. Nonetheless, garlic is considered safe for use during pregnancy (Blumenthal et al., 2000), though Brinker (2001) cautions against excessive garlic consumption in early pregnancy, as empirical evidence and laboratory studies suggest that it may have uterine stimulant or emmenagogic effects. He does not state what levels of consumption are considered excessive.

4.1.3.2 Echinacea

Echinacea is arguably one of the most popular plants in contemporary herbal medicine, where it is used primarily as an immune stimulant. Among prairie First Peoples, several species of *Echinacea* have been used for a variety of purposes. With relevance to contemporary use, the Choctaw, Chickasaw, and Creek peoples historically

used the root of *E. purpurea* against coughs and dyspepsia (Campbell, 1951). *E. angustifolia* is used in Lakota medicine as a poultice for wounds and sores, and the root is chewed to treat tonsillitis (Kraft, 1990).

In this study, one woman used *Echinacea* to try and suppress *Candida* yeast growth, but she found it ineffective. This is perhaps not surprising, for *Echinacea* is considered to be immunostimulant, not anti-microbial. It is most commonly used to treat upper respiratory tract infections (Barrett et al., 1999; Giles et al., 2000). Nonetheless, *Echinacea* is considered safe for use during pregnancy (Blumenthal et al., 2000; Brinker, 2001). A prospective controlled study of 206 women who used the herb during pregnancy found no increase in incidence of birth defects (Gallo et al., 2000); larger trials are needed to confirm this finding.

4.1.3.3 Coconut oil

One woman added coconut oil to her diet and massaged it into her skin when she had symptoms of a systemic yeast infection. Her rationale was that coconut oil is high in caprylic acid, which kills *Candida albicans* (Balch and Balch, 1990). However, the therapy was not sufficient to get her yeast overgrowth under control, and she was still dealing with the problem at the time of the second (post-partum) interview.

Coconut oil is an unconventional therapy for *Candida* yeast overgrowth; there is no historical precedent for its use. As it is a food item, it can be considered safe for use during pregnancy, given no evidence to the contrary.

4.1.4 Other health issues

A few women chose to treat colds, flus, and sleep disturbances with herbal remedies. Colds were treated with *Echinacea* by two women, and one woman used cranberry juice to treat a urinary tract infection. Valerian root and skullcap herb helped one woman sleep. Two women used fenugreek as a decongestant. *Echinacea* is discussed above with reference to *Candida* yeast overgrowth; the other herbs are described here.

4.1.4.1 Cranberry

One woman was diagnosed with a urinary tract infection by means of clinical urinalysis. She chose to treat the condition with cranberry juice; she considered the treatment effective. Clinical studies have confirmed that cranberry juice inhibits the adhesion of bacteria in the mouth (Weiss et al., 2002), stomach (Burger et al., 2002) and bladder (Howell, 2002; Sharon and Ofek, 2002; Sobota, 1984).

A survey of the herbal literature revealed no known contraindications to cranberry's use during pregnancy. It is widely considered to be both safe and effective.

4.1.4.2 Valerian

Valerian is native to Europe where it has been used as a spice, medicine and perfume for many centuries (Pedersen, 1998). It is approved for food use by the Federal Department of Agriculture (Duke, 1985).

Anglo-Saxons used valerian as a salad, which sometimes took over its corner of the garden, and Scots added it to brothe, meats, and pottage.

According to Leung, the extracts and essential oil are components in beers, liqueurs, root beers, candy, frozen dairy desserts, baked goods, gelatins and puddings, meat, and meat products (Duke, 1985:503).

Medicinally, valerian is most commonly used as a sedative and nerve tonic; it contains alkaloids, which soothe and depress the central nervous system (CNS) (Pedersen, 1998). The CNS-depressant constituents are iridoid compounds called valepotriates (Duke, 1985). The sedative and sleep-promoting activities of valerian have been widely studied, and there have been numerous clinical trials demonstrating its efficacy (Blumenthal et al., 2000). It is generally considered safe for use during pregnancy and lactation (Blumenthal et al., 2000; Brinker, 2001).

4.1.4.3 Skullcap

Though clinical evidence is largely lacking, skullcap is considered by herbalists to be an effective sedative herb; it is often used in combination with valerian (Bartram, 1998; Weed, 1986). The plant is used medicinally in the North American herb industry, though is preferred as a bitter tonic elsewhere in the world (Duke, 1985). The Cherokee use a decoction of skullcap roots as an abortifacient, emmenagogue, and to aid in the birth of the placenta (Hamel and Chiltoskey, 1975), so the roots are contraindicated for use in pregnancy. The aerial parts of the plant are considered safe for use during pregnancy and lactation (Weed, 1986).

A related species- *Scutellaria baicalensis*- is used in Chinese medicine. Besides being a sedative, *S. baicalensis* is an anti-inflammatory (Huang et al., 1990; Martin and Dusek, 2002), antimicrobial (Martin and Dusek, 2002) and antispasmodic (Huang et al.,

1990). *S. laterifolia* (skullcap) apparently has these properties as well (Pedersen, 1998) though it is less well studied.

Though skullcap is generally considered safe, there have been several reports of hepatotoxicity resulting from its use (Huxtable, 1992; MacGregor et al., 1989). However, there is evidence that the offending plant was likely an adulterant, germander (*Teucrium* spp.) (Foster and Tyler, 1999).

4.1.4.4 Fenugreek

Two women used fenugreek seed tea as a nasal decongestant. Both were in late pregnancy (third trimester), and both used the herb at the advice of their midwives.

Fenugreek seed is most widely used in Western herbalism as an expectorant (Pedersen, 1998). In Indian Ayurvedic medicine, it is used to treat digestive and mucosal conditions (Escot, 1994; Passano, 1995). According to the Ayurvedic tradition, fenugreek, or methi as it is known, is contraindicated in pregnancy, for it is believed to cause abortion (Brinker, 2001; Escot, 1994). However, this abortive effect was not demonstrated in an experiment involving laboratory animals (Mital and Gopaldas, 1986). Fenugreek is also contraindicated during pregnancy in Western herbalism, as it is a uterine stimulant (Ody, 1999). This action may be the result of a steroidal saponin called neotigogenin, which is contained in the seeds (Escot, 1994). It may also make the seeds useful as a childbirth aid, which is one of its traditional uses (Bingel and Farnsworth, 1991).

4.1.5 Summary

During pregnancy, the vast majority of the herbs used were nutritional and uterine tonics. These accounted for 9 of the 20 herbs (45%) used by the women in this study, and 44 of the 71 accounts of herbal use (62%). All of these herbs are considered safe for use during pregnancy, though with the exception of raspberry leaf, their efficacy has not been verified in a clinical setting.

Anti-nausea herbs and digestive aids were second in frequency, with 15 accounts of use of 3 remedies. These remedies included 15% of the herbs used overall, and 21% of all accounts of herbal use. The remedies included ginger, peppermint and *Cannabis*. Of these remedies, only ginger has been evaluated in a clinical setting; it was considered by the women in this study to be the least effective whereas peppermint was moderately effective, and the results of a small pilot study (Curry, 2002) suggest that *Cannabis* may be highly effective.

Three herbal *Candida* yeast therapies (15% of all herbal remedies) were used on four occasions (6% of all treatment episodes). None of these herbal remedies were considered by the women to be highly effective; a homeopathic *Candida* preparation was more effective. Other remedies included sleep aids, cold remedies, and a urinary tract infection remedy. All of these remedies were considered effective, and their use was supported in many cases by clinical reports.

The herbs used by the participants in this study all have a long tradition of medicinal use in Europe, Asia or North America, with the exception of coconut oil and *Echinacea* for *Candida* yeast overgrowth. Three herbs were suspect due to their purported uterine stimulant and/or emmenagogic properties: these included ginger,

peppermint and fenugreek. Nonetheless, there is no clinical evidence that these herbs could jeopardize a pregnancy.

4.2 Childbirth and post-partum healing

Among the women who took part in this study, a number of herbal remedies were used right around the time of the birth. These herbs included cervical ripening agents, uterine tonics, uterine stimulants, uterine relaxants, anti-hemorrhagics, herbs that promote healing, and blood builders and cleansers. As uterine tonics were reviewed in a previous chapter, they will not be discussed here. Each of the remaining categories of herbs will be examined in turn; they are inventoried in Table 4.3.

4.2.1 Cervical ripening agents

Before a woman's cervix can dilate, allowing the baby to be born, it must go through a number of changes. The cervix is normally hard like a nose, and rounded. In preparation for childbirth, in response to hormonal changes, it becomes soft and flat. The ripeness of the cervix is not usually a concern for women who are entering the birth process naturally. However, in the case of induced labour, the ripeness of the cervix will strongly influence the likelihood that the induction will be successful (Cooke, 1997). By and large, an unsuccessful medical induction results in a Cesarean section (Menticoglou and Hall, 2002). Accordingly, cervical ripening is often the first step taken in an attempt to induce labour in a medical setting.

Table 4.3. Herbs used as childbirth aids.

Common name	Latin binomial name	Purpose	# of users
Blue cohosh	<i>Caulophyllum thalictroides</i> (L.) Michx [Berberidaceae]	Uterine stimulant	3
Castor oil	<i>Ricinus communis</i> L. [Euphorbiaceae]	Uterine stimulant	2
Cinnamon	<i>Cinnamomum zeylanicum</i> Blume [Lauraceae]	Anti-hemorrhagic	3
Comfrey	<i>Symphytum officinale</i> L. [Boraginaceae]	Promotes healing	1
Cramp bark	<i>Viburnum opulus</i> L. [Caprifoliaceae]	Uterine sedative	2
Evening primrose oil	<i>Oenothera biennis</i> L. [Onagraceae]	Cervical ripening agent	2
Motherwort	<i>Leonurus cardiaca</i> L. [Lamiaceae]	Anti-hemorrhagic	6
Shepherd's purse	<i>Capsella bursa-pastoris</i> (L.) Medik [Brassicaceae]	Anti-hemorrhagic	5

There are a number of natural ways to encourage the cervix to ripen. Nipple stimulation, intercourse, and herbal remedies are all potentially effective methods. In this study, intercourse and nipple stimulation were widely used in preparation for labour. In addition, two women used an herbal product in an effort to prepare the cervix for childbirth- oil of evening primrose. Neither of these women was planning a medical induction.

4.2.1.1 Evening primrose oil

Evening primrose oil has a widespread reputation as an effective remedy for long labour and prolonged gestation (Dove and Johnson, 1999). It can be used orally, or placed directly on the cervix. One woman (Delone) described its use: "I did use some oil of evening primrose. I did open up some capsules and stick them up inside of me.

Whether or not it made any difference is really hard to say.” Though Delone wasn’t sure if the remedy was effective, Mimick also used evening primrose oil, and she thought it sped up her labour. She took the capsules orally, following weeks of prodromal labour. As she described it, “Tuesday before I got into official labour and Wednesday when I was in labour, actually Monday Tuesday Wednesday, I was taking evening primrose oil tablets. I think that sped up my labour.”

Whether or not evening primrose oil is an effective cervical ripening agent is debatable. A controlled clinical trial of oral evening primrose oil found it to be ineffective at shortening the length of gestation and the length of labour (Dove and Johnson, 1999). The topical application of evening primrose oil has not been studied in a clinical setting.

Evening primrose oil’s mechanism of action as a cervical ripening agent is unknown. It gained its reputation following centuries of use by North American First Peoples (Duke, 1997); women would eat the raw seeds in preparation for childbirth. It is an excellent source of essential fatty acids, which are an effective remedy for premenstrual syndrome (Duke, 1997; Russo, 2002). This suggests that evening primrose oil may have a hormonal balancing effect, and thereby help a woman’s body make the necessary adjustments in preparation for childbirth.

4.2.2 Uterine stimulant herbs

Uterine stimulant herbs may be taken in the final weeks, days, or hours of pregnancy to trigger or strengthen uterine contractions. The aim is to either induce labour, or to shorten its duration once it has begun. Not all of the women who took part

in this study were amenable to induction of labour, whether by herbal or medical means. This phenomenon will be discussed in a later chapter. Nonetheless, five women chose to use one of two induction herbs, either in the current pregnancy or in a previous one: blue cohosh and castor oil.

4.2.2.1 Blue cohosh

Blue cohosh was used by two of the women who took part in this study, and one woman had used it in a past pregnancy. Sally used blue cohosh, not to induce labour, but to prepare her body for the birth. It was included in a 'nine-month tea' herbal blend that she had purchased from a local herb shop. She considered it to be an effective agent for strengthening her uterus. She said, "I had no problem; the contractions were fine. Blue cohosh is supposed to help regulate the contractions and tone the uterus. But it was very long; I had contractions for three days."

Like Sally, in a previous pregnancy Christina had purchased some blue cohosh to prepare her uterus for the birth of her first child. To her surprise, the tincture of the herb worked very well- so well, in fact, that she went into labour that night, ten days before her expected due date. As she put it, "I was just sort of fascinated with all the little bottles and took them all at once. And went into labour that night. She was ten days early. I was just trying to get my uterus ready for the big event."

Angela also used a blue cohosh tincture, but with the intention of inducing labour. She was two weeks past her expected due date, and was expecting a medical induction. The herb did not work immediately, so she underwent a medical induction the following day.

There is empirical evidence that blue cohosh is an effective induction herb. Blue cohosh roots and rhizomes have a long tradition of use as medicine by North American First Peoples (Belew, 1999; Duke, 1997; McFarlin et al., 1999; Stelling, 1994). The fresh roots are gathered in the spring (Weed, 1986). Blue cohosh tea is consumed near the end of pregnancy to prepare the uterus for childbirth and reduce uterine irritability and false labour pains (Stelling, 1994). It is used to prevent miscarriage and to assist difficult labours (Belew, 1999).

The Eclectic Physicians adopted blue cohosh into their *materia medica* in the 1800s. They found it useful for speeding up labour when it is stalled due to the mother's weakness, fatigue, or lack of uterine energy (Felter and Lloyd, 1992). It was also used to ease pain in pregnancy and labour, as well as after pains (Felter and Lloyd, 1992). It was used as an anti-abortive, as it relieved "the irritation in which the trouble depends" (Felter and Lloyd, 1992).

Today, blue cohosh is valued as a uterine stimulant, anti-spasmodic and emmenagogue (Bartram, 1998; Beal, 1998; Burch and Sachs, 1997; Grieve, 1971). It is believed to be one of the most powerful natural inducers of labour. Its oxytocic effect is apparently produced by the glycosides caulosaponin and caulophyllosaponin (Duke, 1992b; Tyler, 1993). It also contains the compound caulophylline, which raises blood pressure and blood sugar levels (Duke, 1992a; McFarlin et al., 1999).

Blue cohosh has a reputation as an abortifacient (Weed, 1986). Paradoxically, the herb also has a reputation for preventing miscarriage in susceptible women, if it is used before conception to strengthen the uterus (Bartram, 1998; Belew, 1999; Lipo, 1996). If used after conception, it can prevent implantation of the fertilized egg (Lipo, 1996).

The safety of blue cohosh has come into question in recent years. Midwives have noticed a rise in fetal heart rates associated with its use (Weed, 1986). Accordingly, midwives and herbalists are coming to the realization that blue cohosh should be used with discretion, and only in the most difficult labours (Belew, 1999).

A number of direct-entry midwives (DEMs) have stopped using blue cohosh, because they noticed an increased incidence of meconium-stained fluid, fetal tachycardia or fetal distress, and a high-pitched or inconsolable neonatal cry associated with the intrapartum use of blue cohosh (personal communication, May 1998, Shannon Anton, DEM, Susan Claypool, DEM, Lucero Dorado, DEM) (Belew, 1999: 241-242).

There have been two recent case reports of health problems in newborns associated with maternal use of blue cohosh. In one case, the mother used an unspecified amount of blue and black cohosh to induce labour (Gunn and Wright, 1996). The infant showed signs of ill health at birth, and was taken to the hospital shortly afterwards with seizures, kidney damage, and the need for mechanical ventilation. The authors pointed out that caulosaponin, a constituent of blue cohosh, causes coronary blood vessel constriction and myocardial toxicity. They speculate that caulosaponin may have been responsible for the infant's ill health. In a response to this article, it was pointed out that our understanding of toxicity in these herbs comes from studies of the effects of isolated constituents on animals, often in unrealistic doses. In the case of caulosaponin, laboratory animal experiments demonstrated a toxic effect from an amount that was equivalent to a human dose of 350g of the herb (Baillie and Rasmussen, 1997).

(Jones and Lawson, 1998) also published a case report of some adverse effects of

blue cohosh. In this case, the mother was advised to take one blue cohosh tablet daily for the last month of her pregnancy. She chose to take three tablets daily, and she gave birth after three weeks. The amniotic fluid was slightly meconium stained, and by 20 minutes of age, the infant required mechanical ventilation. The infant was diagnosed with profound congestive heart failure, and although the child eventually recovered, left ventricular function was still slightly impaired at two years of age. The authors implicated the glycosides caulosaponin and caulophyllosaponin as they are known to have a toxic effect on cardiac muscle.

Blue cohosh has been known to cause nausea (Gardner, 1987; Romm, 1997), severe stomach pain, and toxicity (Ferguson and Edwards, 1954). The roots contain the alkaloid anagryne, which is held responsible for the congenital deformity ‘crooked calf disease’ (Keeler, 1984; McFarlin et al., 1999). The disease does not appear to occur in other species, but there is a case report of a similar human congenital deformity which could have been due to maternal consumption of anagryne contaminated goat’s milk in early pregnancy (McFarlin et al., 1999; Ortega and Lazerson, 1987).

With the evidence stacking up against it, blue cohosh appears to be an herb best left alone. Nonetheless, the women who took part in this study considered it to be safe for short-term use.

4.2.2.2 Castor oil

Castor oil is made from the seeds of the castor bean plant. It is a common household remedy for constipation, and can be purchased at most drug stores in Canada. Castor oil is known to have a stimulating effect on the uterus, and as such is a popular labour induction agent. One of the participants used castor oil, and another had used it in

a past pregnancy.

Ten days past her expected due date, Henna followed Susun Weed's recipe (Weed, 1986) and consumed a concoction of castor oil, orange juice and vodka. The recipe is as follows: 60 ml of castor oil, 60 ml of vodka, and 60 ml or more of orange juice, followed by a hot shower. The dose is repeated after an hour, and an enema is given. The dose is repeated again an hour later, and another hot shower is taken. Labour should begin three to five hours after the last dose. Henna's midwife warned her against taking the vodka, but Henna felt that it was important to follow the recipe exactly. The remedy was extremely effective, though it made her feel very sick and gave her diarrhea. Her third child was born at home in short order.

Heather could also attest to the effectiveness of castor oil as an induction agent. In a previous pregnancy, she took castor oil, and gave herself an enema; she was immediately in active labour. Her opinion has since changed on the subject of induction, so she did not use castor oil to start her labour in her most recent pregnancy. She described the experience as follows.

I actually took castor oil with him, because I didn't want to be hassled, and also I was getting an ear infection, and the last time I'd had it I was in such severe pain that Tylenol-3s didn't even touch it. So I was terrified that it was going to get raging and I'd go into labour. So I took the castor oil, and for me, it worked great. But I did kind of feel that he wasn't very present when he was born. Like he just wasn't ready. And so I kind of wish I'd just left him alone.

By using castor oil to induce labour, these two women were following a long-

standing tradition. Castor bean has been known since ancient times as a medicine.

Castor bean seeds were found in Egyptian tombs, and Pliny the Elder and Dioscorides both wrote of the oil's use as a purgative (Phillips and Foy, 1990). It appeared in the European *materia medica* in 1764 when the English doctor Peter Cavane published a dissertation on the oil (Nabors, 1958). It has been widely used in European medicine as a purgative since then.

Castor bean seeds are extremely toxic, due to the presence of the glycoprotein ricin (Scarpa and Guerri, 1982), but despite their toxicity, they have been used in small doses medicinally. They are considered to be a contraceptive capable of bringing on a late period. Women in India eat the seeds the day after childbirth to prevent conception for the next nine months (Scarpa and Guerri, 1982). In Mexico, the seeds are used to bring about permanent sterility (Scarpa and Guerri, 1982).

El Mauhoub et al. (1983) reported a case of an infant with a series of birth defects that the authors attributed to the mother's consumption of castor oil seeds for eight weeks after conception. They imply that castor bean seeds are not safe for use as a contraceptive or abortifacient.

The oil pressed from the seeds of the castor bean is widely used as a laxative, purgative, and uterine stimulant for induction of labour. It is used as a gentle laxative for pregnant women (Phillips and Foy, 1990), although most herbalists would not recommend it (or any laxative) as it might cause premature births (Campion, 1996). It is used as an emmenagogue and a galactagogue in Somalia and as a galactagogue in Haiti (Scarpa and Guerri, 1982). Women in India and Pakistan smear the oil on their breasts to relieve mastitis (Dastur, 1962). It contains a mixture of triglycerides, of which 75-90% is

ricinoleic acid, which stimulates the motor activity of the bowel (USD, 1955). Its usefulness for labour induction is thought to be due to its profound effect on the intestinal tract, which stimulates reflux of the uterus (McFarlin et al., 1999). It is also absorbed systemically, and it is not known whether it crosses the placental barrier (McFarlin et al., 1999).

It was not until the 1920s that castor oil gained popularity among physicians for inducing labour (Nabors, 1958). It remained popular until the mid 1950s, when it likely fell out of favour as oxytocin was introduced and became widely available (Davis, 1984). It still remains popular as a folk remedy, and many nurses and midwives still recommend it to their overdue clients (McFarlin et al., 1999; Osborn, 1994). A questionnaire sent to American Certified Nurse-Midwives revealed that of those respondents who used herbal preparations to stimulate labour in their practices, 93% used castor oil. They generally felt most comfortable using it over other herbal preparations, and they considered it to be the most effective (McFarlin et al., 1999).

Castor oil is believed to successfully induce labour only when the cervix is ripe and the baby is ready to be born (Campion, 1996; Summers, 1997). Its ineffectiveness in inducing labour before the cervix is ripe was reflected in the clinical trial reported by (Nabors, 1958). Most of the women in that study required induction because of complications such as pre-eclampsia; under those circumstances, castor oil was found to be less effective than oxytocin. The author concluded that castor oil is of no value in inducing labour, and is irritating and dehydrating besides. In contrast, (Mathie and Dawson, 1959) concluded that castor oil might be useful for stimulating labour after demonstrating that it caused an increase in uterine activity in a laboratory setting.

Labour induction with castor oil has been the subject of a number of scholarly papers in recent years. (Davis, 1984) conducted a retrospective study of the use of castor oil to stimulate labour following premature rupture of the membranes. Soon after the membranes have ruptured, the medical system insists that labour must commence because of the risk of infection. If labour does not commence spontaneously within a specified timeframe (currently 24 hours), medical intervention is warranted. This study demonstrated the effectiveness of castor oil in inducing labour. Out of 107 women who used castor oil, 75% went into labour shortly afterwards. Of the 89 women who did not use castor oil, 58% went into labour spontaneously. There were nearly three times as many Cesarean sections in the control group.

Garry et al. (2000) conducted a clinical trial of castor oil in a group of women whose babies were overdue. Of the 52 women who used castor oil, 30 (57.7%) went into labour within 24 hours, as compared to 2 (4.2%) of the 48 women who received no treatment.

With regards to the use of castor oil for the induction of labour, some safety concerns have arisen in recent years. Mitri et al. (1987) found in a survey of 498 South African women whose babies were overdue that meconium passage was found more commonly in those who had recently taken castor oil or an herbal preparation called 'sihlambezo'. Steingrub et al. (1988) published a case report of amniotic fluid embolism, associated temporally with the mother's ingestion of castor oil; it is conceivable that the woman's contractions were strong enough to result in an embolism. In a survey sent by McFarlin et al. (1999) to Certified Nurse-Midwives in the United States, some respondents reported adverse effects of castor oil including thrombosed hemorrhoids,

precipitous labour, nausea, vomiting, diarrhea, and flatulence were reported. Two midwives reported an increase in meconium stained amniotic fluid, a classic indicator of fetal distress.

The inconsistencies in the level of success of labour induction with castor oil may come in part from the huge variations in dosage. McFarlin et al. (1999) reported dosages from 5 ml to 120 ml in the practices of American Certified Nurse-Midwives.

4.2.3 Uterine relaxant herbs

After-pains are a common complaint of women who have just given birth. These strong, menstrual-like cramps can last for several days after the birth. They may feel more painful than the labour itself.

Cramp bark is a uterine sedative with a history of use for easing menstrual cramps. The bark is taken from the roots of the plant. In this study, two women used cramp bark tea as a remedy for after-pains. They both found it to be effective.

According to Weed (1986), cramp bark and its cousin black haw (*Viburnum prunifolium*) are best prepared as an aqueous infusion, though the tincture is effective as well. A strong infusion should be prepared over a period of many hours. It should then be refrigerated and sipped as needed (Weed, 1986). Black haw is believed to be the stronger of the two herbs (Grieve, 1971).

The bark of the roots and stems of black haw was cited in most 19th century pharmacy reference books as "a treatment for painful menstrual cramps and threatened miscarriage" (Duke, 1997). The Eclectic Physicians used black haw and cramp bark interchangeably to prevent and treat miscarriage, to prepare for labour, and to relieve

false-labour and postpartum pains (Brinker, 1996; Felter and Lloyd, 1992). The Eclectics identified black haw as the most effective drug treatment for miscarriage if used in small doses over time as a preventive, or in larger doses for a threatened event (Felter and Lloyd, 1992).

The extensive use of black haw in folk medicine and mainstream pharmacy has led to a fairly good understanding of its pharmacologic effects. Black haw contains salicin and scopoletin, both of which relax and sedate uterine muscle, (Duke, 1992b) and it is an effective uterine antispasmodic (Bartram, 1998; Belew, 1999; Lipo, 1996). Cramp bark is likely to have a similar mechanism of action.

Black haw is contraindicated in women with hypotension, as large or frequent doses may lower blood pressure (Belew, 1999; Gardner, 1987). Anecdotal evidence suggests cramp bark as a safe substitute in such cases (Gardner, 1987).

4.2.4 Anti-hemorrhagic herbs

A risk associated with childbirth is postpartum hemorrhage, or uncontrolled bleeding in the mother. At a medically attended birth, various synthetic drugs are available for treatment, should they be needed. These include synthetic oxytocin and ergot derivatives, both of which have a rapid contracting effect on the uterus. They are given by injection. At home births, particularly those that take place without professional birth attendants, these drugs are not available. Instead, certain herbs are often kept on hand for the prevention and treatment of hemorrhage.

Among the participants in this study, three anti-hemorrhagic herbs were used, separately or in combination, in tea or tincture form. Motherwort was used by five

women, sometimes in combination with cinnamon and shepherd's purse, in a tea for prevention of hemorrhage. Shepherd's purse was used as a tea or kept on hand by six women for use as a coagulant should excessive bleeding occur. Motherwort and shepherd's purse were used most often as a tea or tincture. Each is reviewed below; cinnamon, also an anti-hemorrhagic, was used only in combination with the other herbs and primarily for its flavour, so it is not reviewed here.

4.2.4.1 Motherwort

Three of the four women who had planned unassisted births used motherwort to prevent post-partum hemorrhaging. Two of these women used the herb in combination with cinnamon and shepherd's purse; one woman used a tincture. The tea blend was used by three other women, all of whom had lay birth attendants and gave birth in their own homes.

Motherwort herb is a heart tonic and emmenagogue (Bartram, 1998; Duke, 1997; Grieve, 1971; Weed, 1986). "This traditional mother's herb softens the rough edges of depression and is notable as both a heart and womb tonic" (Perri, 2002). Motherwort is contraindicated in pregnancy, due to its ability to stimulate menstruation. However, it may be used in the final weeks of pregnancy to prepare the uterus for childbirth (Campion, 1996). Motherwort tincture is effective in relieving tension and shock, though repeated use can increase bleeding, and if used regularly, it can become habit-forming (Weed, 1986). This is a useful childbirth herb, as it provides relief from pain, including after-pains, (Weed, 1986), and it can be used to prevent hemorrhage.

Midwives who give 10 drops of motherwort tincture to every mother after the baby is born claim that it totally prevents hemorrhage. The “little mother” is soothing and calming and a fine uterine tonic. (Weed, 1986:71)

Motherwort may be easiest to use in the form of a syrup or tincture, for its taste is strong and bitter (Grieve, 1971; Phillips and Foy, 1990; Weed, 1986). In this study, the motherwort herb was always used in combination with cinnamon and shepherd’s purse; cinnamon masks its bitter taste.

4.2.4.2 Shepherd’s Purse

Three of the four women who had planned unassisted births had the herb shepherd’s purse in their homes in preparation for the birth. Two women with lay birth attendants and one woman with a registered midwife also used shepherd’s purse, in combination with motherwort and cinnamon as a hemorrhage-preventative tea. Only one of these women (Helen) had a bleeding episode that required treatment. She reported that the herbal tea blend she used was effective in controlling the bleeding. One other woman (Colleen) used shepherd’s purse tea to control her lochia (post-partum bleeding) several weeks after the birth. She described the experience to me.

I did use an herb to stop my post partum bleeding. I had bleeding, not right away, not until about two and a half weeks, almost three weeks later. All of a sudden I started bleeding a bit again, quite a bit, and it freaked me out. So I talked to my birth attendant, and she said to try shepherd’s purse, the tincture. It’s got a lot of vitamin K in it, and it’ll help clot your blood,

try that. So I went and got the tincture and the tea, and I drank the tincture. Stopped immediately. Like seriously, right away, like within 12 hours, the bleeding had suddenly stopped.

Shepherd's purse has been used as an anti-hemorrhagic since the Middle Ages (Phillips and Foy, 1990). The Eclectic publication "King's American Dispensatory" refers to the plant's applications for chronic hemorrhages and menorrhagia (Felter and Lloyd, 1992). It is thought to be particularly useful for childbirth hemorrhage and excessive menstruation, because it stimulates uterine contractions as well as promoting vasoconstriction of the capillaries, stimulating prothrombin production, and tightening tissue structure (Newell et al., 1996). It is also valuable for treating varicose veins (Bartram, 1998) and bleeding hemorrhoids (Belew, 1999). It was used in the First World War to stem hemorrhage when nothing else was available (Blumenthal et al., 2000). The British Herbal Pharmacopoeia (USD, 1996) attributes shepherd's purse with the ability to stimulate smooth muscle and treat hemorrhage.

The active constituents of shepherd's purse include diosmin, the flavonoid rutin, oxalic acid, and tannic acid (Duke, 1992a). The organic acids and rutin are hemostatic, and diosmin has been attributed with capillary strengthening and antimetorrhagic properties (Duke, 2000).

Though shepherd's purse has a long history of use in treating postpartum hemorrhage and excessive menstrual bleeding, clinical studies have not been conducted (Blumenthal et al., 2000). Because of its purported ability to cause uterine contraction, it is contraindicated in pregnancy and labour, and is used only after the placenta is delivered (Belew, 1999; Campion, 1996). Excessive doses can cause heart palpitations

(McGuffin et al., 1997). There are no other known contraindications, and frequent dosing is believed to be safe (Belew, 1999).

Shepherd's purse is a popular herb in contemporary midwifery. When discussing postpartum hemorrhage, the authors of some articles prescribe shepherd's purse and Pitocin (oxytocin) interchangeably (McLean, 1998). Apparently, it is a matter of personal preference on the part of the midwife. (Goldstein, 1995) notes that shepherd's purse is gentler than Pitocin, resulting in less postpartum cramping. Pitocin is not hemostatic; it stems postpartum bleeding by encouraging the uterus to clamp down.

Most herbalists recommend a tea or tincture made from the whole fresh plants, including the flowers and seeds. The tincture loses its potency after a year or two (Belew, 1999). A typical dose is two drops of tincture under the tongue or one dropperful (about 1 mL) in 30 mL of water as needed (Goldstein, 1995). Its action is very quick; Weed (Weed, 1986) reports that a dropperful of tincture under the tongue can stop postpartum hemorrhage in five to thirty seconds.

4.2.5 Herbs that promote healing

The most popular remedy for post-partum soreness, bruising, cuts and tears was homeopathic *Arnica*. This was mentioned by five women. Four other women prepared an herbal bath to promote healing; this bath always included comfrey (*Symphytum officinale* [Boraginaceae]) and sometimes included other herbs such as chamomile, rose petals, calendula (*Calendula officinalis* [Asteraceae]), uva ursi (*Arctostaphylos uva-ursi* [Ericaceae]), and garlic. Two women used black tea bags on their nipples to relieve soreness; one woman also used calendula poultices on her nipples to promote healing,

because they were cracked, abscessed and painful. Calendula ointment is suggested by Weed (1986) as a treatment for sore nipples. Apart from the homeopathic *Arnica*, all of these remedies were used externally.

4.2.6 Blood builders and cleansers

Following the birth, a number of herbs were used to restore blood hemoglobin levels and aid in the recovery process. Many of these herbs were also used during pregnancy, so they have been reviewed in an earlier chapter. Five women used stinging nettle tea as a post-partum tonic. As noted earlier, this herb is a rich source of calcium and iron, as well as many other nutrients. Two women used alfalfa as a blood builder, in combination with nettle and other herbs; one woman used a tincture of yellow dock. All of these herbs were reviewed earlier. In addition, one woman used a Chinese post-partum medicine known as black chicken eggs, and one woman used a Filipino blood cleansing herb, sasparilla (*Aralia* spp. [Araliaceae]), at the advice of her mother.

4.2.7 Summary

Right around the time of birth, the use of herbal remedies proliferated. By reviewing the properties of these herbs, we can see that stronger herbs were used around the time of childbirth, as compared to the gentle tonic and nourishing herbs that were used throughout pregnancy. Many of the herbs used during childbirth- and particularly those that were used to induce labour- were of medium to high strength, and some had toxic constituents.

The vast majority of childbirth herbs were used by women who were planning home births. In the hospital setting, there are no facilities available for the preparation of

herbal teas, and some women who gave birth in hospitals reported that they were actively discouraged from consuming any food or drink while in active labour. In hospitals, pharmaceutical drugs are available instead of herbs to counteract pain, excessive bleeding, and other childbirth-related problems. Some of these drugs are available in the home to women who give birth with registered midwives in attendance. Other women chose to do without medical supervision and pharmaceuticals; they used herbs instead.

Thus we see herbs being used in two ways: firstly, to fill a potential or actual void-of-care when women choose to give birth in the absence of health care professionals, and secondly, in a conscious effort to be self-reliant.

4.3 Lactation

Breastfeeding is dependent upon a set of maternal hormones, including prolactin (for milk production) and oxytocin (for milk ejection). Prolactin is involved in the initiation and stimulation of lactation in mammals, though it is also found in non-lactating animals and is associated with numerous physiological processes in addition to lactation (Lawrence and Lawrence, 1999). Similarly, oxytocin is involved in a number of physiological processes in addition to milk secretion. Nonetheless, these two hormones must be present (and in the case of prolactin, at above-baseline levels) for lactation to become established (Lawrence and Lawrence, 1999). Neither hormone determines the volume of milk produced in a lactating breast; rather, this is a feedback mechanism dependent upon the amount of milk removed from the breast and the frequency of milk removal.

In addition to the appropriate hormones, successful breastfeeding relies on an effective latch and suck on the part of the baby. Good technique on the part of mother and baby ensures adequate milk removal to maintain an ample supply of milk. In addition, breastfeeding is far more than just a physical process; it is emotionally bound. In the cultural context, women value breastfeeding as an integral part of motherhood, though they often find it to be a drain on their energy (Dykes and Williams, 1999) as well as an uphill battle in a society that is not overly supportive of breastfeeding.

Most frequently, breastfeeding efforts are unsuccessful because of a perception of insufficient milk supply (Hillervik-Lindquist et al., 1991). The reasons for this problem are numerous. Only rarely is the problem hormonal (Lawrence and Lawrence, 1999); more commonly, the baby's latch or sucking technique is the root of the problem. Once such issues have been ruled out, if the perception of insufficient milk supply remains, herbal medicine can be used to address the problem.

Because the most commonly cited reason for the premature discontinuation of breastfeeding is the mother's perception (usually inaccurate) of insufficient milk supply [Hillervik-Lindquist et al., 1991], offering women a sense of self-efficacy and empowerment through alternative therapy may help to combat this sense of inadequacy. (Ayers, 2000)

Worldwide, there exist many plants that support breastfeeding. Bingel and Farnsworth (1991) documented over 400 plant species that are used to facilitate lactation. Most commonly used are galactagogues, substances that increase the production or flow

of milk. Some galactagogue plants are used topically, such as the leaves of the castor bean plant (Scarpa and Guerci, 1982). Many other herbs are taken internally.

Galactagogue herbs can provide women with physical and emotional nourishment. Whether or not the herbs actually increase milk flow is debatable. By and large, the efficacy of these herbs is unproven in a clinical or laboratory setting (Humphrey, 1998; Humphrey and McKenna, 1997). However, many have enjoyed centuries of use by generations of women, indicating their cultural value. Not only might some of these herbs be effective galactagogues; there is likely a psychological benefit derived from their use as well (Ayers, 2000).

4.3.1 General observations

Among the 23 participants who were interviewed post-partum, breastfeeding was the norm. All of the women who were interviewed held a philosophy of ‘breast is best’; breast milk was believed to be more wholesome than formula. Breastfeeding was considered to be health-promoting for the mother, as well as the baby. As Veronika put it:

I think it's a really important thing for women to go through. Yeah, I think it's really important for your body, and your hormones, too. And I couldn't imagine getting up in the night and feeding him a bottle. It's just amazing to see how much they thrive, too. Like even while they're nursing, the expressions on his face, and the sounds he makes, you know, I can tell that it's really important for them to do that.

In no case did any of the women make the choice to feed her child formula, if breastfeeding was physically possible. True cases of insufficient milk supply were experienced by three women, all of whom had undergone breast reduction surgery; these mothers anticipated the need to provide their babies with a combination of breast milk and formula. With the exception of those three women, the women all planned to exclusively breastfeed their infants. At the time of the follow-up interview, all of the babies whose mothers had not had this surgery were exclusively breast milk fed.

All of the participants indicated that breastfeeding was very important to them, even those who were unable to exclusively breastfeed their babies. Indeed, lack of success with breastfeeding brought on intense feelings of inadequacy. Karen described it like this:

I was struggling with the breastfeeding. He became quite dehydrated. And uh, so that's, that's where I had difficulty. That's where I grieved, and I did a lot of crying, and that kind of stuff.... I had no idea the emotional tie of the breastfeeding. None of that. Not a clue about what that would be like. So that was the only thing that I felt completely out of control with. And that, you know, will bother me for life. That will be an issue that I carry with me. And he was born to breastfeed. He loves it. You know?

Perceived insufficient milk supply was a relatively common occurrence. The use of galactagogue herbs was relatively widespread, though not universal. Eleven of the 23 women reported using herbs to promote milk flow. Many of the women had learned about such herbs from a midwife or doula. Several had received the information through

friends, some from books, and one woman used an herbal preparation that had been recommended to her by her own mother.

In cases of perceived insufficient milk supply, galactagogue advice was taken with a sense of urgency and gratitude. This is what happened to Shannon, at about two weeks post-partum.

The midwife suggested I take [blessed thistle], and I had her call the market to see if they sold it in there.... And then the guy was like, no, we don't have that. And I was crying, I'm like, yes you do, where is it? Yeah, it was a bad day.

4.3.2 Herbal inventory

Five galactagogue herbs and five foods were being used by the participants in this study (Table 3.4). Each of these herbs is reviewed and discussed in detail below. In addition, the following food items were used (each by one woman) to promote milk production: beer, brewer's yeast, barley broth, cashews, and pig's feet soup with ginger and sweet rice. One woman was using a homeopathic mineral preparation to support lactation.

4.3.2.1 Fennel

In this study, four women used fennel, and all considered it to be an effective galactagogue. They learned about it from friends, midwives, or family members. For instance, Veronika said, "I'm drinking fennel tea as well. My mum drank lots of fennel

Table 4.4. Herbal galactagogues used.

Common name	Latin binomial name	# of users
Blessed thistle	<i>Cnicus benedictus</i> L. [Asteraceae]	2
Fennel	<i>Foeniculum vulgare</i> Miller [Apiaceae]	4
Fenugreek	<i>Trigonella foenum-graecum</i> L. [Fabaceae]	4
Nettle	<i>Urtica dioica</i> L. [Urticaceae]	2
Raspberry leaf	<i>Rubus idaeus</i> L. [Rosaceae]	2

tea when she was breastfeeding, and I've read that it helps you to make your milk. And I love the taste of it. I used to take it to school as a snack, and chew it."

Most of the women used fennel in the form of a tea. One woman (Mimick) used the essential oil instead. She had experienced reduced milk flow early in the postpartum period; she attributed the problem to an antibiotic she'd been taking. She said:

What I do is I put a couple drops on the back of my hand, so [I smell it] any time my hand comes up to my face. ... I read in Susun Weed's guide to take one drop, and drink it in water. But I found drinking it, yuck. I prefer just having it on my hand.... Anyway, since he was born, I've been drinking fennel, or taking fennel through aromatherapy.

Medicinally, fennel is widely used as a digestive aid and as a treatment for dyspepsia (Blumenthal et al., 2000; Holmes, 1997). It has mild estrogenic properties (Bingel and Farnsworth, 1991; Holmes, 1997). Fennel is also used to counteract infant colic, whether consumed by the mother or given directly to the infant (Weed, 1986; Weizman et al., 1993). The effectiveness of an herbal colic remedy containing fennel, chamomile, vervain, licorice, and lemon balm has been demonstrated in a clinical trial

(Weizman et al., 1993). However, this formula was given directly to the babies, so it remains clinically unproven that the beneficial effects of the herbs would reach the infant through the mother's milk.

The Wise Woman Herbal for the Childbearing Year (Weed, 1986) suggests that breastfeeding women use the seeds of fennel or any of its close relatives (anise, cumin, caraway, coriander and dill) to improve their milk supply. Although clinical evidence for its efficacy is lacking, fennel seed has enjoyed centuries of use as a galactagogue. Its mechanism of action is unknown.

In Italy, a galactagogue tea is made from the seeds of fennel and anise (*Pimpinella anisum* L. [Apiaceae]) (Rosti et al., 1994). Two case reports from that country (Rosti et al., 1994) describe temporary central nervous system depression in infants, 15 and 20 days old, whose mothers were consuming large quantities of fennel and anise tea. All symptoms disappeared once the women stopped drinking the tea. However, these appear to have been isolated cases, so it is possible that a particular batch of the tea was adulterated with another, more toxic herb.

There are no known contraindications for use of fennel seed or fennel oil during lactation, but it is not recommended for use for more than a few weeks at a time (Blumenthal et al., 2000).

4.3.2.2 Fenugreek

Another galactagogue seed was used by four of the participants in this study: fenugreek. The women who participated in this study prepared fenugreek as a tea. They

had learned about it from their midwives or from a friend. By and large, they found it to be effective, though they were often unsure of how to measure its efficacy. Hiroko said:

I think [it's working]. For a while there, I thought I wasn't producing as much milk, but it could have just been my imagination. I can't even really tell, unless she pees, right? So I wasn't sure, and because I wasn't getting engorged, I thought maybe that meant I'm not producing enough, but maybe not necessarily so.

One woman who learned about fenugreek from her midwife stopped using it at the advice of a public health nurse, who said it was on a list of substances contraindicated for lactating women. The reason for its contraindication was not given.

Fenugreek seed has a number of medicinal applications. For instance, it is used to protect the gastrointestinal tract as a therapy for ulcers and bowel inflammation (Bartram, 1998; Langmead et al., 2002). As a galactagogue, fenugreek has been used for centuries (Riordan and Auerbach, 1998), and it was used historically as such- along with fennel- by wet nurses in the southern United States (Duke, 1997). There are also reports of fenugreek's use as a galactagogue in Sudan, Egypt, other parts of North Africa, Iraq, and Argentina (Bingel and Farnsworth, 1991).

Fenugreek is an important medicine in India's Ayurvedic tradition, where it is used to treat a variety of digestive and mucosal conditions (Escot, 1994; Passano, 1995). And in India, once the child has been born, women are encouraged to eat a sweetened paste or halva made from the seeds to increase the flow of breast milk (Passano, 1995).

As noted earlier, fenugreek is a uterine stimulant. Indeed, the effect of fenugreek upon the uterus may be related to its stimulant effect upon the milk ducts in the breast, for

both are affected by the hormone oxytocin and its pharmacological relatives (Bingel and Farnsworth, 1991).

"Alternatively, these plants may not possess oxytocin-like activity, and their reputed galactogenic effect might instead merely be coincidental to their being used in obstetrics" (Bingel and Farnsworth, 1991:28). Or perhaps fenugreek supports the production of milk because it is a rich source of essential fatty acids (Mowrey, 1986). One compound in fenugreek, diosgenin, is believed to stimulate the growth of breast tissue, and it was found to boost milk production in an experimental setting (Duke, 1997).

In North America, fenugreek seeds are commonly brewed as a tea, and the broth and seeds are both consumed. Alternately, they can be ground and taken in capsule form. According to popular lore, an adequate dose has been consumed when one's body smells maple. The German Commission E monograph recommends a daily dose of 6 grams of the seeds (Blumenthal et al., 1998); doses of over 100 grams can cause nausea and an upset stomach (HealthNotes, 2001).

4.3.2.3 Raspberry leaf

In this study, at least two of the 22 women who used raspberry leaf as a uterine tonic during pregnancy continued to drink it to enrich their breast milk. Perhaps the cultural value of raspberry leaf tea and its association with motherhood has perpetuated its use.

Raspberry leaf's efficacy as a galactagogue is under debate. Raspberry leaf is believed to stimulate lactation and enrich breast milk by restoring the body's vitamins and minerals (Bartram, 1998; Gladstar, 1993; Ipp, 1999; Weed, 1986). Conversely, due

to its astringent qualities, it has the potential to shrink mammary glands and thereby reduce milk flow (Edmunds, 1995; Lieberman, 1995; Weed, 1986).

Indeed, a search of the literature reveals that there is no clinical evidence that raspberry leaf is a galactagogue. Although the herb can be a good source of vitamins A, B complex, C, and E, as well as calcium, iron, phosphorus, and potassium (Lipo, 1996; Weed, 1986), and its effectiveness as a uterine tonic has been clinically demonstrated (Simpson et al., 2001), there is no proof that it increases the production of breast milk. Nonetheless, it can be expected to provide essential nutrients and promote a sense of self-efficacy and relaxation in the breastfeeding mother. There is a recognized need among breastfeeding women for "support, nurturing and replenishment in return for 'giving out'" (Dykes and Williams, 1999:232). Raspberry leaf tea, along with other popular herbal preparations, can give women this sense of being supported, nurtured and replenished. As Shannon said,

I don't notice a huge difference as far as whether or not I have more milk or less milk, or anything like that. I think the one thing the raspberry leaf tea does is it helps me relax. Just because it's a warm drink, I think. So I just sit down and I feel like, okay, I'll just put my feet up, have a cup of tea. It helps me relax, and feel warm and tingly inside.

4.3.2.4 Stinging Nettle

To support lactation, nettle leaves are typically brewed as a tea, often in combination with raspberry leaf. In this study, two women used nettle as a galactagogue; both had learned about it from their midwives. One of these women (Shelley) was using

both fennel and nettle to improve her milk supply. She had experienced some problems with her baby's latch, and as a consequence she was making very little milk at one point. She was able to get the breastfeeding back on track, but she wasn't able to evaluate the efficacy of the herbs she'd used. She said, "It's hard to say [if the fennel and nettles worked]. At one point, I was taking both of them at the same time. Something worked! But it might have even just been her sucking."

Stinging nettle leaf was one of the less-used galactagogue herbs among the participants in this study, though has a long-standing reputation for enriching breast milk (Bartram, 1998; Bombardelli and Morazzoni, 1997; Gladstar, 1993; Weed, 1986; Yarnell, 1998). The herb is believed to be completely non-toxic (Yarnell, 1998). Nettle contains many nutrients, including iron, calcium, and vitamins A, C, and K (Lieberman, 1995), as well as phosphorus, potassium, sulphur, and vitamin D (Weed, 1986). It also contains some B vitamins and appreciable amounts of magnesium (Duke, 1992a). The leaves are comprised of up to 20% mineral salts, mainly calcium, potassium, silicon, and nitrates (Blumenthal et al., 2000). Nettle extract has been found to contain all of the essential amino acids (Bombardelli and Morazzoni, 1997).

Nettle is believed to support lactation by providing essential nutrients (Weed, 1986). It has no medicinal action, apart from being mildly diuretic and hemostatic (Bradley, 1992). Dried nettles mixed into cattle fodder are known to boost milk production in cows (Grieve, 1971; Phillips and Foy, 1990). Nonetheless, the herb's astringent qualities could theoretically reduce milk production (Edmunds, 1995; Weed, 1986), though like raspberry leaf, this undesired effect would be cancelled out when the herb is prepared as a tea or infusion because it is an ample source of water. There are no

known contraindications to nettle's use during pregnancy or lactation (Blumenthal et al., 2000).

4.3.2.5 Blessed thistle

In this study, two women reported using blessed thistle (in capsules) to increase their milk supply. Both had learned about it from their midwives. Both were undecided about whether or not it was an effective galactagogue, and both were using it in addition to other herbs.

Blessed thistle is a Mediterranean weed; it is occasionally found in North America (Hitchcock and Cronquist, 1987). The dried aerial parts are used as a galactagogue (Gladstar, 1993; Grieve, 1971; Weed, 1986) and it is considered to be one of the best galactagogue herbs. It is usually taken in capsules or as a tea. It is said to work by stimulating the flow of blood to the mammary glands, and thereby enriching the milk flow (Gladstar, 1993), but this theory has not been confirmed in a laboratory or clinical setting. It is rich in a sesquiterpene lactone called cnicin (Blumenthal et al., 2000) which stimulates digestive enzymes and bile secretions (Blumenthal et al., 2000; Gladstar, 1993). There have been no clinical trials of blessed thistle as a galactagogue.

Blessed thistle was historically reputed to be a heal-all, and was even said to heal the plague (Grieve, 1971). It is recommended for birthing and nursing mothers because of its hemostatic properties, which reduce the likelihood of postpartum hemorrhage (Gladstar, 1993), and because of its antidepressant effects (Holmes, 1997; Weed, 1986).

Famed for its ability to increase milk supply, *Cnicus benedictus* is best used as a tincture; up to 20 drops, two to four times daily is the usual dose.

It is said to remove suicidal feelings and lift depression as well. (Weed, 1986:85).

The German Commission E has approved blessed thistle as a remedy for loss of appetite and dyspepsia (Blumenthal et al., 2000). The Commission E does not recommend blessed thistle for use during pregnancy and lactation, and its popularity as a galactagogue is not mentioned in their monograph (Blumenthal et al., 2000). In strong doses, the plant is strongly emetic (Grieve, 1971; Holmes, 1997) and causes nosebleeds (Holmes, 1997), so it should not be overused. Blessed thistle is reputedly an effective emmenagogue and thus should be avoided by pregnant women (Bartram, 1998).

4.3.3 Summary

Galactagogue herbs have been subjected to almost no clinical or experimental study. Their mechanisms of action are largely unknown, and their medicinal worth remains largely unproven, though their cultural value is identified through thousands of years of documented use. The women who took part in this study used five galactagogue herbs. Though they typically felt unable to evaluate the herbs' efficacy, they considered them to be of some value, for they supplied nutrients and (in the case of herbal teas) water, as well as promoting a sense of relaxation and self-efficacy.

4.4 Conclusions

Herbal medicines played an important role in self-care for many of the women who took part in this study. There is a historical precedent for use of all of these herbs,

and only in a few instances were herbs used in an unconventional way. Clinical evidence for the efficacy of these herbs is somewhat limited, particularly in the case of tonic herbs. Their nutritional content is largely known, and they can be considered efficacious based on their nutritive value. There are few safety concerns, except where uterine stimulant herbs are concerned. With those herbs, there are some concerns about toxicity and uterine hyper-stimulation. Among these women, uterine stimulant herbs were rarely used, either in preparation for childbirth or for labour induction.

The participants held substantial collective knowledge of herbal medicines. Where was this knowledge acquired, and how did the women make the choice to use herbal medicines? Why was the use of uterine stimulant herbs so limited? Were there circumstances that supported or hindered self-care? These questions were addressed by means of thematic analysis, the results of which are presented in the following chapter.

Chapter 5.

Thematic analysis and discussion

Apart from a detailed inventory of herbal medicines used in pregnancy, birth and lactation, the interviews comprised a rich data set, creating a window on women's experiences of self-care and help-seeking across the reproductive cycle. The data show that between them, the participants had a great deal of knowledge and experience regarding herbal medicines. Where was this knowledge acquired, and how did the women make the choice to use herbal medicines? Why was the use of uterine stimulant herbs so limited? Were there circumstances that supported or hindered self-care? Thematic analysis uncovered some answers to these questions.

This chapter is in three parts. The first part details several themes derived from the question of how women perceived herbal medicines and pharmaceutical drugs. The second part looks at the issue of prolonged pregnancy, and women's choices and experiences around medical induction, herbal induction, and what I call a 'watch and wait' approach. The third part explores some ways in which the social and work environment and the medical approach to childbirth can support or undermine women's self-care efforts.

5.1 Women's perspectives on herbal medicine

What did the participants consider the role of herbal medicine to be, and did they have concerns about safety? By and large, the women viewed herbal medicines as tonics and drugs of plant origin. If it had a plant name, and was used therapeutically (not as food), it was considered to be an herbal medicine. Prescription and over-the-counter pharmaceutical drugs- even those of botanical origin- were never considered to be herbal medicines, if they did not carry a botanical name. Herbal medicines were comprised of whole plants, plant parts, and occasionally, plant-derived oils (i.e. castor oil and coconut oil). Standardized herbal extracts (those with known concentrations of certain biologically active constituents) were rarely used. Tinctures were occasionally used, but most herbs were bought loose or harvested by the women themselves and prepared as a tea or infusion, a strong aqueous extract (Weed, 1986).

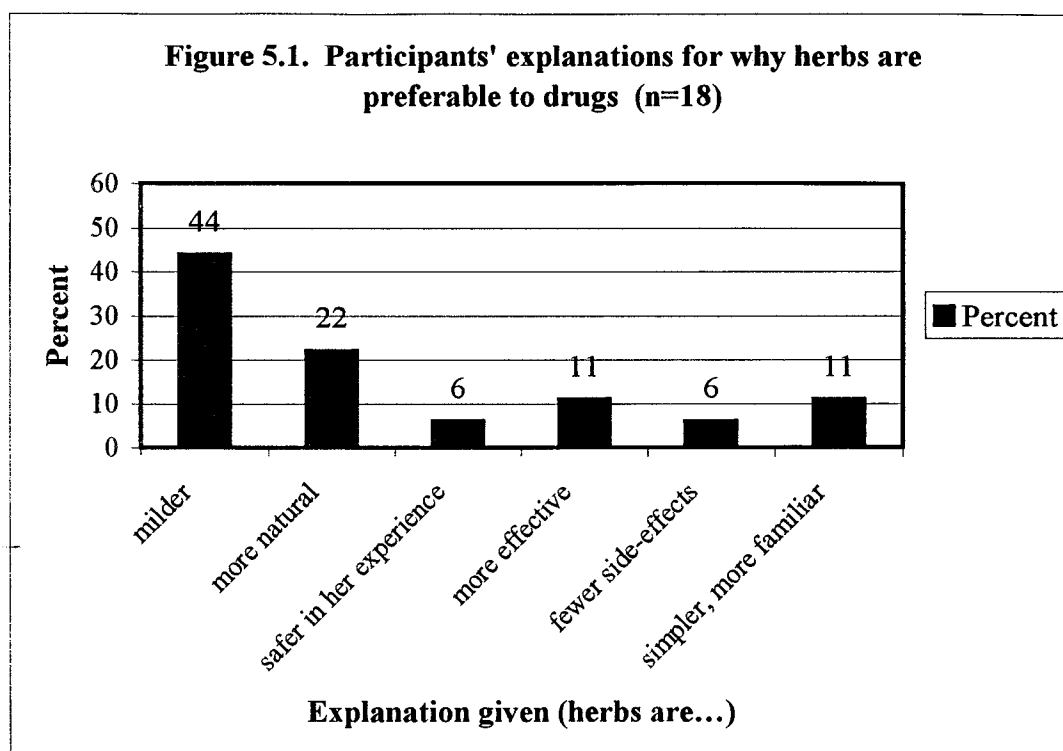
Many of the participants saw herbal medicine as an alternative to biomedical therapeutics; 21 women (78%) indicated that they 'preferred to treat things herbally' when diagnosed with a health problem. In addition, tonics- which have no equivalent in biomedicine- were used by 23 women (85%) as a preventative health measure.

On the other hand, 16 of the women (59%) expressed caution when asked how they felt about using herbal medicines while pregnant. All 27 women made it clear that they paid close attention to what they exposed themselves to while pregnant, for fear of harming the baby. Concerns ranged from one woman's desire for standardized potencies, to three women's questions (directed at the researcher) about whether or not any given herb had the potential to harm the unborn child. No women expressed concern over

whether herbal medicines- as a general category- were safe to use in pregnancy; their concerns were around specific herbs, or around using any sort of medication, natural or synthetic. All the women felt that the herbs they used themselves were safe.

As a general rule, the women expressed a greater comfort level with using herbs than pharmaceutical drugs. This was apparent from their choice to use herbs first, and only to use pharmaceutical drugs after herbal treatment failed (which happened during pregnancy in two instances, and for labour induction in two cases). They had various reasons why herbs are safer- as a general rule- than pharmaceutical drugs, and 18 women articulated their perspectives. Some considered herbs to be milder than pharmaceutical drugs; others said herbs were more natural. As one woman said, “I think that my best choice is to go the more natural, age-old remedy route, something that’s tried and true.” Another woman, shying away from synthetic drugs, reasoned: “I think chemicals are more harsh and abrasive [than herbs].” A few women said they considered herbs to be simpler, more familiar, and to have fewer side effects than synthetic or refined drugs. Two women said they considered herbs to be more effective than pharmaceutical drugs, in their experience (Figure 5.1).

Given this information, it not surprising that pharmaceutical drug use (during pregnancy) was clustered around four women who had chronic health problems including asthma (3), diabetes (1), chronic depression (1), polycystic ovarian disease (1), heroin addiction (1), and pregnancy-related problems such as severe nausea (2) and recurrent miscarriage (1). Five other women used antacids, cough syrup, or analgesics. The remaining eighteen women (67%) avoided using pharmaceutical drugs until the end of pregnancy.



These women's mentors had varying explanations for nations for their perspectives on herbal medicines and pharmaceutical drugs. Those who were interviewed felt that most North Americans would agree that herbs are safer than pharmaceutical drugs. The herbalists among them had some interesting explanations for this. Susun Weed, who was interviewed as a mentor, considered the greater safety of herbal medicines over pharmaceutical drugs to be an uncontested fact.

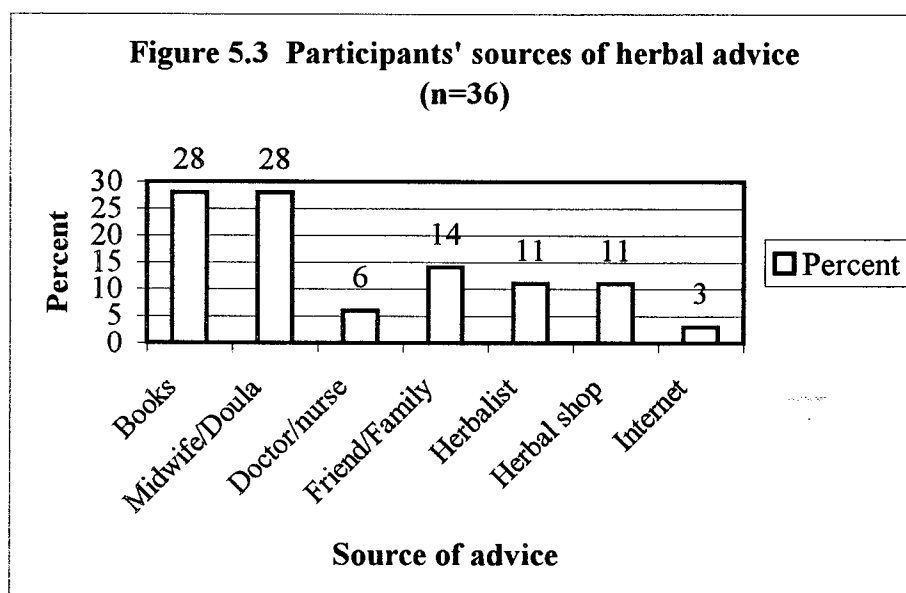
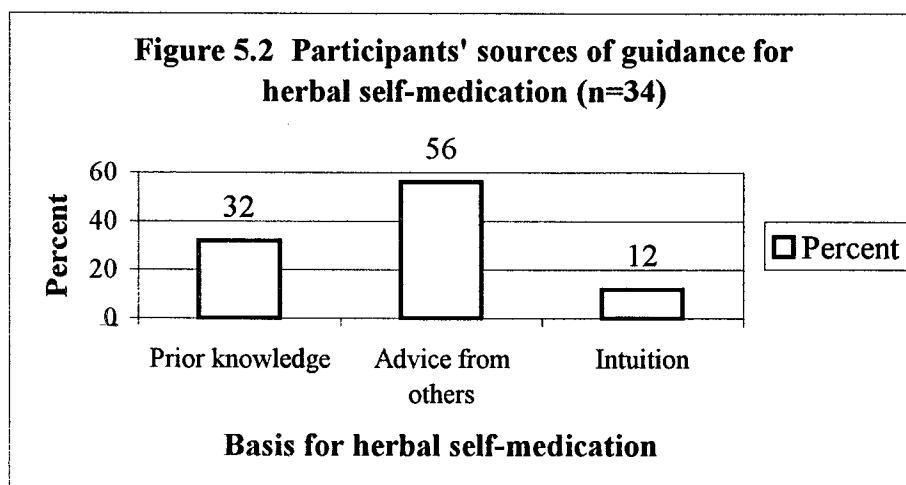
I would say it's true. I would say it's a true perception. If somebody said, elephants are generally bigger than dogs, we wouldn't tie it to a continent or a culture, we'd have to say, yeah, that's true. Any herb is safer than any pharmaceutical, in a gross way, although certainly we could pick out exceptions.

Herbalist Carol McGrath, also interviewed as a mentor, pointed to the relative newness of the pharmaceutical industry and the long-standing familiarity of herbal medicines as an explanation for people's greater comfort with using herbs. Though the pharmaceutical industry has been around for hundreds of years, (Griggs, 1981; Weatherall, 1990) the field of pharmacology- responsible for developing and investigating medicinal compounds and identifying their mechanisms of action- began to grow from around the mid 1800s (Weatherall, 1990). At that time, the pharmaceutical industry relied heavily on plant extracts and elemental preparations, particularly heavy metals (Griggs, 1981). Its repertory of powerful antibiotics and synthetic drugs did not come onto the scene until around the time of World War II. These interviews suggest that the pharmaceutical industry's new drugs are not yet fully trusted by the public, and are particularly viewed with suspicion by the participants in this study in light of the birth defects caused by the pharmaceutical drug thalidomide in the 1950s (Griggs, 1981; Weatherall, 1990).

5.1.1 Choosing a healing path

As we have seen, most of the participants in this study were inclined to use herbal medicine. How did they make the choice to do so? The decision was often based on prior knowledge of the herb and/or the condition (Figure 5.2). Next, the choice might be based on advice from a trusted maternity care provider, friend, family member, herbal shop, or media resource (Figures 5.2 and 5.3). Finally, a few women said they relied on

instinct, or their own intuitive sense of what would be an appropriate therapy (Figure 5.2). Each of these categories is discussed in turn.



5.1.1.1 Prior knowledge

Many of the women had studied some aspect of home medicine in an informal way during their adult lives. For some, herbs had been a part of their personal medicine

chest and kitchen garden for years, so choosing home remedies was second nature. These women were able to make herbal treatment decisions based on prior knowledge. This applied to 32% of all reported herbal self-treatment decision-making (Figure 5.2).

Herbalist Carol McGrath emphasized the importance of experience in guiding self-care decision making.

Academic information is theoretical information until it is put into experiential information. When it comes to experiential information, that's what is real. Experiential information is in your hands, it's in your body. Whereas academic information is just in your head, as a concept.

Four of the 11 women (36%) who said they relied on prior knowledge for herbal decision-making were pregnant with their first babies; this was only slightly lower than the 44% of the total number of participants who were carrying their first babies. A reliance on prior knowledge was weakly correlated with the number of pregnancies a woman had experienced ($r = 0.21$), and surprisingly, there was a weak inverse correlation between age and reliance on prior knowledge ($r = -0.27$). In other words, a reliance on prior knowledge had little to do with a woman's age or her previous experience of pregnancy.

5.1.1.2 Seeking advice

When the women had little experience with a health condition or its remedy, many of them looked for advice. This advice most often came from close to home: from a mother, sister or close friend, from the woman's own bookshelf, from a midwife or herbalist, off the internet, or occasionally from a neighbourhood health food store (Figure

5.3). Advice often came from multiple sources; 19 women made 36 reports of receiving herbal advice.

Here the role of community cannot be over-emphasized. Those women who had a strong network of other women around them- including friends, family, doulas, midwives and doctors- had access to a vast resource of herbal information. Herbal advice was frequently passed by word-of-mouth.

To Carol McGrath, the reason women tended to follow advice from other women was clear.

Anecdotal information is real stories about real people. If you're simply reading an article in a book or magazine, it doesn't give you the confidence to try something. When they're getting real stories from real people, that information is always going to be more valid than something they read in a book.

To consider it from another angle, Susun Weed considered community and herbalism to be intertwined. She viewed herbalism as healing work within the community, as compared to hospitalized medical care that is delivered in isolation from the community at large. Her perspective was supported by the fact that- in this study- the majority of herbal advice was reportedly received by word-of-mouth, from health care professionals, herbalists, friends, family members, and herbal shops.

However, books were also important sources of self-care information, accounting for 28% of all reported sources of advice. Susun Weed's 'Wise Woman Herbal for the Childbearing Year' (Weed, 1986) was specifically mentioned (without prompting) by nine of the women during the interviews. The book often guided the decision to self-

medicate with herbs. There are a number of books on herbal medicine for pregnancy and childbirth (i.e. Romm, 1997; Ody, 1999); why was this particular book so popular? The women all talked about it like it was an old friend; they appeared to find it highly accessible. In addition, some local midwives- including Angela Spencer, interviewed here as a mentor- were recommending the book to their clients, thereby increasing the likelihood that the study participants would have been exposed to it. The midwives' recommendations likely validated the information in the book for their clients, who trusted their opinion.

Returning to the importance of community, Susun Weed attributed the success of her book to its foundations in the oral tradition of herbal medicine.

One of the things I've always done, and that I think has made my book successful, is that instead of doing a lot of research in libraries about what's supposed to work, I've asked women who are actually using the herbs what does work. To me, that's part of the wise woman tradition is passing on our wisdom, sharing our wisdom with one another.

The popularity of this book- and its origins- suggest that anecdotal information need not come from word-of-mouth to be considered valid; it retains its relevance when put into print form. Susun Weed- an author who the participants had likely never met in person- is a part of the community by virtue of her sharing of experiential knowledge through her writing.

From an academic standpoint, what is the connection between herbal medicine and community? While an individual's decision to follow a particular self-help health

care regime is ultimately a personal one, it has been shaped by the values, culture, kinship and friendship networks within which the individual has been socialized.

Not only do social networks enhance our access to resources such as information and support; they have been shown to play a vital role in supporting our physical and mental health. When these networks are disrupted, such as when a person moves to a new city, is divorced, or a family member dies, a compromised immune system and health breakdowns often follow (Pilisuk and Parks, 1986). We rely heavily upon these “life-sustaining networks of social support” (Pilisuk and Parks, 1986:61); accordingly, our personal health care and the health of the family and community are deeply intertwined.

Herbal medicine, when it is practiced from the home setting, is a resource that helps keep the community healthy, not just the individual, inasmuch as herbal knowledge is collectively held. It is- as Susun Weed says- “kitchen medicine”- and thereby accessible to the layperson. Herbal medicines (as defined here) are primarily intended for self-medication, information about their use is often widely available and presented in a format that is accessible to the lay public, and most are readily prepared in any household kitchen. Herbal knowledge is public knowledge, whereas pharmaceutical knowledge is highly specialized, guarded with professional secrecy, and typically cloaked in the jargon of complex patent and generic drug names (Romanucci-Ross et al., 1997).

In addition to the factors noted above, the use of herbal medicine may identify the individual as a member of a particular cultural or ethnic group, or it may be symbolic of a larger social movement. Social movements can be particularly persuasive; one’s personal

choices not only reinforce one's membership in the group but also serve as a political statement.

5.1.1.3 Intuition

Though most of the women relied on prior knowledge and advice from the community when making decisions around herbal self-medication, a few said they preferred to find the answers within themselves (Figure 5.2). For these women, their intuition was the final judge of whether a remedy was helpful or harmful. Through thematic analysis, intuition was identified in four interviews, when women said specifically that they preferred to use 'intuition' or 'instinct' when making self-care decisions. These women said that their bodies would know if a medicine was right for them. In addition, when asked what advice they would give to other pregnant women, a large number of the participants said, 'listen to your body'.

Though intuition is rarely discussed as an aspect of medical work, it is nonetheless a component of medical decision-making (Daviss, 1997). Herbalist and midwife Jeannine Parvati Baker, interviewed as a mentor, considers intuition to be an excellent guide for herbal self-medication.

A woman who has read maybe one herbal book- maybe not- could go into a store and trust her intuition. She may not have all that scientific data. However, her body will tell her [if a medication is right]. If she's cultivating intuition, she will know if it's appropriate for her or not. ... We are free to incorporate some of the data, and still be in touch with our intuition. It's not an either-or [situation].

Intuition is indeed a skill that must be cultivated (Greenhalgh, 2002). It is a valuable clinical skill used regularly in the sphere of medicine, though often subconsciously (Daviss, 1997; Greenhalgh, 2002; Hall, 2002; Philipp, 1999). It appears that intuition is also important in lay healing and self-care decision-making, though its formal documentation is heretofore lacking and further study is warranted.

5.1.2 Summary and Conclusions

Among these women, herbal medicine played an important role in health promotion, with 96% of the participants reporting herbal use. Tonic herbs were widely used, as were therapeutic herbs. The herbal medicines were largely self-prescribed. No women described a visit to a naturopath, and herbalists were infrequently consulted (n = 4).

These women were not unusual in their tendency to self-diagnose and self-medicate. Kleinman demonstrated that a great majority of illnesses are treated in the home in Taiwan and the United States. (Kleinman, 1980) The same phenomenon was observed by Brown and Marcy (1991), whose research in the United States revealed that self-care was most prevalent among women, particularly those with large families, more education and higher socio-economic status. Similar findings were reported by Green, who found that most illnesses are treated in the home in the United States, including as much as 89-96% of acute illnesses. (Green, 1990) Comparable Canadian data are lacking.

Many women expressed caution with regards to using any medication while pregnant. That being said, they all believed herbs to be safer than pharmaceutical drugs,

as a general rule. There was a general perception that herbal medicines involved lower doses than did pharmaceutical drugs, and were also milder, simpler, more natural and had fewer side-effects. Only one woman expressed a concern about the lack of standardization of herbal products.

In choosing to self-medicate with herbs, the women felt guided by prior knowledge (32%), trusted sources of advice (56%), and intuition (12%). A reliance on prior knowledge was not strongly correlated with the woman's age or the number of pregnancies she had experienced. Trusted sources of advice included books, friends, family members, maternity care providers, herbalists, herbal shops, and internet. The majority of herbal advice (69%) was received by word-of-mouth. The women's mentors were an important source of herbal self-care information. In the words of Angela Spencer, interviewed as a mentor:

My mother, many, many years ago, said to me that if you teach a woman to make health care decisions, and she makes healthy choices, she'll make healthy choices for the whole of her family. Like there's a little pebble in the pond, and you'll help her for the rest of her life.

5.2 Women's perspectives on prolonged pregnancy

In Part 1 of this chapter, it was observed that when health challenges appeared, home remedies were the first course of action among these women. Nonetheless, herbal methods of labour stimulation were sparsely used, with only two women attempting

herbal induction. This observation raises a number of questions: how do pregnant women define prolonged pregnancy? Do they define it as the medical community does, or do some women consider themselves to be post-dates immediately after the expected due date has passed? Do they prefer to watch and wait, or are they likely to be proactive in using herbal preparations and other self-administered methods of labour induction? What are the social, psychological, or practical consequences of prolonged pregnancy? What are their ranges of perspectives on medical induction of labour? These issues are addressed here.

5.2.1 Prolonged pregnancy from the medical viewpoint

In human beings, the length of gestation is calculated from the first day of the last menstrual period, and is expected to be 280 days (40 weeks) in length (Cooke, 1997). There is some variation around that length, for some women will conceive earlier or later in their cycles, and others- for reasons unknown- will simply require a shorter or longer gestation period. In some cases, health problems will result in a baby being born earlier or later.

Within the medical community, there are differences of opinion regarding the appropriate length of gestation, and the degree to which intervention is necessary when pregnancies go beyond the expected timeframe. The length of gestation has been debated over the past hundred years (Ahn and Phelan, 1989), and some physicians argue that there may be no set optimum (Keirse, 1991). It is even possible that we are misinterpreting old medical texts and thereby calculating the length of gestation incorrectly, and we should be counting from the end of the last menstrual period, instead

of the beginning (Baskett and Nagele, 2000). In addition, there is evidence that the date of conception is easily miscalculated, and prolonged pregnancy is often misdiagnosed, as much as 50% of the time (Gardosi et al., 1997; Henriksen et al., 1995). To complicate matters, dating the pregnancy through ultrasound creates the impression that male babies are significantly more likely to be carried beyond term than female babies, as seen in a Swedish study including 656,423 deliveries (Divon et al., 2002). This phenomenon has been attributed to a dating error in ultrasound fetometry, due to the fact that dating is based on fetal size, and male babies tend to be slightly larger on average than female babies (Kitlinski Laczna et al., 2003). The authors noted that female babies are not at higher risk for presenting with low Apgar scores than male babies, despite the fact that male babies are more likely to be induced because of prolonged pregnancy. In spite of the difficulties surrounding the issue of pregnancy dating, the 40-week rule, based on ultrasound dating of the pregnancy, is almost universally applied in countries where such technology is available.

If pregnancy is expected to last 40 weeks, at what point is it considered prolonged? The World Health Organization and the International Federation of Gynecology and Obstetrics consider prolonged pregnancy to be 42 completed weeks of gestation, or 294 days (Cooke, 1997). This definition is used most consistently in the literature, though some researchers have used 41 weeks, 41 weeks and 3 days, or 43 weeks gestation as an indicator of prolonged pregnancy (Bakketeig and Bergstro, 1989).

The medical community's concern with prolonged pregnancy is hinged upon observations of an increased likelihood of perinatal complications with advanced gestation. In the past, such complications were believed to include wasting of the unborn

child due to placental degradation (Clifford, 1954; Vorherr, 1975). This wasting, known as post-maturity syndrome, is typified by peeling skin and reduced body fat. However, this condition is not only seen in postdates babies (McLean et al., 1991; Shy, 1991), and has been documented more frequently in term babies (Mannino, 1988). As the medical community came to understand that the relationship between wasting of the infant and prolonged pregnancy was likely not causal, there was a shift in attention to other complications associated with prolonged pregnancy. These included complications associated with macrosomia (large size) (McLean et al., 1991), and a higher incidence of neonatal asphyxia and meconium aspiration syndrome (Cooke, 1997). Recently, it has become apparent that small babies (those with a birth weight that falls below the 10th percentile) are more likely to present with oligohydramnios (low amniotic fluid volume) or abnormal non-stress test results, and are therefore more likely to be delivered by Cesarean, according to a trial of 792 expectantly managed pregnancies at or beyond 41 weeks gestation (Sylvestre et al., 2001). Also, some statistical reports have shown a gradual rise in the perinatal mortality rate with prolonged gestation (Hilder et al., 1998; Kassis et al., 1991). However, these findings contrast with those of Onah (2003), who worked with data on 1094 twin and singleton pregnancies in Nigeria, and reported a “consistent and significant decline in the stillbirth rate and the proportion of babies with 1-min Apgar scores less than 4 up to 42 weeks ($P=0.00000$)” (Onah, 2003:255).

Some members of the medical community have responded to the uncertainty associated with prolonged pregnancy by implementing a policy of routine induction. Prolonged pregnancy is the primary indication for induction of labour (Gardosi et al., 1997). In Canada, gestation that exceeds 41 completed weeks is currently considered to

be an indication for induction of labour. This policy is guided by a report from the Society of Obstetricians and Gynecologists of Canada (SOGC, 1997). The report's chief author, Mary Hannah, also headed a trial of induction of labour versus expectant management. That trial found lower rates of Cesarean section and other complications in the induction group (Hannah et al., 1992), and concluded that induction at 41 weeks was preferable. The Hannah study has not only influenced Canadian guidelines; it has also influenced policy in the UK (RCOG, 2001). However, its findings have raised controversy in the midwifery and obstetric communities, due to methodological problems, such as the high rate of induction in the expectant management group, as well as the use of prostaglandin gel as a part of the induction process in the induction group but its exclusion from the induction process used for the induced participants in the expectant management group (Goer, 1996; Menticoglou and Hall, 2002).

A few smaller studies support the findings of the Hannah trial by reporting better outcomes with induction as compared to expectant management (Crowley, 1995; Grant, 1994). However, other clinical studies have shown better outcomes with expectant management than with routine induction, such as lower rates of Cesarean section (Alexander et al., 2000; Olofsson and Saldeen, 1996; Wigton and Wolk, 1994), and other studies have found no appreciable difference in outcome (NICH, 1994; Roach and Rogers, 1997; James et al., 2001). Alexander et al. (2001) studied an American population of 1325 women who reached 41 weeks gestation, and noted that induction was associated with a higher rate of Cesarean section. However, once corrected for independent risk factors for Cesarean section (epidural analgesia, undilated cervix prior to the onset of labour, and this being the woman's first baby), the relationship between

induction and Cesarean section disappeared. In short, though obstetric policy in Canada currently favours induction of labour, the literature shows that both the clinical evidence and the maternity care community are divided on the issue.

In all this debate over the appropriate management of prolonged pregnancy, women's voices have rarely been heard. One retrospective study looked at the experiences of 32 women who had gone through a prolonged pregnancy (Shearer and Estes, 1985). The women were asked questions such as their calculations of the babies' due dates and their doctor's calculations, their childbirth experiences, the baby's weight and condition at birth, the baby's temperament, and whether they or anyone around them had felt worried or wished for induction. The researchers were surprised by "mother's reports that they were not especially anxious about being overdue" (Shearer and Estes, 1985:110). In this study, the women were not asked if they had tried any self-help methods for stimulating labour, or at what point they considered the pregnancy to be prolonged. A second study looked at women's attitudes towards a 'watch and wait' approach to prolonged pregnancy (Roberts and Young, 1991). This study found that a slight majority of women (55%) said at 37 weeks gestation that they would prefer induction if their pregnancies were prolonged. Of those women who had not given birth by 41 weeks gestation, the number who said they would prefer induction had risen to 69%. Wilk et al. (2000) surveyed 41 women who were experiencing prolonged pregnancy, using questionnaires that tested for fear. They reported elevated levels of fear and anxiety among these women, "mostly of reactive genesis and crystallized mainly on the pregnancy" (Wilk et al., 2000:921).

5.2.2 Findings of this study

In the third trimester of pregnancy, each of the 27 participants was asked her opinion on induction of labour. She responded with her philosophy about medical and self-help intervention, and indicated whether or not she would be prepared to try proactive measures to avoid prolonged pregnancy. Those women who had been through a medical induction before (n=3), talked about the experience.

Table 5.1. Timing of delivery and incidence of labour induction.

	Number of women (total=23)	Percent of total
Gave birth on or before 40 weeks gestation	14	61
Gave birth after 40 weeks gestation	10	43
Gave birth after 41 weeks gestation	7	26
Gave birth after 42 weeks gestation	2	9
Attempted herbal induction of labour	2	9
Attempted other self-help methods of induction	8	35
Attempted medical induction of labour	2	9
Went to 42 weeks gestation and made no attempt to induce labour	1	4

In the follow-up interviews, ten of the 23 women (43%) said they had experienced pregnancy beyond 40 weeks (Table 5.1). Two women who were approaching 42 weeks gestation attempted to induce labour with castor oil or blue cohosh, and in one case (the woman who used castor oil), this was successful. Two other women used herbs to facilitate labour, but not with the intention of inducing. One woman used evening

primrose oil suppositories to encourage cervical ripening, and the other used an herbal blend containing blue cohosh to prepare her uterus for childbirth. To encourage the onset of labour, three women used homeopathic preparations. Two women had sex with their partners in an attempt to stimulate labour, and in both cases, labour began within 12 hours. Two women experienced a medical induction because of prolonged pregnancy, including the woman for whom herbal induction failed. There were also two inductions for other medical reasons, both of which occurred before 40 weeks gestation.

5.2.2.1 Defining prolonged pregnancy in women's own terms

At what point do women consider themselves to be post-term? Do some define prolonged pregnancy as the medical community does, as 41 or 42 completed weeks gestation, and do others consider themselves to be post-dates immediately after the expected due date has passed?

First, it should be noted that none of the women expected to actually give birth on their estimated due date. Two women did give birth on their due date, and both expressed surprise and delight at this turn of events! Thus it seems that the women in my study interpreted prolonged pregnancy as the medical community did; the due date was only an approximation, and they had a week or two of leeway on either side of that date.

5.2.2.2 Impact of prolonged pregnancy on women's lives

Although pregnant women and their care providers were in agreement that pregnancy wasn't prolonged until some time after the due date had passed, many of the women felt tremendous pressure to 'perform' as soon as the 40 week mark had been

passed. As Nicole said, “People were calling every day, and I felt like I was doing something wrong that I hadn’t produced this baby yet.” Because of this pressure, going beyond 40 weeks gestation was associated with an increasing sense of isolation. In the words of Leone, “I felt like I needed a circle of women that I could join, and then stand and chant with or something. At the end, I was alone.”

Beyond 40 weeks gestation, women reported rising stress levels as their friends and extended family (n=3), partners (n=1), and maternity care providers (n=4) became agitated about the length of the pregnancy. Leone, who carried her baby beyond 43 weeks gestation, found herself withdrawing from her circle of friends because of their concern and the unsolicited advice they offered. She described it like this: “I was still reaching out, but I was feeling very cautious about who I was reaching out to.”

Pauline, whose pregnancy went to 44 weeks gestation, became increasingly defensive as her midwives put on more and more pressure for her to consent to medical intervention. Though she believed her pregnancy was normal and her baby was fine, she described how “with the pressure of their guidelines and their policies and procedures, it was really hard to stay focused and to stay positive.”

One woman had been seeing a lay birth attendant as well as her family physician throughout her pregnancy. When she reached 40 weeks gestation, her physician began pressuring her to consider antenatal testing (the non-stress test) and possibly an induction of labour. For her own peace of mind, she chose to stop visiting her physician at that point.

For women who were planning home births with registered midwives in attendance, there was the confounding factor of a regulation prohibiting home birth after

42 weeks gestation (CMBC, 2002). This regulation encouraged the women to use proactive measures to avoid prolonged pregnancy. Indeed, proactive measures were used by all five of the midwifery clients who had carried their babies beyond 40 weeks. In addition, to avoid the possibility of losing the opportunity to give birth at home, one woman had altered the date of her last menstrual period at her initial midwifery visit, buying herself an extra week at the end. Two others said they would change their dates in a future pregnancy. The woman whose pregnancy went to 44 weeks gestation signed a special waiver, absolving her midwives of any responsibility should anything go wrong at her home birth.

Prolonged pregnancy also had negative consequences for women who experienced health challenges or severe physical discomfort while pregnant (n=3). As Kerri, regarding her insulin-dependent gestational diabetes, “it ruins your pregnancy. You get really sick of being pregnant.” Helen, who induced her labour with acupressure, said, “I was so ready to be done. I had such bad edema that half an hour after [my husband] let go of my ankles, there were still thumb prints there.”

Sometimes, prolonged pregnancy was merely an inconvenience. Two women’s male partners had used up vacation time waiting for the pregnancy to end, time that they’d planned to spend with the new baby and assisting the mother in her recovery.

In summary, it was clear that prolonged pregnancy had negative social, physical and psychological consequences for some of these women, and in the social context, prolonged pregnancy began at 40 weeks gestation.

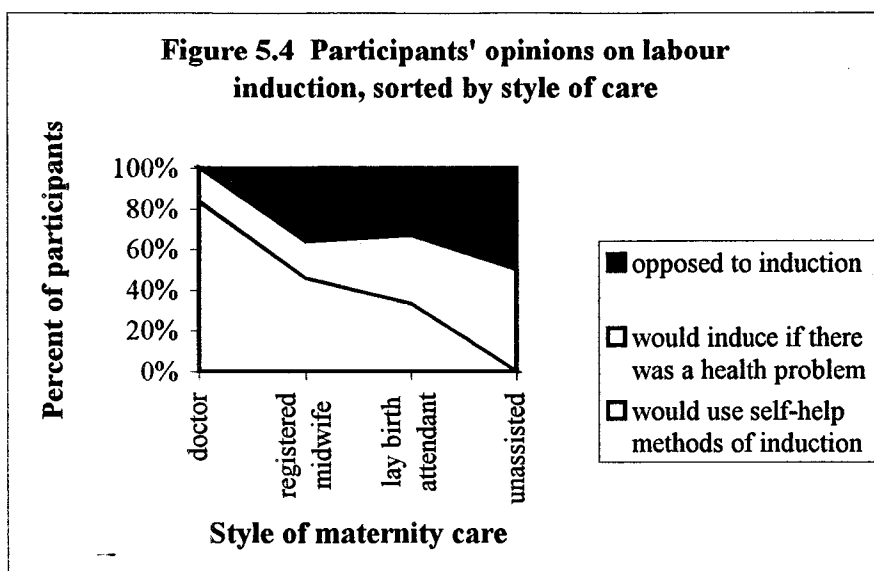
5.2.2.3 Women's opinions on labour induction

When the women were interviewed in the third trimester of pregnancy, their opinions about labour induction were mixed. Twelve women (44%) said they would take a proactive approach to avoid prolonged pregnancy. They described special foods, activities, and herbal medications that they would use before reaching 42 weeks gestation, at which point they expected that their care providers would recommend a medical induction. In contrast, three women (11%) described having taken such measures in past pregnancies, but they all expressed reservations about doing so again. As Heather said, "I felt that he just wasn't present when he was born. Like he just wasn't ready. I kind of wish I'd just left him alone."

A number of women said they disapproved of induction on the grounds of prolonged gestation, in the absence of other risk factors. Eight women (30%) said they were philosophically opposed to induction. In the words of Nicole, "maybe the baby's got an astrological moment that it wants to kick it off in the right direction in life. I don't see any problem with carrying my baby around in my belly until it's ready to come out." These women shared the philosophy that 'nature knows best', and several pointed out that there was uncertainty around the actual date of conception. Three of these women said they felt that the motives governing the policy were political and economic, and did not reflect their best interests.

Seven other women (26%) said they would want some indication that something was wrong with the baby's health or development before they consider an induction. Many of these women said they would prefer to try self-help measures before consenting to a medical induction.

Three women had experienced a medical induction in a previous pregnancy; they all said they did not wish to have their labour induced again. This sentiment was most strongly expressed by Jamie, whose previous labour was induced with Pitocin (intravenous synthetic oxytocin). As she described, it, “with the Pitocin, you’re sitting there watching the nurse press a button, and that’s how your labour is progressing.... I would do just about anything to get out of being induced again, because it was just horrible.” As for the other two women, one’s labour had been induced with prostaglandin, and the other by enema and rupture of the amniotic membranes; both of these women described the experience as disempowering but otherwise not disagreeable. Opinion towards labour induction was loosely associated with style of maternity care (Figure 5.4). None of the women in physician care said they were philosophically opposed to induction. These women were very likely to take proactive measures to avoid prolonged pregnancy. In contrast, women in midwifery care were more likely to be opposed to induction, and relatively less likely to use proactive measures. Women with lay midwives and those who were unassisted were even more likely to say they were opposed to induction, and less likely to take proactive measures against prolonged pregnancy. This may be partly because women who feel strongly against medical intervention of any sort are more likely to choose midwifery care or to avoid the formal health care system entirely. It may also be because the maternity care providers had provided information that influenced the women’s opinions on labour induction.



5.2.2.4 Outcomes

As noted earlier, ten women carried their babies beyond 40 weeks gestation. There were two medical inductions in this group, as well as two inductions performed before 40 weeks gestation due to health problems. In all four cases, prostaglandin suppositories were used. Of the four inductions, three led to vaginal births, and one led to a Cesarean due to fetal tachycardia (elevated heart rate). This is a potential side effect of all labour inducing agents, as they can cause uterine hyperstimulation leading to fetal hypoxia (Scialli and van Tonningen, 2001). In this case, the woman was disappointed with the birth outcome (a planned home birth ending in a Cesarean), and she felt that her choice to have a medical induction was frowned upon by her friends. As she put it, “I felt uncomfortable even saying that I chose the Cervidil [prostaglandin E2] induction, and then this happened. Yes, It’s my fault, and it was the Cervidil.” In contrast, the three women who had successful prostaglandin inductions said they were reasonably happy with the experience.

The two women who underwent medical inductions because of prolonged pregnancy had indicated in the primary interviews that they were not philosophically opposed to induction. In both cases, it was a first pregnancy, and both women had concerns (due to pre-existing conditions) that their cervixes might not dilate without assistance. Both women used self-help methods of induction before undergoing medical inductions. Self-help measures included herbal remedies, homeopathic preparations, sex, and exercise. Both women were in midwifery care, and the inductions were performed at 42 and 43+ weeks gestation.

Seven of the other eight women whose pregnancies went beyond 40 weeks gestation used self-help measures to stimulate labour. Of those who said in the initial interview that they were philosophically opposed to induction, three went beyond 40 weeks gestation, and all three used proactive measures to stimulate labour. Only one woman who passed the 40-week mark made no attempt to induce labour; she gave birth at home at 42 weeks gestation, with a lay birth attendant present.

5.2.3 Conclusions

In this group of women, prolonged pregnancy was occasionally experienced, with ten pregnancies exceeding 40 weeks gestation, seven exceeding 41 weeks gestation, and two passing the 42-week mark. This presented a challenge to the women on a number of levels. Having passed their estimated due dates, the women felt increasingly pressured to give birth, with this pressure coming from friends, family members, and maternity care providers. Though prolonged pregnancy is medically defined as 41 or 42 weeks completed gestation, the social reality is that women are thought of as 'overdue' as soon

as the due date has passed. Prolonged pregnancy was occasionally an inconvenience, as the birth did not coincide with a partner's vacation time. It was also a difficult time for women who had pregnancy-related health problems. In addition, for women in midwifery care, prolonged pregnancy could hinder plans for a home birth, due to regulations forbidding home birth beyond 42 weeks gestation.

A substantial number of the women who took part in this study said they were opposed to labour induction, if the decision to induce was made solely on the basis of prolonged pregnancy. Induction was, as Tara said, "a massive intervention". Those who had experienced a medical induction before all said they would prefer to go into the birth process naturally. However, when the 40-week mark had passed, all but one woman used self-help measures to stimulate labour. Though few women used herbal methods of labour induction, numerous other self-help measures were attempted. This illustrates the fact that herbal medicines are but one of a number of popular forms of home medicine used by these women.

These findings suggest that the social, physical, psychological and practical implications of prolonged pregnancy are sufficient to convince women to attempt labour induction, even when they are philosophically opposed. These outcomes are similar to those of Roberts and Young (1991), who found that women were more likely to say they would prefer an induction after they actually passed their estimated due dates. As a solution, they suggest that "the first step must surely be to abandon the term 'expected date of delivery'" (Roberts and Young, 1991:1105). Their investigation did not go into women's reasons for desiring an induction; the problem was assumed to be solvable through education.

Apparently, it is not only the women who need to be educated around the indeterminate length of pregnancy, as Roberts and Young suggest (1991). A better understanding of prolonged pregnancy and the tentative nature of the 'due date' are needed, on the part of maternity care providers and the public-at-large. At present, prolonged pregnancy creates a number of social, psychological and practical challenges for the women involved. Those whose pregnancies go beyond 40 weeks gestation may have an elevated need for social support.

5.3 Self-care in social context

As seen in Part Two of this chapter, a woman's social environment can have a profound impact on self-care behaviour. Even women who were philosophically opposed to labour induction found themselves using home remedies to stimulate labour, as they felt pressured to do so by friends, family members and maternity care providers. In what other ways did the social context influence self-care behaviour?

From the interview transcripts, it was apparent that the social context was perceived by the women to have a great deal of relevance to self-care. Maternity care providers, hospital staff, public health nurses, partners, friends, family members, employers, and co-workers all appeared to have the power to affect self-care. This influence could be positive or negative, from the perspective of the participants. Accordingly, the transcripts were coded for self-care empowerment (+) or disempowerment (-), depending on how the individual's influence was described by the woman herself (whether she saw it as positive or negative). By way of example, the

following statement was coded as a positive influence on self-care on the part of a maternity care provider. “She was basically saying that it was up to me, that she supported whatever I wanted. She just supported my empowerment.” In contrast, the following was coded as a negative influence: “I went in to be induced again, because they weren’t giving me any alternatives.” In the first instance, the woman was making the decisions around her health care. In the second instance, her maternity care providers were making the decisions for her.

Table 5.2. Women’s perceptions of how others impact their self-care decisions. A positive rating indicates a feeling of individual empowerment; a negative rating indicates a feeling of disempowerment.

	Positive	Negative
Doctor	20	35
Midwife	38	17
Hospital staff	4	15
Public health nurse	0	3
Best Babies program	5	0
Prenatal classes	2	2
Partner	16	5
Friends, family	17	9
Workplace	6	10

Self-care empowerment is a complex issue. In the span of an interview, some women pointed out several instances of empowerment on the part of their maternity care providers, as well as instances of disempowerment. The women’s perceptions of this are summarized in Table 5.2. Below, each source of support is considered in turn.

5.3.1 Doctors, nurses, and midwives

How did maternity care providers (doctors and midwives) enable women to feel empowered to make self-care decisions? How did they disempower women? The women said they felt empowered when they were given the information they needed to make decisions around their own care, and had their choices respected. As Leone said of her midwife, “I just felt like I was heard and respected with her.” Later, she said, “She validated me throughout.” Another participant, Karen, sought out a specific doctor, because she found the doctor to be very supportive of women’s choices, and she said: “I had seen how she empowered my friend through her two pregnancies.” In contrast, disempowerment resulted from a preference on the part of the maternity care provider to make autonomous health care decisions, as well as a refusal to share pertinent information. Leone referred to a doctor who was present at her labour: “He was saying to me, ‘you have to let go and let others who know better than you make the decision for you, and tell you what to do.’ He was very disrespectful and unhelpful.” There was also a tendency on the part of some maternity care providers to devalue the women’s self-care knowledge and emphasize the superiority of medical interventions. Louise found that when she talked to her doctor about using herbal remedies, “she was not very supportive. She said, ‘I don’t know what good that’s going to do.’ So I just do the natural thing on the side.”

In Table 5.2, one can see that midwives appeared to empower the women more than did doctors (2.24:1 ratio of positive to negative experiences with midwives, as compared to 1:1.75 ratio with doctors). One of the tenets of midwifery care is shared responsibility for health care decisions between the midwife and her client (Rushing,

1993). In addition, midwifery care typically involves hour-long prenatal visits, whereas the women interviewed here said that their physician visits were usually only a few minutes long. Longer visits with care providers allowed the women time to air their concerns and receive detailed answers to their questions, and it facilitated trust and even friendship. In the words of Angela Spencer, Registered Midwife, interviewed as a mentor of some of the participants in this project:

It is a gradual process. It does take a little while to gain their confidence, gain their trust. Some people you hit straight off. But usually by 30 weeks, the women are really hungry for nourishment, for books about themselves, for how they can do it, what they can do. So people listen to [your advice].

When the care provider/ client relationship was not satisfactory, many women chose to go to another care provider, or to opt out of formal maternity care entirely. Altogether, 16 of the 27 women (59%) made a shift from one maternity care provider to another in response to negative experiences. Twelve women changed from one doctor or midwife to another, often several times over the course of a pregnancy (Table 5.3). Most often, the switch was made because the care provider was “unfriendly”, “pushy”, didn’t consult the woman when ordering diagnostic tests, or gave advice that the woman didn’t agree with. One or two negative experiences with a particular care provider were usually enough to motivate a woman to get her prenatal care elsewhere. Three women chose to provide their own care following unsatisfactory experiences with doctors or midwives. In addition, one woman was receiving care from her family doctor as well as a lay birth

attendant, but stopped seeing her family doctor when she felt her maternity care decisions were not fully supported.

Women who were hospitalized during their pregnancies or for the birth often reported being disempowered by the hospital staff. The ratio of positive to negative experiences with hospital staff (other than doctors and midwives) was 1:3.75 (Table 5.2). For each woman, the hospital experience was often mixed. One woman described the nurses who helped her through some breastfeeding difficulties as “just tremendous”,

Table 5.3. Participants’ decisions to change care providers.

Original care provider	New care provider	Incidence
Doctor	Doctor	3
Doctor	Midwife	6
Midwife	Midwife	4
Midwife	Lay birth attendant	1
Doctor	Lay birth attendant	2
Doctor	none	1
Midwife	none	2
Lay birth attendant	none	1
Lay birth attendant	Doctor	1

though she described another nurse as a “horrible, brutish woman” for treating her unsympathetically. Several women said they checked themselves out of hospital because of negative experiences. Regarding her hospital stay, Andrea said, “If you’ve got insulting and rude people giving you care, or not giving you care, then what’s the point? You’re better off at home.”

Public health nurses provided home visits to the women, usually within a few days of the birth. Three women described these visits as having a negative impact on

self-care; no positive reports were given. The complaints all related to breastfeeding advice that was considered unhelpful.

In contrast, the government-sponsored Best Babies Program, which targets women who are at risk of having low birth weight babies, received only positive feedback regarding self-care empowerment. The program gave the women access to a nurse and a dietician as well as a group of other women throughout the pregnancy. It also gave them some food vouchers and prenatal vitamins.

5.3.2 Partners, friends, and family

An important source of self-care empowerment was the women's own partners. In 16 instances, partners were described as "helpful" or "supportive", whereas they were thought to disempower the women in 5 cases (a ratio of 3.2:1). Supportive behaviour included listening, sharing information, responding to the woman's special needs, and being her advocate. For instance, Leone said, "My partner was just great in allowing me to decide what I needed to do, and standing by me when I said no to that doctor." The partner was a negative influence when there were relationship problems. For example, Henna described how she was "struggling a lot with our relationship. It seems like there's not enough peace for me to involve myself in the pregnancy the way I'd like to."

Friends and family were also an important source of empowerment, with a ratio positive to negative experiences of 1.89:1. When these individuals were knowledgeable about pregnancy, birth, and early infant care, they were enormously valuable resources for the women. For Shannon, whose sister had studied midwifery, "My sister was a huge influence. She shared what she'd learned with me and helped to educate me." The

influence of friends and family could be negative, however, when such a knowledge base was lacking. Louise had asked her friends to tell her about their pregnancies, in order to learn from their experiences, but she found that “most people are really negative when they talk about it, like it’s the worst experience of their lives. They sort of dramatize it.” As lay birth attendant and educator Gloria Lemay, interviewed as a mentor of some of the research participants, put it:

I find that the messages women are given prenatally are just terrible. You are not able, and you are not strong, and you are not powerful, and something terrible is going to happen to you if you don’t obey the practitioner who happens to be sitting in front of you.

Nonetheless, she found social support to be invaluable following the births of her own babies:

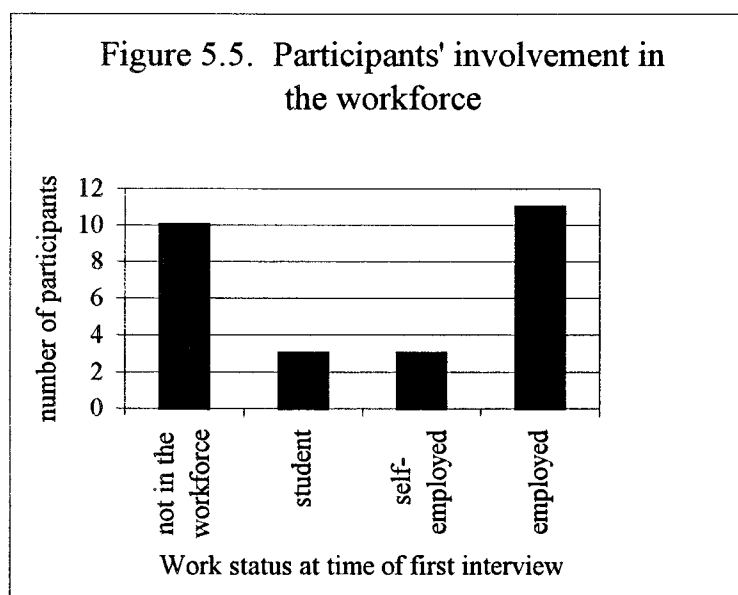
I really relied on the community centre, La Leche League, people that had babies at the same time as me that I met in prenatal classes. As a new mother, you just feel like no one else understands what you’re going through with late nights, and sore nipples, and husbands that aren’t perfect. If you find other women that you can talk to, it really does save your sanity.

5.3.3 The workplace

Among the participants, there was a 63% rate of participation in the workforce (Figure 5.5). In terms of self-care, the workplace had the potential to be helpful and/or

harmful. The participants reported that their work environment had positive and negative influences on self-care at a 1:1.67 ratio (Table 5.2).

At work, while pregnant the participants were exposed to the attitudes of employers, co-workers, employees, and clients. They often reported hostility from others who felt they should not be working while pregnant. This hostility could undermine self-care efforts as the women responded by trying to prove that they were capable of working long, physically demanding days. This was particularly true for retail workers. Three women spent long days working in retail shops or coffee bars, where they were required to stand up all day. Two of the three women experienced premature labour; both attributed it in part to the work environment. The third woman stopped work in spite of financial difficulties, after she was told she was incapable of doing her job properly.



The connection between retail work and premature labour is not coincidental. Epidemiological studies have made the connection between premature labour and physically demanding work (Homer et al., 1990; Launer et al., 1990; Mozurkewich et al.,

2000). Work that requires standing for long periods of time is also correlated with an increased risk of spontaneous abortion (Fenster et al., 1997; Gabbe and Turner, 1997; Launer et al., 1990), premature birth (Mozurkewich et al., 2000) and reduced birth weight (Fortier et al., 1995; Gabbe and Turner, 1997; Ha et al., 2002; Hatch et al., 1997; Launer et al., 1990). Part-time work is associated with higher mean birth weights (Hatch et al., 1997) and a lower risk of pre-term birth (Henriksen et al., 1994), compared to full-time work. Work related stress is also linked to spontaneous abortion (Fenster et al., 1997) and pre-term labour, particularly in cases where the woman does not wish to be working (Homer et al., 1990).

A fourth woman (Delone) had worked through three previous pregnancies, and had been diagnosed with pregnancy induced hypertension (pre-eclampsia) each time. She attributed her better health in the current pregnancy in part to the fact that she was no longer working. She said, “This pregnancy has been a lot less stressful, knowing that I don’t have to go to work and perform. I can go upstairs and have a nap at lunchtime if I feel like it.”

Epidemiological studies have confirmed that work outside the home during pregnancy is connected with a rise in blood pressure and subsequent pregnancy induced hypertension (Higgins et al., 2002; Mozurkewich et al., 2000; Walker et al., 2001). This connection is especially strong when the work is physically demanding (Homer et al., 1990; Mozurkewich et al., 2000; Spinillo et al., 1995; Wergeland and Strand, 1997) or the women have no control over the work pace (Wergeland and Strand, 1997; Wergeland and Strand, 1998).

Two women reported overt hostility on the part of their employers or co-workers, who did not approve of them working while pregnant. Surprisingly, one of these women (Tara) worked for an agency that provided support to pregnant women. She said the attitude of her employers towards her pregnancy “did cause an immense amount of stress.”

On the other hand, the workplace could have an empowering effect. Kerri, whose job required her to work with childbearing women, appreciated the access to information she had at work. Two women who worked in holistic health fields described how their work helped them to feel in touch with their bodies and their pregnancies. Christina put it like this: “I loved it, there was just something going on in the universe and my body that made it really exciting to do that work. I was excited about being a mum too, and about being pregnant.” In addition, working while pregnant gives women access to earned income, workplace support networks, job-related satisfaction, and the elevated status enjoyed by working members of our society. These positive aspects of working while pregnant remain largely unreported in the literature. Nonetheless, they influence the women who must make the decision whether or not to participate in the workforce while pregnant.

5.3.4 Conclusions

The social environment had a number of influences on self-care behaviour. These influences could be positive or negative, or presumably, neutral. In these women’s experiences, the influence of friends, family members, and partners was usually (but not always) positive, whereas interactions with midwives, doctors, hospital staff and public

health nurses ranged from positive to negative in their impact on self-care. A negative influence was perceived when the woman felt that her self-care knowledge and behaviour were undermined by a refusal to share pertinent health information, and a resistance on the part of the health care provider towards joint decision-making.

These women indicated that they needed to feel supported in their self-care decisions, and they appreciated any support in the form of validation, information, and assistance. When they felt they were being invalidated, denied information, or denied assistance, they were very likely to avoid the perpetrator, which often meant- in the case of maternity care providers- switching to another provider. When they felt trapped in a particular situation (such as the workplace, when they could not afford to stop work), they reported elevated stress levels and a negative impact on self-care. In summary, social support is integral to prenatal self-care, but only if its delivery is positive and empowering to the woman, for sources of social support also have the ability to disempower.

Chapter 6.

Discussion: explaining women's reproductive care experiences

Chapter 2 addressed the sociological concept of medicalization, the process whereby life events are drawn into the medical sphere (Conrad, 1992). As noted in that chapter, while some authors paint a picture of pregnancy and childbirth as fully medicalized in North American society, others demonstrate alternatives to medicalized childbearing. The women's health movement and self-help movement played a part in constructing alternatives to medicalized childbirth, which include the midwifery model and the self-care model of maternity care. To review these concepts, the medical model of care involved unilateral decision-making on the part of the maternity care provider, and interpretation of pregnancy and childbirth in medical terms. In contrast, the midwifery model encompassed social, personal, and biological aspects of childbearing, and emphasizes shared decision-making. The self-care model assumes the pregnant woman herself makes decisions about her care, utilizing the health professions on a consultancy basis.

Having presented the results of this study, I now return to the issue of medicalization, midwifery, and self-care. In this study, to what extent were the women's childbearing experiences shaped by medical terminology, techniques and interventions? What is the evidence in favour of medicalization? Conversely, what is the evidence against medicalization; where are the midwifery and self-care models most apparent?

The information presented in this thesis illustrates the complexity of the situation in which the individual women who participated in this study negotiated their maternity

care. Chapter 4 documented women's heavy reliance on home remedies, as well as their infrequent use of pharmaceutical drugs. This supports the observations of other researchers that health conditions are most often treated in the home, with home remedies (Brown and Marcy, 1991; Green, 1990; Kleinman, 1980). On one hand, it seems to refute the hypothesis that pregnancy has been fully medicalized for North American women (Conrad, 1992). If pregnancy were fully medicalized, then surely the common health complaints of pregnancy would be treated within the medical system. On the other hand, one may interpret the widespread use of home interventions as an indication that pregnancy is viewed in medical terms at the societal level; whether performed by physicians or by pregnant women themselves, these interventions signal a desire to alter the natural course of events.

Support for the medical model of pregnancy and birth became more apparent in Chapter 5, where the issue of prolonged pregnancy was discussed. The analysis revealed that women resisted defining prolonged pregnancy as a medical condition, yet all but one of the women whose pregnancy exceeded 40 weeks gestation took deliberate action to end the pregnancy. This suggests that medical definitions of pregnancy had permeated everyday life, affecting women's perceptions of pregnancy beyond 40 weeks, and confirming the hypothesis that at least this aspect of pregnancy has become medicalized. However, the women's tendency to intervene may simply indicate that intervention in the duration of pregnancy is itself a natural phenomenon, and would occur in absence of medicalization. Cross-cultural or historical comparative research would shed more light on this issue; this question is not resolved here, but this is a prime topic for future research.

6.1 Birth stories: the language of medicalization and normalization

While the evidence for medicalization of pregnancy appears tentative from this data set, stronger evidence for medicalization may surround childbirth itself. One can look for evidence of such medicalization by examining the language used by the women to describe their own experiences of childbirth. Was birth described in terms of cervical dilation, interventions and Apgar scores? Or was it described as a natural process, framed by images of everyday life? Birth stories can also be ‘mined’ for information on women’s perspectives on who makes the decisions around their care. This type of analysis was used by VandeVusse (1999), who reported a continuum from unilateral to joint decision-making in the birth stories of a convenience sample of 33 American women. A similar analysis is used here as a means of identifying the medical, midwifery and self-care interpretations of childbirth.

One might expect childbirth to be medicalized more thoroughly for women who were in physician care. Indeed, the birth story analysis reveals that it was the case for the participants in this study. For instance, Andrea looked to her doctor to decide whether or not she was in labour.

I had been to the doctor that morning. And she had said, well, yeah, any time, could happen any time.... Then I guess about four or so in the afternoon I started feeling some contractions. But they were of course different from when I had my first son. So I thought, well, is this it? And so I looked it up in a book, and it sounded like pre-labour. I phoned my doctor around 7:30 at night and said that I think this is starting. She said,

well stay up and keep moving, keep walking around, and that'll ensure that things keep happening, if they are going to keep happening.

As her contractions intensified, Andrea phoned her doctor again and was told that she was indeed in labour, and should go to the hospital. She went on to describe the birth experience in terms of cervical dilation, time, and interaction with her doctor and the hospital staff.

So we got to the hospital at ten after ten, and I was five centimetres dilated. Meanwhile, the nurses, racing around, we're just gonna plug in this suction because this baby's gonna come any second...

When the vaginal exam revealed that she was only 5 centimetres dilated (full dilation is 10 centimetres), Andrea thought she should keep walking around to stimulate her labour, as advised earlier by her doctor. However, the nurses prevented her from doing so.

They said, "no, no, you have to stay down, you have to stay in bed! Lie on your side, or go on your hands and knees, do anything, but you can't get up yet." So I was on my hands and knees, and then my water broke and I went from 5 to 8 centimetres in one big whoosh, one fell swoop. And I said, I feel like I have to push. And my doctor said, well, I'll just push the remaining 2 centimetres [of cervix] off, and then, push away.

Andrea's interpretation of her birth experience is highly medical, with progress measured in terms of cervical dilation, and events described using the doctor's and nurses' definitions of what was happening. Andrea was not the only woman to describe her childbirth experience in medical terms. All of the women who received physician

care used phrases like this one: “I went into the doctor Monday for a check, and I was 2 centimetres dilated and thirty percent effaced.” Even Sally, who attempted to give birth unassisted, but ended up calling some lay birth attendants and finally transferring to hospital, described the final stages of her birth in medical terms. As she said, “three days is a long time to have your water broken. In the medical world anyway, if you’re water’s been broken for 18 hours, you’re considered high risk.” Nonetheless, she resisted the medical definition of her birth experience as high risk: “Actually, we didn’t end up telling them it was the third day, instead we said it was 18 hours ago my water broke. We didn’t want them to go all crazy on us. But they did, anyway.”

Medicalization was not always met with resistance. In one case, there were deliberate attempts to define childbirth in medical terms. Mimick, describing her early labour, related this scenario:

My girlfriend was actually supposed to be my labour support. But because [I had tested positive for] group B strep, I said no to her, because she’s got 2 young kids. I mean, with blood and guts and gore and all that that hospital births are, I was afraid that if she got splattered, what would happen to her two kids.

Mimick, however, was the only woman of the 23 women who were interviewed post-partum who seemed to make a conscious effort to define her birth in medical terms. In comparison, most of the other women attempted to *normalize* the experience.

Normalization was accomplished by involving family members in the birth, claiming the right to be the first one to identify the baby’s gender, cutting the umbilical cord oneself,

and so on. The women who had normalized the experience of medically managed childbirth indicated that it was very important to them to do so. In the words of Karen:

[My husband] was in the room the whole time, and he got to tell me the gender of the baby. So it was still him first. Even though it was a C-section they didn't take away that from us. That was really important to us. He cut the cord, and it was actually really neat for him because he got to do all the stuff I would have done. The measuring and the weighing, he got to do all that.

Normalization was not always possible. Tara, who had a particularly traumatic birth, lamented her inability to normalize the experience.

The spinal didn't take on me completely. It was pretty traumatic, for both my partner who was watching, and for me. I didn't get to see my baby. They couldn't turn me over to redo [the spinal anesthetic], and they didn't knock me out, which in hindsight they should have. So it was horrific, the Cesarean itself. I can't remember a lot of it; I don't remember her being born, or them showing me her.

As one might expect, normalization of the birth experience was equally important to the women who had births that were not medically managed. This was most striking in the birth stories of women who had had highly medical births in the past. Delone, who gave birth at home without medical assistance after three Cesarean sections, put it like this.

The birthing part, it was wonderful. You can't beat that. You can't beat the pushing out part. The baby drops and you grab the baby, and you're

the first one to hold him, you know? It's so different, because you're holding him, and you know you're the one who gets to say what the sex is, and nobody takes your baby away from you. There was just a bed right there on the floor, and so I just laid down on the floor with him and held him and just nursed right away, and he cuddled beside me. You can't beat that.

A successfully normalized birth was considered a triumph. The vocabulary of normalization often came out at the end of a birth story. Having described her birth experience, Shannon said:

It couldn't have gone any better, because nobody interfered, I didn't have any pelvic exams, and no one said, now it's time to push, push, push, push. Nobody told me how to do any of it. I just did it!

In the home setting, variations in the course of events during a birth were interpreted with the language of normality. Amy, describing the unassisted birth of her third child, was surprised by the length of her labour. Rather than looking for any medical explanation for the delay, she said: "I don't know why it took longer. I think it might have been because there was a lot of action going on around here, my two kids, my husband, my friend, and her child. And three dogs."

6.2 Shared care and self-care

Not only was it highly normalized, non-medicalized birth was marked by self-diagnosis and autonomous decision-making on the part of the women. Several participants, including Leone, appreciated the midwifery model. Leone asked a number of knowledgeable individuals to help her find solutions to her baby's awkward presentation.

I contacted other midwives to get some ideas of what to do, and then I consulted my midwife about one of the positions they said I was to get into, and she said she couldn't see it hurting, or causing a problem.

Leone insisted on consulting her midwife before conceding to the interventions the doctor-on-call wanted to perform in hospital: "we were firm that we had to talk to the midwife before we made the decision to do the C-section." When she insisted on a model of joint decision-making, the doctor became quite irate. "He didn't know how to respond to someone who was asking questions, who said no to what he recommended."

Many of the women who had midwives, lay birth attendants or were unassisted described how "I felt", and "I knew", and "I decided". This was not universally true; others, such as Colleen, having her first baby with the help of lay birth attendants, used the language "they said", "they did", and "they gave me the option". Delone used both types of language:

I didn't really understand that that pushing sensation in my bum meant it was time to push the baby out. [The doulas] said if you can breathe through it, do, and don't push until you have to. I put my finger up myself and felt the baby. One part of the head was two knuckles up me, and one

part of the head was only a knuckle and a half up me. I said, the head is right there.

This went on for some time, with Delone periodically feeling the baby's head with her fingers. While she alone measured her progress, she waited for the suggestion from her doulas to begin pushing. Interestingly, though Delone had chosen to give birth without a midwife or doctor, she described a desire for shared decision-making, much like that expected within the midwifery model of care detailed in Chapter 2.

Finally at about 3:30 in the morning, I said you know, the baby's head is right there. And so finally, they said, well maybe you should push him out. So, I mean this is what happens when you don't have anybody with you that knows what's what.

From the birth stories, incidence of autonomous decision-making, joint decision-making, and decisions made by others were tallied and presented in Table 6.1. Joint decision-making was observed most often in the case of midwife or lay birth attendant care.

Table 6.1. Incidence of each type of decision-making reported in the participants' birth stories, sorted by style of maternity care.

	Physician care	Lay and registered midwifery care	Unassisted
Decisions are made by the woman herself	0	10	10
Decisions are made by somebody else	11	6	4
Decisions are made jointly	1	5	0

In the case of women receiving physician care, someone other than the woman herself did nearly all the decision-making. Not surprisingly, the women who chose unassisted birth showed the highest reliance on autonomous decision-making.

Though joint decision-making was unusual during the actual birth process, judging by the herbal medicine data presented in Chapter 5, joint decision-making was the norm during pregnancy among these participants. Midwives and herbalists were often consulted, and they suggested many of the home remedies women used (Figure 5.3). In the case of herbal medicine, the participants took self-care advice from others more than half the time (Figure 5.2), and they always played an active role in the decision to use herbs. The remainder of the time, the women relied on their own prior knowledge or intuition to guide herbal self-treatment. Only during the birth process did women report having done what they were told to do, rather than making decisions about their own care autonomously or in consultation with advisers. And, judging from the birth stories, most of these women would have preferred an autonomous or shared approach to decision-making.

6.3 Conclusions

Three models of women's reproductive health care are described here: medical, midwifery, and self-care. The women who participated in this study made use of all of these models of care. Among the participants in this study, the childbearing experience was normalized, to a varying extent, suggesting that pregnancy and childbirth are not fully medicalized in this society. Most prenatal health care decisions were made

autonomously by the women, or were made in consultation with an adviser in accordance with the midwifery model of care. In a general sense, childbirth seemed to be more highly medicalized than pregnancy, with the exception of prolonged pregnancy. Many of the women resisted having their pregnancies defined in medical terms by avoiding prolonged pregnancy through self-help measures, rather than challenging the medical model head-on. However, as noted in Chapter 5, those who went beyond 42 weeks gestation continued to resist the high-risk label. The medical sphere and the social environment evidently influenced self-care behaviour, yet the women still preferred to see themselves in control of their own health care. This paradox is in need of further study.

Women's descriptions of their birth experiences include language that ranged from highly autonomous to highly provider-oriented. Between those two extremes lay the language of collaboration. Physician attended births were associated with low rates of client-centred or collaborative decision-making; these rates were far higher in the case of midwifery care. In addition, the women who were in physician care tended to describe their births in medical terms. Women who gave birth unassisted had the highest rates of autonomous decision-making, and collaborative decision-making was not seen in their birth stories. Indeed, collaborative decision-making during childbirth appears to be a phenomenon associated primarily with midwifery-style care.

It is not known to what extent these results can be applied to the population at large. It must be kept in mind that the sample included an unusual subset of society, with exceptionally high rates of home birth and alternative styles of maternity care.

Nonetheless, these results indicate that viable alternatives to medicalized pregnancy and childbirth do indeed exist in our society.

Chapter 7.

Summary and conclusions

Herbal medicines are widely used in most societies, including our own. Nonetheless, herbal self-medication in pregnancy was heretofore an understudied phenomenon. This research utilized an interview format to uncover details about herbal medicine use and other aspects of self-care behaviour. This was a qualitative study of self-care in pregnancy, birth and lactation within a non-random sample of 27 women in British Columbia, Canada. Participants were recruited by means of a flyer, which said that the interview would cover self-care and health care pregnancy, birth and lactation, but did not mention herbal medicine. The women were interviewed in their third trimester of pregnancy, and 23 of the participants were re-interviewed post-partum. Interviews were tape recorded, transcribed, and subjected to thematic analysis. Six of the participants' mentors were interviewed and asked to comment on some of the themes that were emerging from the data; these mentors included midwives, herbalists, educators, and authors.

The interdisciplinary nature of this thesis places it in a unique position. With foundations in the biological and social sciences, this work contributes to both fields. It has the advantage of exploring issues of biomedical safety and efficacy of herbal medicine, while simultaneously exploring the nature of the study participants' decisions to self-treat with herbal medicine. The main disadvantage to the interdisciplinary approach is that the qualitative research methodology did not provide a rigorous, large-sample, quantitative data set. This obviates statistical analysis of the rates of herbal

medicine use among the study participants, and subsequent generalization about rates of usage in the population as a whole. On the other hand, a biological, survey-type study with a high sample size and randomized or stratified design would not have yielded the rich qualitative data set obtained here by means of purposeful sampling and semi-structured interviews. This study takes advantage of an interest-rich data set, yet it is acknowledged that the findings may not apply outside of the sample population.

7.1 Implications for health policy and future research

The main findings of this study are summarized in Table 7.1. As found here, many pregnant women self-medicate with herbs as an aspect of self-care. In this study, the women themselves considered many herbal remedies to be of value, yet safety and efficacy of most herbs have not been established in a laboratory or clinical setting. Clinicians and researchers need to investigate the use of these herbs more thoroughly, and to publish their findings, so that therapeutic efficacy and safety issues can be clarified.

Several other policy-related issues came up in the thematic analysis of the interview data. Some of these issues revolved around prolonged pregnancy and induction of labour. The research findings point to a need for greater understanding among maternity care providers and the public-at-large that pregnancy beyond 40 weeks is often a source of stress and worry for women. For the study population, the fact that medical opinion considers pregnancy to be prolonged after 42 weeks gestation did not affect the social reality that a woman is considered ‘overdue’ at one day past 40 weeks. In addition, the public-at-large appeared to be unaware that the obstetric community is strongly divided on the issue of whether it is preferable to ‘watch and wait’ or to induce

Table 7.1. A summary of the major findings of this study.

- Of the 27 participants, 26 (96%) used herbal medicines internally while pregnant.
- Tonic herbs were most widely used in pregnancy, accounting for 57% of total herbal medicines used.
- Of the 23 participants interviewed post-partum, 11 (48%) used galactagogue (lactation-enhancing) herbs.
- Herbs were more widely used than over-the-counter or prescription pharmaceutical drugs, with a ratio of 4.4:1 between them.
- Herbs were universally thought to be safer than pharmaceutical drugs, as a general rule.
- Herbal use was guided by prior knowledge (32%), advice (56%), and/or instinct (12%).
- Many women were opposed to labour induction on grounds of prolonged pregnancy. Nonetheless, most used self-help methods to stimulate labour.
- Prolonged pregnancy was a source of considerable stress and social pressure.
- A woman's social surroundings affected her self-care behaviour.
- Friends, family, health care professionals, and work associates all had positive or negative impacts on self-care.
- Midwifery care was more positive, overall, than physician care in terms of self-care empowerment.
- There was evidence of medicalization of childbirth in the language used by some of the women to describe their birth experiences. This was most often the case for women in physician care. However, nearly all the women made an effort to normalize the birth experience, drawing it out of the framework of medicalization.
- For women in physician care, most childbirth management decision-making was made by third parties. Women in midwifery described how they primarily made autonomous or joint decisions, and women who were unassisted made most care decisions themselves. Joint decision-making was almost exclusively associated with midwifery-style care.

labour in response to (or in anticipation of) prolonged pregnancy. A public education campaign regarding the issue of pregnancy beyond 40 weeks would help to remedy this situation, as would greater delicacy on the part of maternity care providers in dealing with 40 weeks + clients.

The study participants showed a preference for maternity care providers who empowered them to make their own health care decisions by providing relevant information to help them make informed choices, and validating those choices. This model of care was observed in the birth stories of women in midwifery-style care. As noted above, many of the study participants left a care provider because they were unsatisfied with the style of care; this trend is deserving of further study. It points out the need for some care providers to adjust their style of maternity care delivery to better meet the needs of their clients. It also reinforces the notion that medicalization of pregnancy and birth was not complete within the study population, and was often met with resistance. The women negotiated their maternity care within medical, midwifery, and self-care frameworks, and many sought to normalize the childbearing experience. Perhaps the concept of medicalization could be revisited in a larger-scale study or meta-analysis of the literature, to identify whether or not the findings of this study point to general societal trends.

Among these women, herbal medicine was one of a number of quantifiable elements of self-care. This study contributes to the general understanding of the roles herbal medicine can play in pregnancy, birth and lactation. It reveals a substantial body of lay healing knowledge within a community of childbearing women. It is hoped that

other researchers will contribute to the knowledge documented here, while recognizing and honouring women's knowledge and wisdom in caring for themselves.

Afterword

Before embarking upon this study, I had an opportunity to explore the childbearing community on a personal level, while narrowing down the focus of study, constructing the sampling model and writing the interview schedules.

My first pregnancy in 1997/8 gave me an interest in the use of herbs in pregnancy and childbirth. As the manager of an herbal product line in a health food store, I had access to both reading materials about herbal medicines and the herbs themselves. In addition, I received suggestions from my midwives about what herbs I could use to support a healthy pregnancy.

In 2001, with literature review and methodology coursework under my belt, and pregnant again, I was blessed with a second opportunity to examine the roles of self-care and herbal healing in pregnancy. That year, I immersed myself in the alternative childbirth community in Victoria, BC and around the English-speaking, computer-privileged world by means of email discussion groups and internet forums. I also conducted two loosely-structured focus group sessions at my home, involving myself and five other pregnant women.

Through these explorations, I learned that herbal medicines were indeed widely used by childbearing women, and that herbal information was spread mainly by word-of-mouth. I noted that herbal medicines were often used by women to reduce their reliance on medical care. In many cases, there appeared to be a conflict of interest between women and their maternity care providers when it came to self-care. The women I encountered viewed self-care as a source of good health and personal empowerment, yet some of these women said they felt that their maternity care providers repeatedly

undermined their self-care efforts, apparently in an attempt to maintain control of the pregnancy and birth process. This left the women feeling disempowered and inadequate post-partum, when they found themselves wholly responsible not only for their own health, but also for that of their new infants. I learned about a growing unassisted birth movement, that was at least in part a response to this power struggle.

These observations shaped the study such that women employing a range of maternity care services (or none at all) were invited to take part. I sought to learn not only what herbs women were using during pregnancy, birth and lactation, but also to see how formal maternity care providers were affecting self-care behaviour.

In short, by conducting this research, I was able to expand my personal knowledge of herbal medicine, and gain a better understanding of its role in my own community.

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Appendix 1. Recruitment flyer.

Pregnant?

I am a graduate student at the University of Victoria. I am researching pregnant women's experiences in health care and self-care.

If you would like to talk about your experiences, please call me to arrange to be interviewed.

Participation involves two interviews, one before and one after the birth of your child. Each interview is between 1 and 2 hours in length. I will travel to meet with you.

A small honorarium will be offered to compensate you for your time.

Thank you!

Rachel Westfall

In Victoria, call 472-6033.

If you are out of town, please call 0-250-472-6033, and dial 4862 to reverse the charges.

e-mail: rachelw@uvic.ca

If you have any questions or concerns about this research, you may contact my supervisors or the University of Victoria Office of Vice President Research. Their numbers are listed below.

Professor Barry Glickman (250)472-4067
Professor Nancy Turner (250)721-6124
UVIC Office of Vice President Research (250)721-7968

Appendix 2. Interview schedule for primary interviews.

Demographic information: “Tell me about yourself”.

Is this your first pregnancy? Tell me a little about your previous pregnancies/ births.
What kind of maternity care, what kind of birth experiences?

What type of maternity care do you receive now?

How did you choose this type of care?

How have you been feeling this pregnancy?

In general, how is your health? Do you get sick often, or have any chronic complaints?
What do you do about it?

What are your expectations of pregnancy and birth?

How would you like this birth to be, ideally?

How do you feel about the use of herbs by pregnant women? Are there any you have used yourself? Can you remember where you learned about them? Was it your idea to use them, or someone else's?

How do you feel about the use of pharmaceutical drugs by pregnant women? Are there any you have used yourself? Can you remember where you learned about them? Was it your idea to use them, or someone else's?

What do you focus on when you ‘take care of yourself’?

Who/ what sources do you rely on most for health information? Who has given you the best advice for your pregnancy? This could be a person, a book, a course you took, or any other source of information.

How do you feel about using herbs to induce labour or make the birth seem easier?
Pharmaceutical drugs? Do you plan to use anything yourself?

Describe your relationship with your maternity care provider when it comes to the issue of self-care. Do you find him/her supportive? Ambivalent? (Un)interested? (Un)informed? Unsupportive?

Appendix 3. Interview schedule for follow-up interviews.

How are you feeling as a new mother?

Any health concerns since we met last time?

How did you deal with them? Herbs/ remedies: where did you learn about them?

Did you use any home remedies or alternative measures to prepare your body for the birth, or to induce labour? What? Where did you learn about them? Did they work?

Tell me about the birth.

What was it like for you? For your partner? For the baby?

Did you do anything in particular to ease the birthing process?

Did your care provider encourage any? Do you feel that these things helped?

Did you use any herbs or other alternative therapies for the birth?

Whose suggestion? Do you feel that these things helped?

Did you feel 'in control' the whole time?

What do you think helped? What harmed?

Did you do anything to try and keep your perineum intact? Did your attendants?

If you have any lesions, are you doing anything special to help your body heal?

How does this birth compare to previous ones?

Are you satisfied with how the pregnancy and birth went?

Stuff that's out of your control- was there anything you wish had gone differently?

Are you satisfied with the care you received? Are there any changes you'd like to see?

Any resources, styles of care etc. that you'd like to see made available?

What about the care you gave yourself, in pregnancy and in the birth? Are you satisfied?

Is there anything you'd like to do, or learn more about if you become pregnant again?

Stuff that you have control over- is there anything you'd do differently the next time around?

How is the breastfeeding going? Are you doing anything to help keep your milk production up? What? Herbs/ remedies: where did you learn about them? Do they help? Any side effects?

What advice would you give to other expecting mums, regarding self-care, health care?

Appendix 4. Interview schedule for mentor interviews.

Describe how you got involved in the childbirth community.

What is your involvement now?

In my interviews with pregnant women, I've noticed some themes. I'd like to have your insight on them. (Each to be discussed in turn, if relevant to the individual's area of specialty)

1. (a) I've noticed several core communities within which pregnancy self-care information is propagated. One is the community of childbearing women that has a well-known childbirth educator, in Vancouver. Another is in Victoria, among the employees and participants in the Best Babies programme. Third, some of the women I interviewed belong to cyber-communities within which they find the same kinds of support. Likely there are many such communities. Your thoughts?

1. (b) Women from these communities have access to a pool of knowledge about health care and self-care that seems to be difficult to access for women who lack these support networks, in spite of the availability of information in books and on the internet. Why would this be?

1. (c) Membership in one of these communities also seems to influence whether or not a woman uses herbal medicine while pregnant. Those with a midwife or doula were also more likely to use herbs than those with a GP or OB. Any thoughts on why?

1. (d) Membership in one of these communities also seems to give women greater confidence in their ability to take care of themselves, and to "trust in the birth process". This suggests to me that community support networks enable women to feel safe, competent and informed. What do you think?

2. All of these women believed herbs are safer than pharmaceutical drugs, though virtually all said one should be informed about what one was using, whether it was known to be safe to use in pregnancy, and how to use it properly. Why do you think they feel this way? What are your views on herbs and synthetic drugs?

3. Overall, women who chose to give birth at home appeared to be more likely to practice natural immunity, elimination communication and other alternative child-rearing practices. Why do you think these things go hand in hand?