



**The development and evaluation of a health
promotion program for pregnant women aimed at
addressing rates of caesarean section.**

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Abstract

Introduction

A reduction in rates of caesarean section worldwide has been identified as a public health priority. Among a plethora of strategies aimed at addressing rising rates of caesarean section, few have explicitly involved information-based approaches for pregnant women. This thesis aimed to develop and evaluate a program for pregnant women designed to encourage informed decision-making for childbirth.

Methods

Due to the novel approach of the proposed program, this thesis adopted a methodology based on a four-stage program planning and evaluation cycle involving needs assessment, program planning, program implementation and process evaluation. A systematic literature review represented needs assessment and was carried out to identify strategies implemented globally to address rising rates of caesarean section. The program was then implemented with a sample of 151 pregnant women at a tertiary referral hospital in metropolitan Adelaide, South Australia. Process or ‘formative’ evaluation was carried out via a postnatal questionnaire to assess participants’ reactions to the program and to identify factors supporting or impeding the effectiveness of the program. The notion of a culture of caesarean section was also explored in the context of the broader program, by including sections in the questionnaire relating to women’s preference for caesarean section and views on community perceptions of caesarean section.

Results

On the basis of needs assessment, an information-based approach consisting of a peer support network and two pamphlets were developed to form the basis of the program. Prior to program implementation, resources were piloted with the involvement of key stakeholders including consumers, obstetricians and midwives.

Process evaluation found that women generally resisted engaging with the program, citing they felt resources to be irrelevant to their situation. None of the program participants utilised the peer support network. Women who had experienced childbirth previously and those of higher education were significantly more likely to read the pamphlets. While generally satisfied with pamphlet content, one in five women reported feeling distressed by some of the information.

Regarding the notion of a culture of caesarean section, the majority of women agreed with the existence of a community acceptance of caesarean section as easy, routine and convenient.

Conclusion

This thesis raises key issues regarding information-based approaches for pregnant women, aimed toward addressing caesarean section rates. Such approaches need to acknowledge the influence of external factors relating to both social and obstetric norms and values on women's decision making.

Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

I give consent to this copy of my thesis, when deposited in the University Library, being available for loan and photocopying.

Ruth Walker

May 2002

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Publications

The following publications have arisen out of the research reported in Chapters 2 and 6 of this thesis. A copy of these papers is found in Appendix 17.

Walker R, Turnbull D & Wilkinson, C. (2001). Why choose caesarean section? (Letter to Editor). *The Lancet*, 357(9256), 635-636.

Turnbull D, Wilkinson, C & Walker R. (2001). Women's request for caesarean section (Letter to Editor). *Birth*, 28(2), 146-147.

Walker R, Turnbull D & Wilkinson, C. (2002). Strategies to address global cesarean section rates: A review of the evidence. *Birth*, 29(1), 28-39.

Abbreviations

Abbreviations used frequently in this thesis are listed below:

AML	Active Management of Labour
CI	Confidence Interval
CS	Caesarean Section
ECV	External Cephalic Version
OR	Odds Ratio
VBAC	Vaginal Birth After Caesarean Section

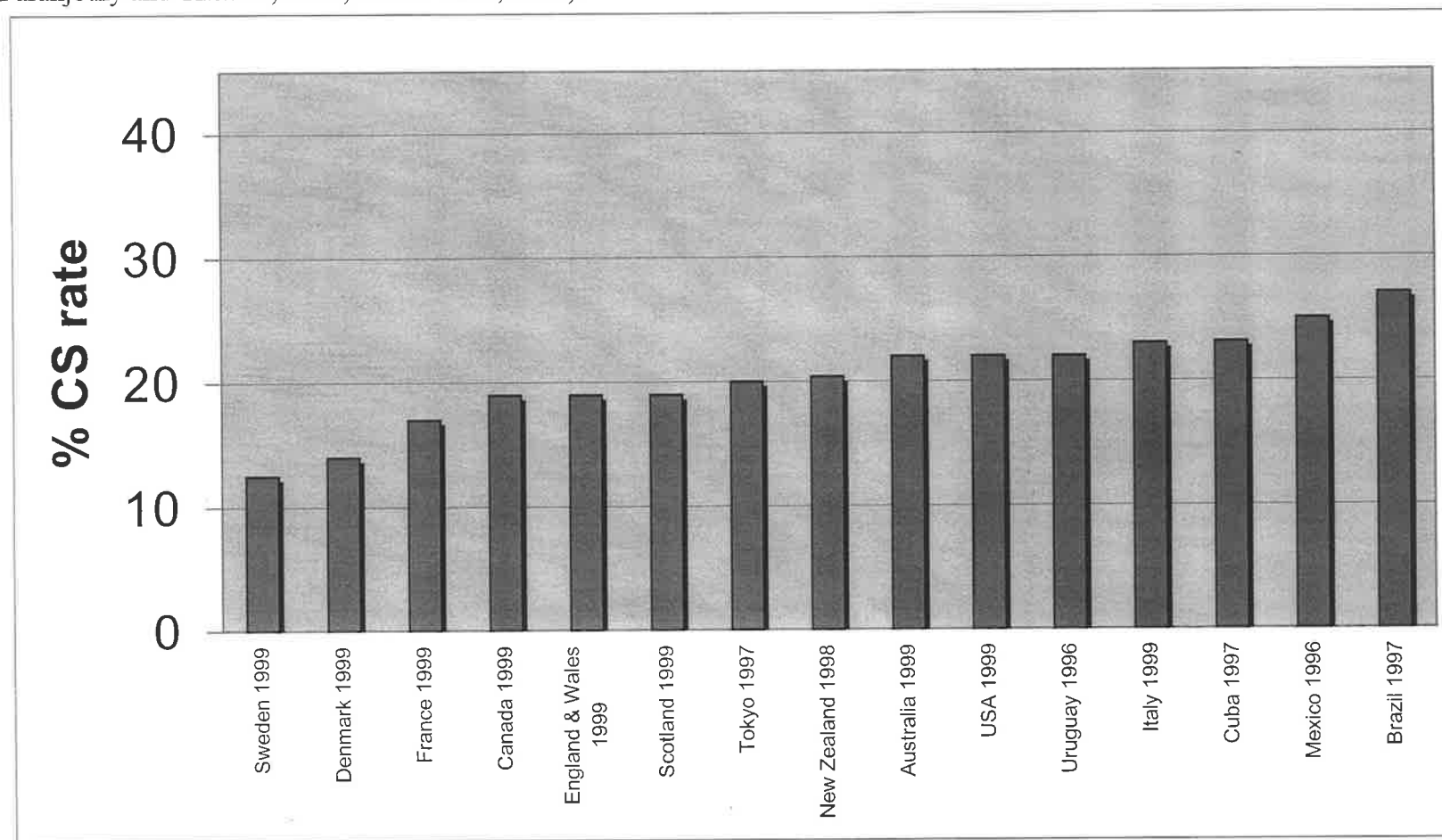
Chapter 1 - Introduction

The issue of steadily increasing global rates of caesarean section has evolved into one of the most widely debated topics relating to maternity care. Use of this surgical operation, which has origins dating back to antiquity, has not diminished in the 21st century but has grown to ‘epidemic’ proportions in some settings (Belizan, Althabe and Barros, 1999). Figure 1.1 provides an international comparison of caesarean section rates in a number of Western and non-Western settings. Although the ‘optimal’ rate of caesarean section is a contentious issue (Sachs, Kobelin, Castro and Frigoletto, 1999), the World Health Organization has stipulated that any rate above 15% is unjustifiable (WHO, 1985). With this in mind, it is pertinent to note that the majority of countries represented in this graph have recorded rates above 15%.

The new millennium has seen calls for a halt to rising caesarean section rates come from both Western and non-Western settings (Hale, 1994; Young, 1997; Belizan et al., 1999; Chanrachakul, Herabutya and Udomsubpayakul, 2000; Horton, 2000; Pai, 2000; Dobson, 2001; Gonzalez-Perez, Vega-Lopez, Cabrera-Pivaral, Munoz and Valle, 2001). Central to these calls has been evidence regarding the negative physical and psychosocial sequelae for both mother and infant associated with caesarean section (Mutryn, 1993; DiMatteo, Morton, Lepper, Damush, Carney, Pearson and Kahn 1996; Lilford, Van Coeverden De Groot, Moore and Bingham, 1990). Accordingly, debates regarding factors responsible for high rates of caesarean section and the means to best address rates have been heard globally. The following section details the historical context of caesarean section.

Figure 1.1 International comparison of caesarean section rates.

(sources: Tokyo Metropolitan Maternal and Child Health Service Center, 1997; Belizan et al, 1999; Ministry of Health, 1999; Paranjothy and Thomas, 2001; Nassar et al., 2001).



1.1 History of caesarean section

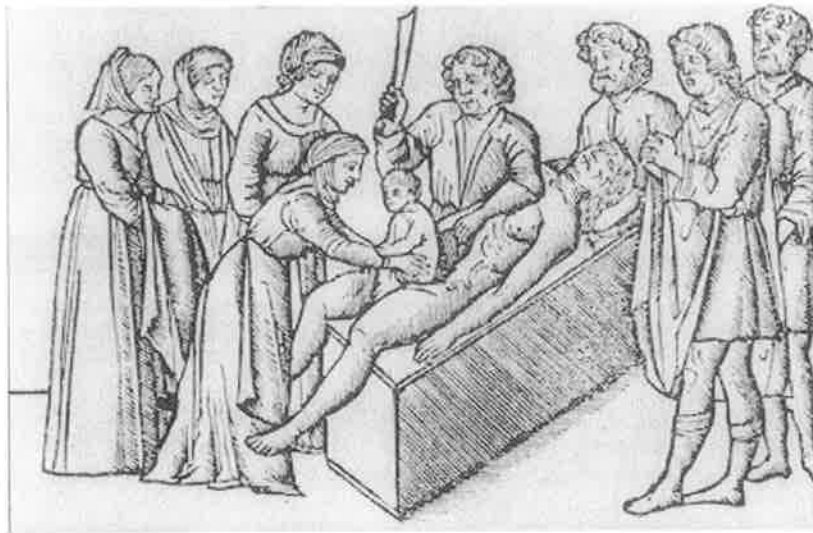


Figure 1.2 From Suetonius' Lives of the Twelve Caesars, 1506 woodcut.

(Picture courtesy of National Library of Medicine (2000), p.1)

One of the earliest printed images of caesarean section. A live infant (allegedly Julius Caesar) being surgically removed from a dead woman.

Caesarean section is a procedure where a baby is surgically removed from the uterus of the mother. The term 'section' refers to the division of tissue, in this case the abdominal wall and the wall of the uterus, in order to extract the baby (Burchell and Apuzzio, 1992).

The procedure of extracting an infant from the uterus of the mother has a rich history and has been recorded in folklore from as early as 3000 BC Egypt. References to caesarean section have been found in the 'Mishnah' - the oldest book of Judaism, in tales of Greek mythology, ancient Hindu belief and in accounts of the Chinese Wei dynasty in 225 AD (National Library of Medicine, 2000).

The origin of the term 'caesarean section' has, somewhat erroneously, stemmed from the belief that Julius Caesar was delivered by caesarean section in around

100-144 BC. This notion has since been refuted, largely due to the fact that Caesar's mother is known to have lived long after his birth (de Costa, 2001), a situation which would not have been possible given the fact that the procedure was nearly always fatal up until the late 19th century (Burchell et al., 1992). The more widely accepted origin of the procedure comes from the Latin word 'caedere' meaning to 'cut' (de Costa, 2001). Another possible origin lies with Roman law (the 'lex regia'). This law stated that a woman dying in pregnancy or childbirth was not to be buried with the child in her womb. Thus subsequent children 'cut from their mother's womb' were called 'caesones'. Roman law under Caesar then became the 'lex caesarea', hence a possible origin of the term caesarean (Churchill, 1997).

Historically, caesarean section was used to retrieve an infant from a dead or dying mother, in keeping with religious doctrine, as a last hope for saving the infant's life (National Library of Medicine, 2000). It was not until the 16th century, in England and Europe, where the first maternal survival from caesarean section was documented. The first caesarean birth where both mother and child are purported to have survived, performed by a Swiss swine-gelder on his wife, is said to have occurred in 1581(de Costa, 2001).

As maternal survival from caesarean section increased from around the 16th century, ethical implications of performing caesarean section on a live woman were debated (Churchill, 1997). Related to this issue was the revelation that caesarean section could be used intentionally with women for whom labour was thought to be a potential danger, for example in cases of contracted pelvis (Churchill, 1997).

Maternal mortality from caesarean section was still extremely high during the 16th century and would continue to be for several more centuries, largely due to the fact that the procedure was still very basic and the uterine wound was not sutured adequately.

Traditionally, childbirth was a specialty of midwives who had very little formal training. Birth was an 'all-female business', usually involving support of neighbours and relatives (Porter, 1997). Men were, on the whole, absent during childbirth with the exception of the male 'surgeon' called on for obstructed labours. This surgeon was required to 'dismember and extricate the dead foetus with hooks, in order to save the life of the mother' (Kirkham, 1999, p.80). As Kirkham points out, the notion of birth as a 'collective culture of women' began to change in the 17th century with a new class of 'ladies' choosing to avoid 'humble' midwives in preference for male midwives. Ostensibly, this practice demonstrated proof of their superior social status (Kirkham, 1999).

During the 17th and early 18th centuries, religion played a large part in shaping the role of caesarean section (Churchill, 1997). The Roman Catholic Church deemed that when childbirth was proving fatal for the mother and potentially for the baby, the mother's life was to be sacrificed. The view of the church was that as the mother had already been baptised, it was vital that the baby be born in order to receive baptism. Baptism was seen as the necessary process in order for a person to ascend to heaven rather than spend eternity in 'limbo', a place believed to be between heaven and hell (Churchill, 1997). For this reason, it was believed that it was better to save the baby than the mother in such situations. Similarly, in the

case of maternal death, it was deemed that the soul of the child be saved, as Guillimeau wrote in 1612:

“Lawyers judge them worth death, who shall bury a great bellied woman that is dead before the child is taken forth because they seem to destroy the hope of a living creature”. (Churchill, 1997, p.6).

For most of the 18th century, medical opinion of caesarean section was divided between those who condemned the procedure as a fatal and somewhat barbaric method of childbirth and those who defended the operation (Churchill, 1997). It was in the latter part of this century too that the notion of caesarean section performed for other than medical reasons was voiced, with the idea that ‘rash and ignorant men anxious to establish a reputation’ might be performing the procedure in haste (Churchill, 1997).

During the early part of the 19th century, caesarean section continued to be plagued by high maternal mortality. With advancement of medical knowledge and experimentation in antiseptic surgery and anaesthetics, coupled with the introduction of rubber gloves for surgery, the safety of the procedure increased. By the late 19th century, an eminent German surgeon, Max Sanger, argued that the treatment of the uterine wound post-caesarean section was critical. In particular, he contended that ‘buried’ sutures were to be used to close the uterine wound (Burchell et al., 1992).

Medical practitioners (who were predominantly male) were becoming increasingly involved with childbirth, although their obstetrical education was said to be somewhat perfunctory (Churchill, 1997). As Porter (1997) explains, in Britain and the United States the accoucheur, or man-midwife, as well as general practitioners became increasingly involved in delivering babies, although some 'considered delivering babies ungentlemanly' (p.382). The role of midwifery, determined by The 1902 Midwives Act, ensured continuance of the midwife as an independent practitioner. It also reinforced the superior status of doctors whom midwives would 'relieve from tiring and unremunerative work' (Kirkham, 1999, p.83). Furthermore, midwives were to be restricted to normal delivery, with abnormal childbirth (such as caesarean section), deemed a matter for the medical fraternity.

Use of caesarean section increased markedly by the 20th century with reports of successful operations from many Western settings (de Costa, 2001). This was also heralded as the time in which the safer lower-segment incision was introduced along with the development of modern antibiotics such as Penicillin (National Library of Medicine, 2000). As a consequence, maternal mortality from caesarean section in the United Kingdom reduced to 0.15% (de Costa, 2001). With these improvements came a concomitant increase in indications for the procedure, with severe pre-eclampsia, birth in older primiparas and diabetes added to the growing 'list' (de Costa, 2001).

Great concern and debate surrounding the frequency of the operation ensued during the early part of the 20th century, despite apparent improvements in safety. The main contention concerned the undeniable risk associated with caesarean section,

thus the rationale behind the increasing rates of the operation. Not unlike the central issues surrounding caesarean section currently, the issue of over-utilisation of caesarean section for convenience factors was heard, as Churchill (1997) notes:

“there was a temptation to perform an easy, quick and dramatic operation instead of following the safer and better, but more tedious, path of ordinary obstetric methods” (p.44).

Religion continued to have an influential role in decision-making for childbirth. As late as 1935, the Catholic Church continued to recommend caesarean section for difficult deliveries, even if it meant ‘sacrifice of the mother rather than preservation of her life through the destruction of the child’ (Churchill, 1997, p.47).

Increasing urbanisation across industrial Britain, Europe and the United States also influenced rates of caesarean section in the 20th century. As family diets suddenly became restricted to urban availability, coupled with a lack of exposure to sunshine, the crippling bone disease ‘rickets’ became common. Rickets was especially perilous for childbearing women who, as a result of pelvic deformities, faced immense difficulties in childbirth or, in some cases, death (Porter, 1997). Caesarean section was an attractive alternative in such situations up until the 1930’s when the availability of safe milk increased, aiding normal bone growth (National Library of Medicine, 2000).

The 1940’s and 50’s saw ‘the trend toward medically managed pregnancy and childbirth steadily accelerate’ (National Library of Medicine, 2000, p.11). This

was particularly pertinent at the end of World War II where many countries had diminished populations and the safe delivery of a baby was of paramount importance (Churchill, 1997). As a result of increasing pressure for, and ability to provide, good perinatal outcomes, rates of caesarean section deliveries increased along with reliance on medical specialists for childbirth. In the United States, the number of deliveries taking place in hospitals grew from 50% in 1938 to 99% in 1955 (National Library of Medicine, 2000).

By the 1980's, Australia, Canada, England, New Zealand and the United States, saw rates of caesarean section, which had been around 5% in 1970, rise to around 10% (Churchill, 1997). It has been argued that one of the reasons behind such increases in caesarean section rates was adherence to the doctrine "once a caesarean, always a caesarean" quoted by Dr Edwin Cragin in 1916 (National Library of Medicine, 2000). Concern over the validity of Cragin's dictum and risk of morbidity following major surgery from both consumer and professional groups (such as the American College of Obstetricians and Gynecologists) led to recommendations of trial of labour as a safe alternative to repeat caesarean section.

As is well documented, caesarean section rates have continued to rise in most Western settings. Latest reports cite rates in the United States, Australia, New Zealand and England at around 20% (Paranjothy et al., 2001). As de Costa (1998) notes, although caesarean section is today safer than ever before, death is more likely to occur after caesarean section than vaginal delivery. Reports state that the overall risk of mortality associated with caesarean section, after excluding women

with medical or life-threatening antenatal complications, is five times that of vaginal delivery (Lilford et al., 1990).

Throughout history, caesarean section has represented a desperate measure, utilised in an attempt to save either mother or baby. Today, caesarean section is no longer a rudimentary or 'barbaric' form of childbirth, nor does it represent a 'last resort' (Churchill, 1997). Historically, indications for caesarean section have been shaped by cultural, religious, economic, professional and technological factors and it is these factors that are implicated in rising rates of this procedure today (Sakala, 1993).

1.2 Caesarean section in the 21st century

While at least in developed settings childbirth is safer than ever, birthing in the 21st century is beset with unique dilemmas. Not only are maternal and perinatal death rates low in Western settings (Johanson, Newburn and Macfarlane, 2002), but women now have access to a wealth of technology surrounding pregnancy and childbirth. This context of safe and increasingly medicalised childbirth (Johanson et al., 2002), together with an emphasis on greater patient autonomy in all aspects of pregnancy and childbirth (Department of Health, 1993) has generated unique dilemmas. The way in which women give birth is increasingly shaped by cultural, environmental and social factors as much as clinical factors. The place in which a woman chooses to give birth, in addition to her own and her caregiver's values and expectations, impinge greatly on her experience of giving birth.

In Australia, nearly one in four women will have caesarean section (Nassar et al., 2001), a statistic which has motivated a better understanding of factors thought to be either directly or indirectly responsible for contributing to increasing rates of caesarean section. These factors range from medicalisation of childbirth to changing maternal demographics.

1.2.1 *Medicalisation of childbirth*

The term 'medicalisation of childbirth' has been used to describe 'the inappropriate use of interventions/technology/care providers in maternity care' (Thomson, 2000, p.416). Others have noted the fact that birthing is now increasingly a medical

event, taking place in an environment traditionally associated with sickness (Dahlberg, 1999).

There is an increasing tendency for women to birth in the hospital setting, at close proximity to a wealth of obstetric technology (Kirkham, 1999). A survey of over 2000 pregnant women in the United Kingdom found that 95% expected to give birth in hospital (Thomas, Callwood, Brocklehurst and Walker, 2000). According to recent reports, home births represent 0.3% of all births in Australia each year (Nassar et al., 2001). It appears childbirth may move even more toward the hospital setting in Australia given the recent decision of the sole insurer of independent midwives offering home birth, to refuse renewal of their professional indemnity insurance (Australian Broadcasting Corporation, 2001). This has served to substantially decrease women's options for care during childbirth and the setting in which to birth.

The use of epidural anaesthesia has been linked to increases in caesarean section. Reports from the United Kingdom (Howell, 2001), Australia (Chan, Scott, Nguyen and Keane, 2001) and New Zealand (Ministry of Health, 1999) cite approximately 30% of women use epidural analgesia as a form of pain relief during labour. A systematic review found that use of epidural was associated with several adverse effects such as instrumental deliveries and caesarean section – particularly for dystocia (Howell, 2002).

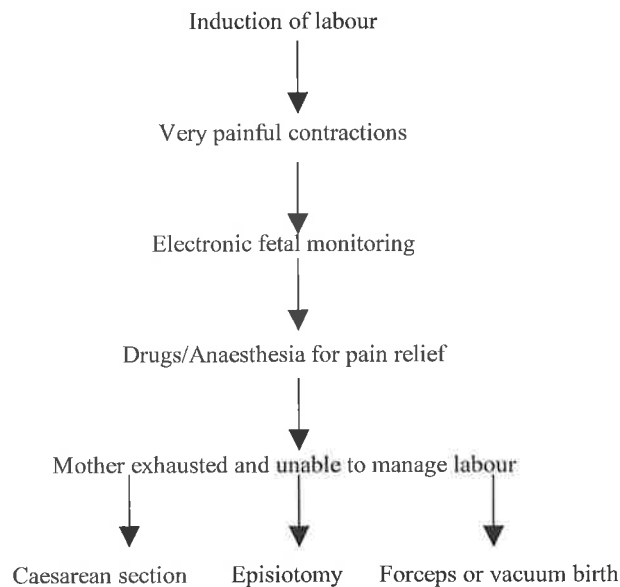
Electronic fetal heart rate monitoring has been associated with increased rates of caesarean section (Thacker, Stroup and Chang, 2002; Goddard, 2001). In South

Australia, cardiotocography (CTG) is performed during labour for approximately 60% of women (Chan et al., 2001). The association between fetal monitoring and caesarean section is said to stem from a tendency toward false positive identifications of fetal distress (Keeler and Brodie, 1993). As Kirkham (1999) notes, “such rituals, whilst they may give staff a comforting, if false, sense of control, deny any control to the childbearing woman” (p. 89). Goddard (2001) in a recent editorial for the *British Medical Journal* advocates, based on current evidence, that electronic fetal monitoring be restricted to high-risk pregnancies with the less intrusive intermittent auscultation used for low risk cases.

Amniotomy, or early artificial rupture of the membranes, has recently been linked with an increased risk of caesarean section (Fraser, Turcot, Krauss and Brisson-Carrol, 2002). The practice of routine artificial rupture of membranes has been advocated as part of an approach termed ‘active management of labour’, which was thought to reduce risk of caesarean section (O’Driscoll, Foley and MacDonald, 1984). Ironically, Fraser (Fraser et al., 2002) found in a systematic review of over ten randomised controlled trials that amniotomy was associated with a trend toward an increase in caesarean section.

This association between other medical intervention and caesarean section has often been referred to as a ‘cascade of intervention’ (Armstrong, 1990). Figure 1.3 demonstrates the notion of how obstetric interventions in labour tend to lead from one to another, culminating in caesarean section.

Figure 1.3 Cascade of intervention



(Armstrong, 1990)

Advances in medical technology, such as the ability to visualise the fetus through ultrasonography, have also influenced attitudes toward the fetus itself (National Library of Medicine, 2000, p.13):

“The fetus has then become a patient. Today it can even be surgically and pharmaceutically treated in utero. This changes the emotional and financial investment both medical practitioners and expectant parents have in a fetus. This is even more pronounced after the commencement of labour when the fetus increasingly becomes the primary patient.”

Some have argued that growing emphasis on ‘clinical surveillance’ and fetal well-being may serve to neglect maternal psychosocial needs creating, in a sense, women as the ‘reproductive mechanism always at risk of functioning ineffectively’ (Lundgren and Wahlberg, 1999, p.12).

LoCicero (1993) has explored contemporary psychological theories of gender and psychosocial development to propose an explanation for high rates of medical intervention. She believes that inherent difficulties in the mother-obstetrician relationship can be attributed to innate gender differences, role expectations and identity. For example, she argues that the patriarchal medical-model of obstetric care, focusing on rationality and scientific thought, is incompatible with maternal values of non-invasive interventions and social support. Such conflict can, she argues, lead to both parties feeling victimized and engaging in mutual blame. LoCicero (1993) argues that the more appropriate model of care is that provided by midwives, characterised by a tradition of care based on an understanding of the needs and expectations of women.

1.2.2 Clinician convenience

Clinicians have been accused of performing “daylight obstetrics” (Wagner, 2000). This phrase refers to the notion that clinicians may favour caesarean section over vaginal delivery due to the desire for a ‘normal’ working day, given the inherent ‘control’ associated with the timing of caesarean section (Brown, 1996).

Pressure on clinicians associated with workload has also been said to influence decision-making around mode of delivery. Wagner (2000) notes that in countries where obstetricians perform primary maternity care (including antenatal care and attendance at normal birth) the convenience of caesarean section is possibly of great importance. A qualitative study from Chile involving in-depth interviews with 22 obstetricians (Murray, 2000) found that ‘programming’ or scheduling of

births was found to be a common time-management strategy. Murray (2000) argues that this practice stems from several factors. Firstly, healthcare-financing policy has encouraged obstetricians to practice in the private sector to increase their income. Secondly, peripatetic work schedules mean that Chilean obstetricians are expected to work in a number of different settings in a given day. Thirdly, obstetricians have a close and continuous relationship with their private patient, typified by 'mutual trust' and are also committed to be present at the birth. These factors in combination are said to encourage the 'liberal' use of caesarean section (Murray, 2000).

A study of over 30 000 deliveries performed by 441 clinicians in different hospitals in New York State (Burns, Geller and Wholey, 1995) found physician factors had a significant role in variations in caesarean section rates between hospitals. Clinician convenience factors, rather than the background and training of the clinician, had an effect on the number of caesarean deliveries. In particular, delivery on a Friday and delivery between 6 a.m and 6 p.m increased the likelihood of caesarean section.

A further United States study sought to determine whether, after controlling for clinical variables, clinician demand for leisure time affected caesarean section rates. This study found variables relating to leisure time significantly predicted numbers of total and unplanned caesarean section (Brown, 1996). The study focused on births taking place in military hospitals over a period of one year. This setting was argued to be one in which economic incentives would not be an issue, primarily as clinicians received a salary and gained no extra reimbursement for performing caesarean section. The author posited that the predominant incentive for clinicians

working within these hospitals was one of leisure. As expected, non-clinical incentives for leisure were found to be associated with caesarean section. Emergency caesarean section was most likely to occur on a Friday between 3 to 9 p.m. The likelihood of having caesarean section was also significantly reduced for deliveries occurring on the weekend.

A study from Brazil also found an association between hour of delivery and rate of caesarean section (Gomes, Silva, Bettiol and Barbieri, 1999). These researchers carried out regression modelling to identify significant risk factors for increasing rates of caesarean section in one region of Southeast Brazil. They found caesarean section was most likely to occur between 7 a.m and 12 p.m and less likely to be performed between 1 a.m and 6 a.m. Most caesarean sections tended to occur at 8.p.m and least at 6 a.m.

1.2.3 *Fear of litigation*

“In recent years, performing a caesarean section has been safer from a legal point of view than persisting with a vaginal birth. The impression has developed that if a section were performed, everything possible was done and that any untoward results with vaginal birth could not be defended” (Burchell et al., 1992, p.401).

The term “defensive obstetrics” has been used to describe the situation whereby obstetricians might be performing unnecessary procedures in response to perceived possibility of litigation (Ennis, Clark and Grudzinskas, 1991; Birchard, 1999). In particular, it has been suggested that obstetricians may be increasingly performing

caesarean section due to increasing numbers of litigation claims (Wagner, 2000). A 450% rise in medical negligence claims was seen in Ireland during 1990-1998, with obstetrics and gynaecology cases accounting for nearly half of all payouts (Birchard, 1999).

Tussing & Wojtowycz (1997) examined almost 60 000 deliveries in New York state to explore the existence of defensive medicine in obstetrics. The authors used obstetric malpractice suits as a proxy for physician fear. They collected cumulative data by county for 1975 through 1986. Malpractice exposure was shown to influence use of electronic fetal monitoring which influenced diagnosis of fetal distress, which in turn significantly affected use of caesarean section.

The evidence that caesarean section rates are higher for women receiving care in the private system may be linked to fear of litigation. Some have suggested that women who have taken out private health insurance have an expectation of a 'perfect baby' and may perceive that 'in choosing private health insurance for pregnancy they are purchasing a higher quality outcome than can be achieved through the public system', (Shorten, 2001b, p.3). Obstetricians in private practice may therefore feel pressure to opt out of uncertain vaginal delivery in favour of caesarean section to avoid costly litigation claims (Turrentine and Ramirez, 1999).

Despite the alleged relationship between malpractice fears and caesarean section, the number of caesarean sections performed for defensive reasons remains unclear (Keeler et al., 1993). In Australia, there is an absence of any publicly available data on the incidence and causes of medical negligence claims, birthing-related or

otherwise (Senate Community Affairs Reference Committee, 1999). Professional indemnity subscriptions have nonetheless risen over the past decade. Specialist obstetrician/gynaecologists in New South Wales have seen their subscriptions rise from \$AUD 7200 in 1990 to \$AUD 41,400 in 1999. With regard to the existence of a 'litigation crisis in obstetrics', national reports have led commentators to conclude that "what is clear is that litigation and medical defence subscription rates are issues of continuing significant concern to doctors, and that the fear of litigation, whether it is based on reality or not, is affecting the practice decisions of at least some doctors" (Senate Community Affairs Reference Committee, 1999, p.183).

1.2.4 Financial incentives

The notion that clinicians may choose to provide care that is more highly reimbursed has been posited for causing higher rates of caesarean section (King, 1993). Clearly, the truth of this explanation varies according to setting and reimbursement model.

In Australia, efforts to decrease rates of caesarean section prompted the introduction, in 1988, of a global obstetric fee. This introduction saw obstetricians receive a standard fee-for-service regardless of mode of delivery (King, 1993). Prior to the advent of this global fee, non-salaried clinicians received a higher fee for performing caesarean section. Contrary to expectations, a global fee had no effect on caesarean section rates and King (1993) notes that it may have even acted to increase rates: "if the monetary reward is the same regardless of the type of

delivery then caesarean section could be seen as a preferred option, potentially involving less work than the alternative” (p.304).

Keeler & Brodie (1993) note that across the United States the average clinician charge for vaginal delivery is about 70% that of the charge for caesarean section. Fees also vary according to insurance status. Clinician charges in the private sector in 1989 were \$US 2,053 for caesarean section and \$US 1,492 for vaginal delivery. In the public or Medicaid system (which provides health insurance for low income women) fees were approximately \$US 554 for vaginal delivery and \$US 767 for caesarean section. In line with the argument that financial incentives play a significant role in determining caesarean section rates, women with private health insurance and for-profit private hospitals have higher rates of caesarean section (Gruber, Kim and Mayzlin, 1999).

To illustrate that clinicians may increase their use of certain procedures to counteract changes in fees or financial downturn, Gruber & Owings (1996) tested an 'induced demand' model. They were interested in whether a 13.5% decline in fertility in the United States during the period of 1970-82 was associated with increased use of caesarean section. They argued that this decrease in fertility might lead clinicians to increasingly perform caesarean section due to higher reimbursement compared with vaginal delivery. Gruber & Owings (1996) demonstrated that there was indeed a strong correlation between decline in fertility and within-state increases in the use of caesarean section.

Concerns have also been raised over the issue of financial incentives in China, where high rates of caesarean section in the private sector are said to stem from models of physician reimbursement (Cai, Marks, Chen, Zhuang, Morris and Harris, 1998). Financial incentives, in addition to cultural factors, have purportedly influenced the practice of caesarean section in Chile (Murray, 2000) and Brazil (Rojas-Hinojosa, 2000). According to Rojas-Hinojosa (2000), both private and public sectors in Brazil have a 'strong inherent incentive for supplier induced demand' (p.1). The public 'Unified Health System' is based on retrospective payment for service; hence procedures that result in increased health care consumption might be preferred by public hospitals. The private sector 'Group Medicine' is similar to the Australian fee-for-service model. Rojas-Hinojosa (2000) contends that introducing new models for reimbursement might be one avenue for addressing high rates in this region.

1.2.5 Maternal factors

1.2.5.1 Maternal request

Perhaps the most contentious of all factors implicated in rising caesarean section rates is the issue of maternal request for caesarean section. Issues of whether women are requesting caesarean section, the reasons for such request, and the existence of substantial methodological and conceptual issues inherent within the maternal request literature have been voiced. These issues will be discussed in greater detail in Chapter 6.

1.2.5.2 *Health insurance status*

Research from the United States (Hurst and Summey, 1984; Potter, Berquó, Perpétuo, Leal, Hopkins, Souza and de Carvalho Formiga, 2001), Australia (Roberts, Tracy and Peat, 2000), Asia (Chanrachakul et al., 2000; Padmadas, Kumar, Nair and Kumari, 2000) and Latin America (Murray and Serani-Pradenas, 1997; Belizan et al., 1999; Murray, 2000) has found that private health insurance status increases the likelihood of having caesarean section.

The subject of a differential in obstetric intervention between the private and public sectors in Australia has been widely debated (King, 1993). In South Australia, approximately 22% of women in the public sector have caesarean section compared with 32% in the private sector (Chan et al., 2001). Private health insurance status is typically a marker of middle to high socio-economic status. Ostensibly, higher socio-economic status is associated with good health and low obstetric risk. Concern has thus been raised due to the fact that these women nonetheless have higher intervention rates (Senate Community Affairs Reference Committee, 1999).

Some clinicians (Molloy and Richardson, 1993) have argued that this apparent differential in intervention rates between private and public patients may be due to the fact that private patients may be more likely to be better-informed and assertive. Women in the private sector may be cognisant of the risk of birth trauma and thus more likely to elect for caesarean section (Molloy et al., 1993). Molloy & Richardson (1993) also argue that the differential may be explained by the fact that older women are more likely to hold private insurance and it is these women who may be at heightened risk for pregnancy and labour complications. A recent study

cast doubt, however, on the assertion that clinical factors related to women who birth in the private sector can explain higher rates of caesarean section (Roberts et al., 2000). This study focused on the rate of caesarean section for two groups of women (n = approximately 170 000) matched for low risk status but differing in health insurance status. This study found rates of obstetric intervention were greater for women in private hospitals (Roberts et al., 2000). Low risk private patients having their first baby had significantly higher rates of caesarean section both before and during labour compared with low risk public patients (16% v 10%). Women in the private sector were also more likely to experience forceps, vacuum-assisted delivery, induction, epidural and episiotomy.

In addition to having private health insurance, having a 'healthy personality' may be a risk factor for obstetric intervention (Fisher, Smith and Astbury, 1995). Fisher and colleagues (1995) surveyed 242 nulliparous women using standardised psychometric questionnaires and semi-structured questionnaires during late pregnancy and postpartum. They found that private health insurance status conferred a nearly twofold risk of caesarean section. Importantly, the likelihood of experiencing increased obstetric intervention was increased if, along with private insurance status, in late pregnancy women reported that they had high self-esteem, were thinking clearly, had mature means of dealing with anxiety, were in secure partnerships with educated men and were confident in their knowledge of childbirth procedures.

1.2.5.3 Socio-economic status and ethnicity

Women who are most likely to experience pregnancy complications, low birth weights or infant mortality are least likely to have caesarean section. Hurst (1984)

reviewed data from national, local and individual hospital and found what they term an 'inverse care law' – those of lower social class, although having higher obstetric risk have low caesarean section rates. A South Australian study also found that while women of low socio-economic status and non-European women were more likely to have a higher obstetric risk profile, they were less likely to have elective caesarean section or induction of labour (Jonas, Roder and Chan, 1992).

Similar patterns of care have been found in New Zealand (Ministry Of Health, 1999). In a 1998 report into obstetric procedures, women from areas of high socio-economic deprivation, who could be expected to have the highest clinical need, were found to have lower caesarean section rates (15%) compared with women living in areas of low socio-economic deprivation (21%). Similarly, rates of epidural analgesia were higher for women from least deprived areas (17% vs 31%). Rates of obstetric intervention were also related to ethnicity. Maori and Pacific women were less likely than non-Maori/Pacific to have caesarean section, instrumental delivery, induction, episiotomy and epidural. This difference remained even after adjusting for maternal age (Ministry of Health, 1999).

1.2.5.4 Changing demographics

"Child bearing has become a matter of choice rather than destiny, deliberation rather than duty. One in five women, we are constantly told, will not even have a child. She's got other things to do". (Benn, Budge and White, 1999, p.29).

The 'profile' of childbearing women is changing. In South Australia, the proportion of women over the age of 30 giving birth for the first time has risen from 14% in 1985 to 32% in 2000 (Chan et al., 2001). At a national level too, the age at which women are first giving birth is increasing. The estimated mean age nationally was 27.1 in 1999, compared with 25.8 in 1991. The percentage of older women (aged 35 or over) giving birth for the first time is increasing with nearly 10% of all primiparous women being over 35 years in 1999 (Nassar et al., 2001). This situation appears to be occurring in comparable countries (Ministry of Health, 1999; Windridge and Berryman, 1999; Paranjothy et al., 2001).

A study from the United Kingdom found evidence to suggest that older maternal age is a significant risk factor for caesarean section, a factor not explained by higher risk of obstetric complication (Bell, Campbell, Graham, Penney, Ryan and Hall, 2001). This study of over 20 000 deliveries found a robust relationship between increasing maternal age and delivery by caesarean section for women with no history of caesarean section and whose babies were presenting in the cephalic position. This relationship remained after controlling for obstetric complications.

Increasing maternal age has also been linked to likelihood of caesarean section in other studies in the United Kingdom as well as New Zealand (Thomas et al., 2000; Ministry of Health, 1999). Although it is recognised that repeat procedures or physiological characteristics of older mothers may contribute to higher rates, clinician or maternal preference cannot be excluded.

Amu and colleagues (1998) report anecdotal evidence that professional women, delaying the onset of childbirth, may be contributing to increased demand for caesarean section (Amu, Rajendran and Bolaji, 1998). Certainly, two population-based descriptive studies from North America have found that older women, particularly those having their first child, tend to be more highly educated and of higher socio-economic status compared with 'average-aged' gravidas (De Wit and Rajulton, 1992; Rindfuss, Morgan and Offutt, 1996). The findings that older women are more likely to have caesarean section, independent of clinical risk, suggest that social trends associated with delayed motherhood may be associated with an increase in this mode of delivery (Keenan, 2002).

A recent article in *The Australian* (Baxter, 2001) titled '*Annie gets her babe, but work's still in the picture*' illustrates how the media are adding to the debate over current trends in delaying motherhood, and the link with caesarean section. This article described how famous celebrity photographer Annie Leibovitz delivered a baby daughter at the age of 52, following artificial insemination. The article describes how the birth seemingly did little to alter Leibovitz's work schedule:

"Leibovitz had a caesarean, whether by choice (as is often the case with busy career women) or necessity. [Her daughter] cannot have cramped her mother's style too much as Leibovitz turned up babeless only a fortnight after the birth at a benefit in New York", (p.11).

The following section describes the indications for and the risks involved with caesarean section.

1.3 Caesarean section: indications and risks

1.3.1 *Indications for caesarean section*

‘Indication’ refers to the clinical circumstance on which the decision whether or not to perform caesarean section is made. Caesarean section can be carried out for maternal, fetal or combined indications. Maternal and fetal indications do not always correspond, and it is then that evidence-based judgement and the wishes of expectant parents decide the appropriate outcome (Burchell et al., 1992).

An indication can be grouped into one of two categories. ‘Absolute’ indication refers to the situation when, in the obstetrician’s opinion, the risk to the fetus if left in the uterus exceeds that of carrying out a caesarean section (Llewellyn-Jones, 1990). While absolute indications usually mean the baby cannot be delivered vaginally, ‘relative’ indications for caesarean section refer to reliance on the individual case, and the experience of the obstetrician (Churchill, 1997). For example, the term ‘dystocia’, meaning ‘difficult delivery’, is classified as a relative indication.

Shifts in the distribution of various indications have been evident over the course of the last century (Churchill, 1997). The number of indications for caesarean section has also increased along with the incidence of the procedure itself (Llewellyn-Jones, 1990).

Table 1.1 displays the main indications for all caesarean sections (including both emergency and elective) carried out in South Australian hospitals during 2000.

Table 1.1 Indications for caesarean section, S.A. 2000

Indication	% (n = 4428)
Dystocia - CPD/Failure to progress	35
Previous caesarean section	28
Fetal distress	20
Malpresentation	16
Other	11
Pregnancy hypertension/hypertension	5
APH	4
Multiple pregnancy	3
IUGR	2

n.b. Total does not add up to 100% - Up to two reasons could be provided for caesarean section
CPD = cephalopelvic disproportion
APH = ante-partum haemorrhage
IUGR = inter-uterine growth retardation
Source: (Chan et al., 2001)

1.3.1.1 Dystocia

Dystocia, or failure to progress, is a broad term used to describe ‘abnormal’ or ‘difficult’ labour (Churchill, 1997). This term includes cephalopelvic disproportion, the term given to situations where the fetal head is thought to be disproportionate to the size or shape of the mother’s pelvis. Recently, this term has also been used to describe variations in fetal position (Churchill, 1997). ‘Abnormal uterine action’ and complications during the process of labour are also included in the definition of dystocia (Llewellyn-Jones, 1990). Due to the inherent ‘vagueness’ of this definition, some have argued that this indication has been subject to overuse (Churchill, 1997). As can be seen in Table 1.1, dystocia is the leading indication for caesarean section in South Australia.

1.3.1.2 Previous caesarean section

Management of women with history of previous caesarean section has been argued to be one of the biggest ‘culprits’ in increasing rates of caesarean section (Flamm, Newman, Thomas, Fallon and Yoshida, 1990). Although now recognised as invalid, the dictum ‘once a caesarean, always a caesarean’ (Cragin, 1916) has influenced the decision-making of some clinicians and women. In South Australia, repeat caesarean is the primary indication for caesarean section in over one quarter of cases (Table 1.1). Previous caesarean section could be deemed a relative indication in that the need for repeat caesarean section depends on the reason for the preceding operation. Most women can attempt vaginal birth after a previous caesarean, with a 50-70% success rate (Burchell et al., 1992). Prior indications of failure to progress and malpresentation do not necessarily imply the need for repeat caesarean section, as they may not repeat in subsequent pregnancies. Clearly, factors including fear of uterine rupture, individual clinician preference and women’s anxiety regarding vaginal delivery after previous caesarean section (for example, due to familiarity with the procedure, fear of ‘failing to progress’ again) influence choice of subsequent delivery mode.

1.3.1.3 Fetal distress

Fetal distress refers to the situation during labour where a baby shows signs of oxygen deprivation. Distress is usually evidenced by decreases in the baby’s movements, an abnormal heartbeat or the passing of faeces into the amniotic fluid (Churchill, 1997). Immediate delivery of the baby by caesarean section may be needed in order to avoid prolonged periods of oxygen deprivation leading to permanent brain damage or even death. As is the case for dystocia, the non-specific term ‘fetal distress’ can lead to issues in individual interpretation.

Increasing pressure on obstetricians regarding cases of medical negligence may also result in hyper-vigilance, in order to avoid cases of cerebral palsy (Nisselle and Murray, 1993).

1.3.1.4 Malpresentation or malposition

Malpresentation or malposition includes situations where the fetus is positioned other than in the ideal head-down (cephalic) position in utero. These include breech presentation, transverse lie, face and brow presentation. Caesarean section is the preferred mode of delivery for breech presentation, the most common form of malpresentation, occurring in approximately 86% of all cases (Chan et al., 2001). Evidence from an international term breech randomised controlled trial has confirmed that caesarean section is the preferred mode of delivery for breech presentation at term (Hannah, Hannah, Hewson, Hodnett, Saigal and Willan, 2000), compared with vaginal breech delivery.

An alternative to caesarean section for breech presentation is external cephalic version. This procedure involves gentle manipulation of the mother's abdomen in an attempt to turn the breech fetus. Despite high-level evidence for the efficacy of this procedure in safely reducing the risk of caesarean section (Hofmeyr and Kulier, 2002), the procedure remains under-utilised (Shennan and Bewley, 2001).

A transverse presentation refers to the situation where the baby is lying horizontally rather than head down. This is an absolute indication for caesarean section, due to the increased risk of uterine rupture (Burchell et al., 1992). Brow and face presentations are relative indications, depending on the extent of the presentation

and stage of labour. Brow presentation in early labour is not an absolute indication for caesarean section due to the chance of the baby spontaneously converting to a face presentation (Burchell et al., 1992).

1.3.1.5 Pregnancy induced hypertension

Hypertension that develops during pregnancy is a relative indication for caesarean section, depending on level of severity (Burchell et al., 1992). Llewellyn-Jones (1990) notes that approximately 40% of women with pregnancy induced hypertension require either induction or delivery by caesarean section.

1.3.1.6 Multiple births

Twin pregnancies tend to be managed by vaginal delivery of the first twin followed by assessment of the position of the second twin (Llewellyn-Jones, 1990). If the second twin is breech or transverse, or fetal weight is estimated at < 1500 grams or > 4000g, caesarean section is indicated (Llewellyn-Jones, 1990). Higher-order births, such as quads, are usually born by caesarean section (Churchill, 1997). The recent National Sentinel Caesarean Section Audit from the United Kingdom found that while 59% of twin pregnancies were delivered by caesarean section they were found to present a minor part of overall caesarean statistics (Paranjothy and Thomas, 2001).

1.3.1.7 Placenta praevia

When the placenta is implanted entirely or in part in the lower uterine segment (Neilson, 2002), caesarean section may be indicated. Whether this indication can be categorised as absolute or relative varies according to the degree of praevia. Total placenta praevia can be classified an absolute indication, unlike low-lying

praevia (Burchell et al., 1992). Placenta praevia in early pregnancy does not automatically indicate the need for caesarean section. A placenta that appears to have a minor degree of praevia may become normally sited as the lower segment develops (Neilson, 2002). Early delivery by caesarean section is argued to be necessary only if there is evidence of fetal distress and only if the baby is of sufficient maturity (Neilson, 2002).

1.3.1.8 Genital herpes

The general consensus is that recurrent genital herpes is an indication for caesarean section, due to the inherent risk of virus transmission to the neonate (Burchell et al., 1992). Australian research has found that of nearly 3000 obstetricians surveyed, 96% would recommend caesarean section for women with active herpes at onset of labour (Marks, Fethers and Mindel, 1999). Opinion varied depending on gender of the obstetrician and whether they worked in the private or public sector. When asked whether they would consider caesarean section when positive viral cultures were present prior to the onset of labour, males and those working in private hospitals were more likely to recommend caesarean section. A similar survey in the United Kingdom found that of over 1000 obstetricians, 92% responded that they would recommend caesarean section with active lesions at onset of labour (Brocklehurst, Carney, Ross and Mindel, 1995).

1.3.1.9 Maternal diabetes

The optimum mode of delivery for pregnant women with pre-pregnancy diabetes remains contentious (Llewellyn-Jones, 1990). There is no evidence to support the over-use of obstetric interventions if diabetes is well controlled (Enkin, Keirse, Neilson, Crowther, Duley, Hodnett and Hofmeyr, 2000). The development of

gestational diabetes (a defect in glucose homeostasis which develops during pregnancy) may not in itself indicate caesarean section. The findings of a recent systematic review of randomised controlled trials found little evidence to support elective delivery at term (either by induction or caesarean section) for women with pre-gestational or gestational diabetes (Boulvain, Stan and Irion, 2002). Fetal macrosomia, an adverse outcome of gestational diabetes, may be an indication for caesarean section (Enkin et al., 2000).

1.3.1.10 Maternal request

Maternal request for caesarean section, in the presence or absence of clinical indications remains a controversial issue (Gamble and Creedy, 2000). The extent to which maternal request is justified as an indication for caesarean section depends on the individual case, clinician and setting. In the United Kingdom, professional clinical guidelines state that a woman is unable to insist on any specific form of treatment that is not clinically advisable (Dimond, 1999). As previously mentioned, the issue of maternal request will be discussed in greater detail in Chapter 6.

1.3.2 Risks associated with caesarean section

This thesis refers, in Chapter 6, to what some women or clinicians may perceive as benefits of caesarean section. As a counterbalance, the following section provides a summary of the major risks involved with caesarean section, both physical and psychological.

1.3.2.1 Physical morbidity and mortality

Maternal

Estimates of maternal mortality associated with caesarean section are difficult to ascertain, due to difficulty in isolating maternal death caused directly by caesarean section (Enkin et al., 2000). Evidence suggests that maternal death from caesarean section is approximately 4 to 5 times higher than vaginal delivery, when pre-existing medical complications are taken into account (Lilford et al., 1990).

Maternal morbidity is also higher with caesarean section compared with vaginal delivery (Lilford et al., 1990). Morbidities include those inherent with any major surgery, such as risks from anaesthesia and operative injury (Enkin et al., 2000). Frequency and type of complication vary widely depending on setting and definition of morbidity. The most common complications include infection, pyrexia and endometritis (Shearer, 1993; Hillan, 1995).

A population-based retrospective cohort analysis of over 142 000 women assessed risk of maternal re-hospitalisation within 60 days of giving birth (Lydon-Rochelle, Holt & Martin, 2000). A total of 3149 women were re-hospitalised (1.2%). Women in the caesarean group were almost twice as likely to be readmitted to hospital within 60 days, compared to women in the spontaneous vaginal delivery group. Women in the caesarean section group were most likely to be admitted with uterine infection, gallbladder disease, genito-urinary tract conditions and obstetrical wound infections.

Women undergoing emergency caesarean section appear to have an increased risk of complications compared to those having an elective caesarean section (Neilsen and Hokegard, 1983; Hillan, 1995). A retrospective review of over 600 women delivered by caesarean section was carried out to determine incidence of postoperative morbidity. This study found that only 9.5% of women had no record of postnatal morbidity. Nearly half of women sustained three or more problems in the postnatal period, the most frequent being pyrexia. Women delivered by emergency caesarean section had a higher likelihood of postoperative febrile morbidity, blood transfusion, wound infection, intrauterine infection and chest infection (Hillan, 1995). A number of studies have identified problems such as increased risk of placenta praevia with subsequent pregnancies (Ananth, Smulian and Vintzileos, 1997) and increased likelihood of ectopic pregnancies (Hemminki and Merilainen, 1996).

Fetal

The major risk associated with caesarean section for the fetus is respiratory distress syndrome. This condition can occur from inadvertent premature delivery due to miscalculation of dates (Enkin et al., 2000). Respiratory distress occurs as a result of the inability of the preterm baby's lungs to expand properly (Shearer, 1993). It has been estimated that approximately 6-15% of neonates developing respiratory distress syndrome were born by elective caesarean section (Shearer, 1993). The risk of developing respiratory distress syndrome has been found to be less if the mother goes into spontaneous labour prior to caesarean section (Cohen and Carson, 1985).

One study has documented a dramatically increased risk of persistent pulmonary hypertension among neonates born by elective caesarean section (Levine, Ghai, Barton and Strom, 2001). This retrospective review of nearly 30 000 consecutive deliveries from 1992 to 1999 in the United States found that neonates born via elective caesarean section had nearly five times the risk of persistent pulmonary hypertension compared with those born vaginally.

A further risk to the fetus is that of laceration injury. A retrospective review of over 900 caesarean section deliveries found surgery-related laceration occurred in 1.9% of cases (Smith, Hernandez and Wax, 1997). Complications from anaesthesia and low Apgar scores have also been reported (Shearer, 1993).

The long-term effects of caesarean section on the baby are less well known. It has been argued that delay in bonding and attachment related to caesarean section could have long-term social-emotional implications for both mother and baby (Churchill, 1997; Hillan, 2000). Similarly, negative psychosocial sequelae arising from the childbirth experience for some women could be argued to have detrimental effects on the child's development (Churchill, 1997).

1.3.2.2 Psychosocial morbidity

"I felt like people came from nowhere to strip my clothes, jewellery, insert catheters, shaving me. Some people have a problem with understanding how violated a woman can feel after a section. I felt like a helpless piece of meat, unable to help myself, watching my husband stand aside watching me looking pale and afraid". (CARES, 2001, p.4).

As the quote above demonstrates, some women have likened caesarean section, particularly one which is unwanted or unexpected, to a physical violation. A meta-analysis carried out by DiMatteo and colleagues (1996) has been widely cited as evidence that caesarean section is associated with significant negative psychosocial outcomes for the mother, compared with vaginal delivery. Women who had caesarean section were more likely to express less immediate and long-term satisfaction with the birth, had less positive reactions to the baby after birth, experienced a longer time to first interaction with the baby after birth, were less likely to ever breastfeed and interacted with their babies less at home. The authors concede that a 'third-variable explanation' cannot be ruled-out as a potential confounding factor. Maternal attributes, such as number of previous births, socio-economic status and degree of social support may influence how individual women experience caesarean section and adjust in the postpartum period.

An association between caesarean section, postnatal depression and significant psychological distress has also been found in several studies (Boyce and Todd, 1992; Astbury, Brown, Lumley and Small, 1994), particularly for first time mothers (Fisher, Astbury and Smith, 1997).

Compared to an elective procedure, emergency caesarean section in particular may be associated with increased psychological distress. A Swedish study of over 300 women found that unplanned caesarean section led to substantial post-traumatic stress at both several days and one month postpartum, compared with all other forms of delivery (Ryding, Wijma and Wijma, 1998). Further, a prospective longitudinal study of nearly 500 women found that those who experienced both a

high level of obstetric intervention and dissatisfaction with their intrapartum care were more likely to develop trauma symptoms. In particular, the experience of an emergency caesarean section was a contributing factor in the development of acute trauma symptoms (Creedy, Shochet and Horsfall, 2000).

A review of the literature on the psychosocial impact of caesarean section found adverse psychosocial impacts existed not only for the mother but also for her partner (Mutryn, 1993). This review found that feelings of loss, dissatisfaction, inadequacy, worry, role failure and shock could manifest for the father whose child was born by caesarean section. These feelings appeared to be influenced by whether the father was present during delivery, whether he had a good relationship with the primary care provider and whether he felt involved in the decision-making.

The association between caesarean section and psychosocial morbidity has been attributed to a number of factors. Researchers have noted that for unplanned caesarean section in particular, being unprepared for the procedure and feeling a subsequent lack of choice and control are predominant factors (Fisher et al., 1997; Ryding, Wijma and Wijma, 2000). A sense of failure and inadequacy at not having 'achieved' vaginal delivery are also cited as reasons for psychological distress (Churchill, 1997). Factors surrounding the actual procedure itself, such as separation from partner and/or baby coupled with severe and often long-lasting post-operative pain may also explain negative reaction (Churchill, 1997).

1.4 Thesis rationale and framework

Calls for new approaches to address rising rates of caesarean section have featured in a plethora of articles (Young, 1997; Flamm, Berwick and Kebcenell, 1998; Irvine, 1999; Wagner, 2000). One approach, providing pregnant women with information on which to make informed decisions, has been the central focus of three medical journal editorials in particular (Horton, 1997; de Costa, 1999; Johanson and Newburn, 2001b). Similarly, reports from the United Kingdom (Paranjothy et al., 2001), Australia (Senate Community Affairs Reference Committee, 1999) and New Zealand (Ministry Of Health, 1999) have emphasised the need for pregnant women to have information about caesarean section. The reasons for this are twofold. Firstly, in order to minimize the risk of psychological distress for women who have caesarean section, (Boyce et al., 1992; Astbury et al., 1994; DiMatteo et al., 1996; Ryding et al., 1998), there is a very real need for information to be provided which emphasises exploring all birth options and illustrates the importance of shared decision-making with healthcare providers. Mutryn (1993), in a review of the literature, developed a profile of women at relatively high risk of adverse psychosocial outcome following caesarean section. She found that those women who had little or no knowledge about caesarean section and its physical and/or psychosocial implications and those who had little or no control over the birthing experience or participation in the decision-making were frequently cited in the literature as having negative psychosocial outcomes.

Secondly, in addition to reducing negative psychological outcome from unanticipated caesarean section, women who are better-informed about the indications, risks, benefits and alternatives to caesarean section may be more likely

to actively participate in the decision-making for childbirth, hence influencing intervention rates. This thesis aims to describe the development of such a program for pregnant women. In doing so it aims to explore both the processes involved in the development of the program and the effectiveness of the program as a means for encouraging informed decision-making for childbirth.

On examining the literature over the last twenty years, four studies have focused on the distribution of specific caesarean section information for pregnant women (Fawcett, 1981; Fawcett and Burritt, 1985; Fawcett and Henklein, 1987; Fawcett, Pollio, Tully, Baron, Henklein and Jones, 1993). These series of related studies were carried out in the United States in the 1980's and early 90's to determine firstly, the needs of caesarean-birth parents and secondly, to test a specially designed information intervention.

The first study consisted of a retrospective survey of 24 couples experiencing caesarean birth (Fawcett, 1981). This survey found the need for detailed information regarding events surrounding caesarean section. In particular, Fawcett (1981) carried out content analysis of responses in terms of the Roy Adaptation Model. This model argues that adaptation in individuals and groups manifests in four modes – the physiologic, self concept-group identity, role function and interdependence modes. It was found that respondents had ineffective responses in all four modes of the model, for example, the physiological (fatigue, pain), self-concept (disappointment, anger), role-function (delayed assumption of motherhood) and interdependence (inability for woman and partner to be alone with baby immediately after birth) modes. Couples who experienced an unplanned

caesarean section were more likely to have ineffective responses in terms of the model.

Due to the survey findings, two exploratory studies of a specially developed intervention followed. Fawcett & Burritt (1985) distributed a pamphlet containing caesarean section information to 81 pregnant women and their partners. The intervention also consisted of a follow-up telephone call to clarify issues raised by the pamphlet information. They found that, overall, the pamphlet was seen to be informative and reassuring with the follow-up being particularly valuable. A second exploratory study then tested the efficacy of an intervention that integrated the pamphlet with focused antenatal class discussion (Fawcett et al., 1987). Responses to the intervention were also compared between vaginally delivered and caesarean delivered participants. Of the fifty-eight pregnant women and their partners who received the intervention program, regardless of subsequent mode of delivery, the majority reported that it had met most of their information needs.

The final stage in the series of studies carried out by Fawcett and colleagues was an experimental study aimed at describing the effects of specific caesarean section information on adaptation to unplanned caesarean section (Fawcett et al., 1993). When comparing the reactions of those women who received comprehensive information as part of standard antenatal classes ($n = 74$), with those who received standard antenatal class curriculum ($n = 48$), no differences were found in perception of the birth experience, physical distress, self-esteem, functional status, feelings about the baby or quality of marital relationship. The authors argued that 'normalization' of caesarean section might have explained the lack of differences

between the groups. That is, expectant parents and childbirth educators may pay greater attention to caesarean section in any case, which may impact on the difference in information received by the two groups.

An unpublished randomised controlled trial, currently underway in Australia, is investigating a decision-support strategy for women deciding on mode of delivery after previous caesarean section (Shorten, 2001a). The resource offered to women consists of a decision support model assisting women in considering their childbirth options. Outcome measures will consist of levels of decisional conflict, anxiety, knowledge of risks and benefits, satisfaction and maternal and perinatal health outcomes.

Clearly, there is a lack of empirical research focusing on developing and evaluating information-based approaches for pregnant women, aimed at addressing rising rates of caesarean section. The studies to date have predominantly focused on developing and testing an intervention to be incorporated in antenatal classes, and with a particular focus on adaptation to unplanned caesarean section (Fawcett, 1981; Fawcett et al., 1985; Fawcett et al., 1987; Fawcett et al., 1993). Despite the findings of these studies, little is known about the types of information women might need or want, or how women would react to receiving such information.

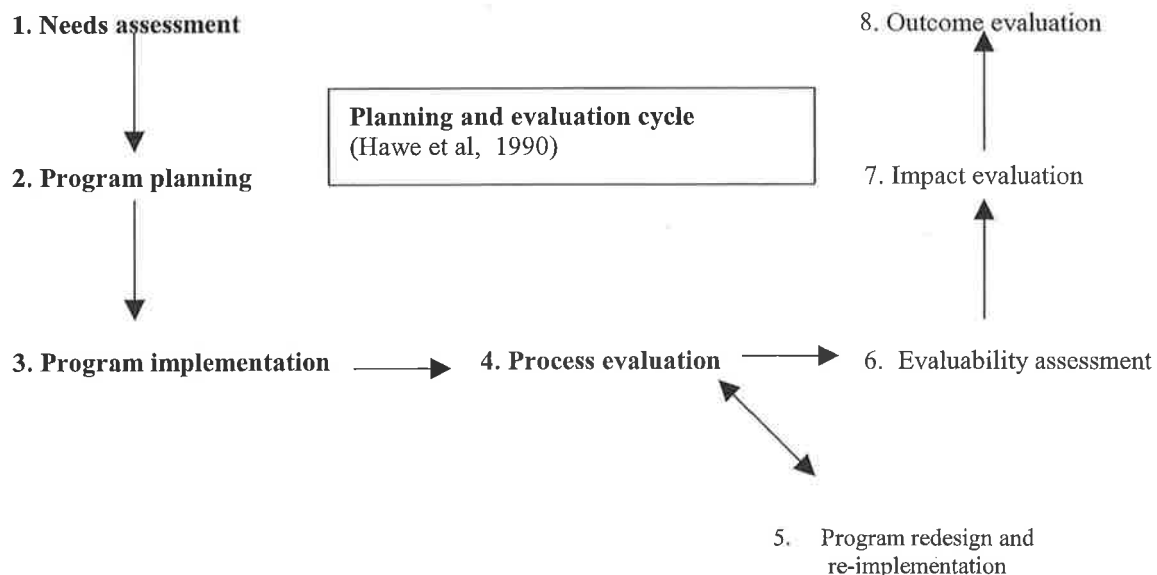
The following section describes the methodology involved in developing and evaluating a broad-based program for pregnant women and their families, aimed at providing information for encouraging informed decision-making, outside the context of antenatal classes.

1.4.1 Thesis methodology: program development and evaluation.

This thesis aims to describe the development and ‘formative’ evaluation of a novel intervention for addressing rising rates of caesarean section. Therefore, the thesis aims to concentrate on a careful examination of the processes involved in the development of the program (stages 1-3, Fig. 1.4) and initial reactions of women to the program (stage 4, Fig. 1.4), as opposed to measuring clinical or psychosocial outcomes at the outset. Careful documentation of the planning phase and formative evaluation of novel programs is advocated by those in the field of health promotion (Hawe, Degeling and Hall, 1990; Bradley, Wiles, Kinmouth, Mant, Gantley and Fallon, 1999). Hawe and colleagues (1990) believe that systematic planning and evaluation, followed by re-evaluation where necessary, will result in better program delivery. This process, represented in the steps outlined in Figure 1.4, can also assist in avoiding the conduct of a costly randomised controlled trial prior to confirmation of a program’s effectiveness.

Figure 1.4 Planning and evaluation cycle

START HERE:



On the basis of this cycle, the development and evaluation of the current program involved those stages 1-4 (highlighted in bold). These stages are detailed in this thesis as follows:

Stage 1 (Chapter 2): Needs assessment - literature review

The primary focus of needs assessment took the form of a literature review of strategies to address rising rates of caesarean section globally. Informal consultation with key stakeholders including midwives, obstetricians and consumers, was also carried out to best identify program approach, these consultations are described as part of stage 2.

Stage 2 (Chapter 3): Program planning

It is important to document the 'ground work' that has gone into the development of a program (Sherman, 2001). As is the predominant theme in a systematic approach to program planning and evaluation (Hawe et al., 1990), the ability to trace impediments to a program's success, or to replicate a successful program, stem from careful description in the planning phase.

Stage 3 (Chapter 4): Program implementation

Many health promotion programs are not implemented as planned (Sherman, 2001). It is therefore important that included in the evaluation cycle is documentation of factors that may impede or facilitate program implementation. If careful attention is placed on describing these processes, problems can be identified and re-designed accordingly. As mentioned above, precise documentation of program implementation is also crucial for replicating successful programs.

Stage 4 (Chapter 5): Process Evaluation

Process evaluation is often referred to as ‘formative evaluation’, as it enables researchers to measure the immediate outcomes and activities of a program, its strengths and limitations in the first instance (Hawe et al., 1990). Naidoo & Wills (1994) also stress the significance of uncovering the responses of those involved, *prior to* attempting to demonstrate behaviour change (Stages 7 and 8, Fig. 1.4). In an Australian example, the Victorian Drink Driver Program, process evaluation sought to consider the impact of the program on various key stakeholders, such as offenders, accredited drink drive agencies, magistrates, the Department of Human Services and VicRoads prior to measuring actual behavioural outcomes (Drug Treatment Services Unit, 1998). As part of the current program evaluation, the process evaluation stage of the cycle aimed to assess whether women participated in the program, their level of satisfaction and whether the program operated as planned. Evaluation of clinical or psychosocial outcome measures would be carried out after process evaluation had demonstrated the program was operating effectively. Stages 5 to 8 (Figure 1.4) were beyond the scope of the thesis.

1.4.2 Thesis aim and objectives

Aim

To develop and evaluate a program for pregnant women aimed towards informed decision-making for childbirth.

Objectives

To carry out development of the program, including liaising with key stakeholders

To describe women's response to the program, in particular to explore whether:

- *participants actively used the program (uptake)*
- *participants were satisfied with the resources they received (satisfaction)*
- *the program was being implemented as planned*

To explore whether the program had an influence on:

- *subsequent mode of delivery*
- *women's views of caesarean section - particularly women who reported considering caesarean section*
- *level of satisfaction with decision-making for caesarean section*

To explore the notion of a culture of caesarean section by describing:

- *Women's opinion of community views of caesarean section*
- *Women's preference for caesarean section*

To summarise, this thesis is divided into seven chapters. The historical background of caesarean section and an insight into the current context of caesarean section in 2002 were detailed in Chapter 1. This chapter also outlined the rationale and methodology for the development and evaluation of a program for pregnant women, divided into four stages. A needs assessment, in the form of a systematic review of the literature, is described in Chapter 2. Chapters 3 and 4 detail the planning and implementation stages of program development. Program participants' reactions to the program in the form of process evaluation are presented in Chapter 5. Chapter 6 contains a description of 'culture of caesarean section', a notion which refers to

changing societal perceptions of this mode of delivery. Two studies are described, conducted in the context of the wider program, which aim to explore the existence of a culture of caesarean section in Australia. The final chapter, Chapter 7, describes future directions for research to address rising caesarean section rates, in light of the program evaluation findings.

Chapter 2 – Stage one: Needs assessment - Literature review

2.1 Introduction

Professional opinion concurs that although caesarean section is safer than in the past, it is associated with psychosocial (Mutryn, 1993; DiMatteo et al., 1996) and physiological morbidity and mortality for both mother and baby (Lilford et al., 1990; Shearer, 1993; Cohen et al., 1985). Of additional concern is the cost associated with increased caesarean section deliveries. It has been estimated that each 1% increase in caesarean section rates in the United Kingdom costs the National Health Service £5 million (Horton, 1997).

Over the past two decades the goal of achieving a reduction in rates has been evident in developed countries. More recently, concerns have been raised in Latin America (Belizan et al., 1999), India (Padmadas et al., 2000; Pai, 2000) and Turkey (Tatar, Gunalp, Somunoglu and Demiroglu, 2000). Accurate determination of global caesarean section rates necessitates the application of international statistics for this intervention, but it is difficult to collect reliable national estimates of these rates in developing countries. In some settings, such as India, little population-based data exist (Pai, 2000). Although data are more readily available for developed countries, international comparisons are limited by factors such as time frames of data collection.

The United States and Australia currently have the highest caesarean section rates in the developed world at 22% (Ventura, Martin, Curtin, Menacker and Hamilton, 2001, Nassar et al., 2001). It is alarming that some developing countries, for

example regions of South America, have rates between 25 and 45% (Belizan et al., 1999). In striking contrast, the Netherlands and Sweden have caesarean section rates that have remained at approximately 10% since the 1980s (Paranjothy et al., 2001). Although this thesis does not aim to address the issue of whether there is a “correct” caesarean section rate, it is pertinent to note that very few countries have rates below the World Health Organization’s suggested optimum rate of 15% (WHO, 1985).

As mentioned in Chapter 1, this chapter presents stage one of the program planning and evaluation cycle (Hawe et al., 1990) – needs assessment. In this case, needs assessment consisted of a review of the different types of strategies developed in response to high rates of caesarean section, and reports on their success.

2.2 Criteria for considering studies for review

2.2.1 Criteria for study selection

In selecting studies for review, selection criteria included types of study participant, intervention, outcome measure, and study. Types of study participants included pregnant women in the antenatal or intrapartum period in hospital delivery wards. In situations where interventions primarily addressed physicians or hospitals, study participants comprised the physicians or hospitals themselves.

The types of intervention included any intervention directed at caesarean section rates, whether this was a “primary” aim (in which the primary aim of the study was to address caesarean section rates) or a “secondary” aim (in which caesarean section rates were affected during the course of a study).

Types of outcome measures included many different childbirth outcomes, but mode of delivery was the primary outcome measure.

The types of studies selected were in-line with those categorized by Level 1-4 classifications recognized by the Cochrane Collaboration (Muir Gray, 1997). These are levels of evidence based on the research design used. Level 1 studies are systematic reviews; Level 2 are randomised controlled trials; Level 3 are quasi-experimental studies; and Level 4 are observational evidence. According to these classifications, Level 1 evidence is the “gold standard,” or highest level of evidence. The review identified studies published in developed and developing settings worldwide.

2.2.2 Search strategy for study identification

The search included a review of the 1985-2001 Cochrane Database of Systematic Reviews, Medline, Sociofile, Current Contents, Psyclit, Cinahl, and EconLit databases. Search terms included the following: *caesarean section*, *caesarean section and reduction*, *caesarean section and rates*, *caesarean section and preference*, *caesarean section and psychology*, *caesarean section and knowledge*, *caesarean section and psychosocial support*, and *caesarean section and education*. The American spelling “*cesarean*” was also entered for each search. No language limits were applied. Interventions were subsequently grouped into psychosocial interventions, clinical interventions, and structural strategies.

To ensure that the review included studies that met the specified criteria, the author confirmed each study’s relevance by assessing the abstract, or if needed, the entire study before inclusion. If any uncertainty occurred over the relevance of a specific study, the author’s supervisor would confirm its relevance.

2.3 Psychosocial interventions

Interventions in this group were characterised by addressing the caesarean section rate while focusing on the psychological well-being of women in the antenatal, intrapartum, or postnatal periods. Such psychosocial interventions attempted to influence caesarean section rates by addressing psychological aspects of pregnancy and birth through social support and education.

2.3.1 Psychosocial support during labour

Level 1 evidence has determined that the continuous presence of a support person during labour can reduce likelihood of caesarean section (Hodnett, 2002). Hodnett (2002) assessed the effects of intrapartum support for labouring women as compared with standard hospital care. This study sought to determine whether support from caregivers resulted in positive medical and psychosocial outcomes. Earlier studies have found that women value information, comfort and sympathy from their caregivers when giving birth (Hodnett, 2002). This systematic review of randomised controlled trials worldwide compared continuous support during labour by either a specially trained professional or layperson, with standard care. Participants were randomised to receive either treatment (support persons) or control (standard care). Studies included in the review came from many Western and non-Western settings including Belgium, Canada, France, Greece, Guatemala and the United States and included more than 5000 women in many different hospital settings.

It was found that continuous presence of a support person (professional or non-professional) reduced the likelihood of caesarean section. Further, it decreased the

need for medication for pain relief, of operative vaginal delivery (e.g forceps, vacuum), and of a 5-minute Apgar score of <7 . Several trials also found that continuous support reduced the likelihood of negative ratings of the childbirth experience itself. Despite differences in hospital regulations, “risk” status of participants, and the presence of significant others, the trial results showed considerable uniformity. This research highlighted the importance of women receiving intrapartum support from both their significant others and from those who are specially trained.

This systematic review illustrates how efforts should be made to ensure women receive intrapartum support, either from a specially trained caregiver or family member, in order to reduce the need for intervention during labour. Importantly, in some less-developed settings, support from family members during labour may be a low-cost and culturally appropriate approach to caesarean section reduction.

2.3.2 Education and support programs

A randomised controlled trial (Fraser, Maunsell, Hodnett and Moutquin, 1997) assessed whether a specialised Vaginal Birth after Caesarean (VBAC) education and support program increased the likelihood of vaginal delivery in women who had a previous caesarean section. Compared with elective repeat caesarean section, VBAC is associated with a lower risk of complications for both mother and baby (Fraser et al., 1997). Attempts to increase the number of women who undergo VBAC have met with little success. Prior to this trial, there had been no controlled trials to assess the effectiveness of community-based education and support

programs aimed at increasing the rate of VBAC, although as the authors note, many of these sorts of programs have been developed.

This randomised-controlled trial was carried out at 12 hospitals, over 2 years. Women who had a single previous caesarean section were recruited through physicians or from hospital pre-admission registries. Having completed a baseline questionnaire to determine self-assessed motivation to attempt vaginal delivery at the outset, participants were randomised into one of two groups. The "Verbal" group participated in an individualised education program and those in the "Document" group were provided with a pamphlet regarding the benefits of VBAC. The main outcome measure was the number of women achieving vaginal delivery. The proportion of women *attempting* a vaginal delivery was also assessed. It was hypothesised that the individualised education and support program would result in a higher proportion of women attempting vaginal delivery, compared to those women who received the pamphlet.

There was no difference in vaginal delivery rates between women who received the program and those who received a VBAC pamphlet, even when results took into account motivation for vaginal delivery. The researchers reported that women who indicated low motivation for VBAC (372 women, or 29%) were more than three times as likely to experience elective caesarean section, compared with those who indicated high motivation. It therefore appears that motivation, and underlying attitudes in particular, are critical components of a woman's decision for her mode of delivery.

This study posits the notion that perhaps neither written information nor verbal information can counteract a woman's underlying attitude. Of further interest was the finding that women who indicated low motivation for VBAC were less likely to be planning future pregnancies, more likely to have had previous trial of labour before their caesarean section, and likely to be requesting sterilisation.

The authors also noted that the timing of their intervention may have had an impact on its limited success. They report that 40% of women who were planning an elective repeat caesarean section made this decision prior to 20 weeks of pregnancy. Therefore, it could be argued that similar interventions would need to acknowledge the importance of program implementation early in pregnancy, in order to compensate for the effect of underlying intentions and attitudes.

In carrying out this review of psychosocial interventions, it became evident that these interventions are, in the most part, aimed toward women who have had previous caesarean section, not at preparing *all* pregnant women. According to recent South Australian data (Chan et al., 2001), of all indications for caesarean sections carried out in 2000, nearly 30% were due to previous caesarean section. This leaves a significant proportion of women who had a caesarean section for 'other' reasons such as failure to progress, fetal distress, malpresentation, hypertension, or multiple pregnancy. These data illustrate the importance of *all* pregnant women, not only those with a previous caesarean section, taking an active role in any education or support initiative.

2.4 Clinical interventions

Clinical interventions were those primarily focused on conditions associated with pregnancy, such as fetal position and whether or not women had had previous caesarean section. Studies included in this category examined VBAC, management of breech presentation, active management of labour, and use of a partogram.

2.4.1 *Vaginal birth after caesarean (VBAC)*

It has been postulated that one of the reasons caesarean section rates are rising worldwide may be due to differences in management of women who have had previous caesarean section (Churchill, 1997). The oft-quoted "once a caesarean, always a caesarean", by Dr Edwin Cragin in 1916 (Cragin, 1916), and now recognised to be invalid, has nonetheless permeated the beliefs of some physicians and pregnant women. It is now recognised that this phrase was valid during the era where the standard procedure was a 'classical' vertical uterine incision, a procedure which had a 12% chance of rupturing if a woman chose to deliver her next child vaginally (Kaufmann, 1996).

There is compelling Level 1 evidence, from meta-analysis of morbidity and mortality associated with VBAC, that VBAC is a safe alternative to repeat caesarean section (Rosen, Dickinson and Westoff, 1991). This is partially due to the introduction, in the early 20th century, of the safer low-transverse (horizontal) uterine incision (de Costa, 2001). On the basis of their meta-analysis, Rosen et al (1991) argued that the aforementioned quote be modified to "Once a caesarean, a trial of labour should precede a second caesarean except in the most unusual circumstances" (p469).

Studies have found that approximately 73-75% of women undergoing trial of labour after previous caesarean section will succeed in having vaginal delivery (Rosen and Dickinson, 1990; Flamm et al., 1990). Women more likely to be 'successful' in achieving vaginal delivery were those whose prior caesarean was for breech presentation (these women had twice the success rate of women who had had caesarean section for other reasons). Women with a previous vaginal delivery had twice the success rate compared to women who had never delivered vaginally. Women with more than one previous caesarean section had only one third the chance of a successful VBAC compared with those with only one previous caesarean section (Rosen et al., 1990).

The notion of encouraging women to attempt VBAC is not always the rule-of-thumb for many hospitals, and this may account for one of the reasons VBAC is not an alternative routinely chosen by women. The findings from an Australian study (Appleton, Targett, Rasmussen, Readman, Sale, Permezel and Group., 2000A) have highlighted that the way hospital staff present VBAC as an option may have an impact on women's motivation. A survey of 900 hospital staff demonstrated that while over half (53%) believed patients should be *actively encouraged* to try for VBAC, a significant proportion (47%) felt simply that it should be presented as an *option*.

Although in the United States caesarean section rates are again rising (Ventura et al., 2001), there had been a notable reduction in rates during the past few years, from 25% in 1988 to 20.8% in 1995 (Curtin, Kozak and Gregory, 2000). This has been argued to be due, in part, to increased use of VBAC, from 12.6% in 1988 to

35.5% in 1995 (Kaufmann, 1996). Recently however, advocates of normal childbirth have alerted attention to the fact that the United States is now seeing an apparent decline in VBAC rates, and a concomitant increase in caesarean section rates (Young, 1999). This decline has been said to be partially attributed to concern from within the American College of Obstetricians & Gynecologists over the incidence of uterine rupture (Young, 2000).

A recent retrospective cohort analysis of the incidence of uterine rupture over a period of approximately nine years has added to the debate over the relative safety of VBAC (Lydon-Rochelle, Holt, Easterling and Martin, 2001). This study carried out in the United States found a three-fold risk of uterine rupture with spontaneous trial of labour, compared to repeat caesarean section (3.6 per 1000). The risk of uterine rupture increased with induced labour (7.7 per 1000). Prostaglandin-induced labour was found to confer the greatest risk of rupture (24.5 per 1000).

The status of VBAC in the Australian context has been addressed in a recent multicentre study. Appleton and colleagues (Appleton, Targett, Rasmussen, Readman, Sale and Permezel, 2000b) carried out a retrospective analysis of medical records from 11 major obstetric hospitals nationwide for 5 years from 1992-1997. They were particularly interested in the VBAC rate but equally at the rate of significant uterine rupture. Similar to the aforementioned United States findings, the rate of uterine rupture with VBAC was estimated at 0.3%.

Appleton and colleagues also found that Australian hospitals remain cautious in their approach to VBAC. While the overall VBAC rate was reported to be 25.3%,

which is lower than the 50% rate found in comparable international studies, the authors did note that the VBAC rate is rising in Australia. They emphasise that women wishing to attempt VBAC, and their care providers, need to be aware of the evidence regarding the relative risks of this mode of delivery in order to ensure truly informed decision-making.

2.4.2 Management of breech presentation

Breech presentation is the clinical term whereby instead of the head, the baby's buttocks or feet are presenting to the birth canal (Churchill, 1997). Breech presentation at term occurs in approximately 4% of all pregnancies, approximately 80% of which are delivered by elective or emergency caesarean section (Nassar et al., 2001). Although there is an increasing trend for caesarean section for breech presentation (Nassar et al., 2001), it is not an absolute indication. Attempts to address rising caesarean section rates have therefore included assessment of the management of breeches. This is largely due to the availability of two alternatives to caesarean section, vaginal breech delivery and external cephalic version.

2.4.3 Vaginal breech delivery

Vaginal delivery of the breech fetus accounts for approximately 0.7% of all deliveries (Nassar et al., 2001). Research findings from the United Kingdom have suggested that this method of delivery may not be viable for the baby. A population-based comparison of outcomes for fetuses presenting in the breech presentation at term was carried out during 1988-90 (Thorpe-Beeston, 1992). After excluding babies with congenital abnormalities, the incidence of intrapartum and

neonatal death associated with vaginal birth was higher compared with babies born by caesarean section.

Recent results from an international Term Breech Randomised Trial (Hannah et al., 2000) has also found evidence to suggest elective caesarean section confers a better outcome for the baby in the breech position at term, compared to vaginal breech delivery. This trial, carried out in 121 centres worldwide, found perinatal mortality, neonatal mortality or serious neonatal mortality was significantly lower in the planned caesarean section group when compared to the planned vaginal breech delivery group.

2.4.4 External cephalic version (ECV)

External cephalic version (ECV) is a procedure that aims to rotate the fetus in the breech position externally, to cephalic presentation. Although the success rate of this procedure is estimated to be around 65%, it is said to be under-utilised (Coco and Silverman, 1998). Prior to the availability of ECV the only alternative for a fetus in the breech position was caesarean section, or less likely, trial of labour (Coco et al., 1998).

A recent systematic review of randomised controlled trials considering the efficacy of ECV at term, found evidence to suggest this technique significantly reduced the risk of caesarean section (Hofmeyr et al., 2002). This finding, along with the development of protocols to ensure the safety of ECV (ACOG, 1997), has been widely disseminated as evidence for the importance of this procedure for caesarean section reduction.

Despite the evidence for ECV, breech presentation at term is relatively rare. Some have argued that the cost of training obstetricians in this technique may outweigh the call to perform the procedure (Regalia, Curiel and Natale, 2000). A literature review to calculate the costs and predict caesarean section rates associated with four options for peripartum management of term breech pregnancy, found that this may not be case (Gifford, Keeler and Kahn, 1995). Gifford and colleagues found that routine ECV resulted in more vaginal deliveries and lower costs compared with strategies allowing vaginal delivery but not including attempted ECV.

2.4.5 Active management of labour (AML)

Active management of labour (AML) is an approach initiated by the National Maternity Hospital in Ireland during the 1970's. Characterised by a 'protocol for the supervision of the intrapartum care of nulliparous women' (Impey and Boylan, 1999, p.183), AML includes early admission in and diagnosis of labour, relatively prompt use of oxytocin and continuous intrapartum emotional support. The practice was originally intended as an attempt to shorten prolonged labour, which it has succeeded in doing in some settings (Akoury, Brodie, Caddick, McLaughlin and Pugh, 1988).

The notion that AML could potentially reduce caesarean section rates originated due to the fact that the National Maternity Hospital, at a time of rising caesarean section rates in most Western countries, had comparably low rates (Impey et al., 1999). Although criticised by some for being "inflexible and dogmatic" (Oakley, 1984), this has not deterred some hospitals introducing AML in an attempt to reduce their

caesarean section rates (O'Driscoll et al., 1984; Akoury et al., 1988; Boylan, Frankowski, Rountree, Selwyn and Parrish, 1991). While these observational studies found AML could reduce caesarean section rates, this finding has not been confirmed by randomised controlled trials (Enkin et al., 2000).

A recent randomised controlled trial from New Zealand, involving over 600 women (Sadler, Davison and McCowen, 2000) found AML reduced the length of first-stage labour, the relative risk of prolonged labour, but no evidence to suggest that an AML protocol reduced the caesarean section rate. Rates for the AML group were 9.4% and for the routine care group, 9.7%.

A review of observational and randomised controlled studies of AML (Impey & Boylan, 1999) attempted to reconcile the discrepant findings between randomised controlled trials and observational studies within the literature. The authors noted that differences in adherence to AML protocols may be one reason why randomised controlled trials have differed from observational studies in finding no evidence for caesarean section reduction.

2.4.6 Partogram

A partogram is a graph used by obstetrical staff to record labour progress, which has “alert” and “action” necessitating intervention. The use of the partogram has recently been implicated in influencing caesarean section rates. A randomised clinical trial carried out in the North West of England (Lavender, Alfrevic, and Walkinshaw, 1998) compared three different partograms, with action lines at differing time intervals. On presentation in labour, women were randomised to

monitoring by a partogram with an action line either 2, 3 or 4 hours to the right of the alert line. The researchers found that partograms with an action line 2 hours to the right of the alert line were associated with higher rates of caesarean section. The results were deemed inconclusive, however, due to the fact that differences between the 3 and 4 hour partograms were found to be statistically significant however differences between the 2 and 4 hour partograms were not.

Partograms certainly seem to have the potential to influence rates of caesarean section (Lavender et al, 1998), however the strength of this relationship remains equivocal. Research in this area is currently under review by Buchmann and colleagues (Buchmann, Gulmezoglu and Nikodem, 2002). These researchers are carrying out a systematic review of randomised controlled trials focusing on the benefits and risks of partograms on maternal, obstetric (including caesarean section) and fetal outcomes. At the time of writing, the results of this review were not available.

2.5 Structural strategies

The following groups of interventions stem from hospital organization and policy. They involve studies examining the effects of local opinion leaders, clinical practice guidelines, quality improvement strategies, midwifery care, and financial incentives.

2.5.1 Local opinion leaders

Local opinion leaders are "health professionals nominated by their colleagues as 'educationally influential'" (Thomson O'Brien, Oxman, Haynes, Davis, Freemantle and Harvey, 2002, p.1). Studies have investigated whether such initiatives may change health care professional practice.

A recent systematic review of randomised controlled trials focused on the use of local opinion leaders to improve health outcomes (Thomson O'Brien et al., 2002). These researchers found only one randomised controlled trial that demonstrated a significant impact on caesarean section rates. This trial compared use of opinion leaders with an administrative strategy (audit and feedback) to determine the influence on compliance with surgical practice guidelines (Lomas, Enkin, Anderson, Hannah, Vayda and Singer, 1991). The guidelines, distributed by the Society of Obstetricians and Gynaecologists of Canada, outlined the high incidence of caesarean section and recommended that physicians should, where possible, recommend trial of labour for women who have had caesarean section. Physicians at different hospitals were randomised to audit and feedback, opinion leader education or control group. Over a two-year period, no differences in trial of labour or VBAC rates between the audit and feedback and control groups were found.

Compared to these two groups, however, physicians randomised to opinion leader education had VBAC and trial of labour rates 46% and 85% higher, respectively.

2.5.2 Practice guidelines

Implementation of clinical practice guidelines is another strategy directed at reducing caesarean section rates. Such directives aim to disseminate explicit decision-making principles for clinicians developed by the medical profession, sometimes in collaboration with government (Lomas et al., 1991).

A retrospective observational study of the impact of legislatively imposed practice guidelines found no evidence of their effectiveness (Studnicki, Remmel, Campbell & Werner, 1997). A mandate was introduced in Florida during 1992 which stated that practice guidelines regarding caesarean section deliveries be disseminated to obstetricians. Furthermore, the mandate required that peer review boards be established to review caesarean deliveries. In the retrospective analysis of over 350 000 live births, occurring before and after implementation of the guidelines, no effect was found on primary caesarean section rates. There was evidence, however, that guidelines may have reduced the repeat caesarean section rate.

Evidence for the impact of practice guidelines on caesarean section reduction is insufficient, given the lack of empirical research in this area.

2.5.3 Quality improvement strategies

Quality improvement strategies have been introduced widely as a means of addressing caesarean section rates. Such strategies have been successful in reducing

rates in predominantly American settings in which they have been introduced and reported.

In a six-year evaluation of a caesarean section reduction program (Myers and Gleicher, 1993), the authors noted that their comprehensive departmental program was successful in maintaining their caesarean section rate of 10-12%. This program, a "more stringent implementation of existing departmental guidelines, as well as the establishment of some new ones" (p1220), involved a six-fold agenda consisting of second opinion, VBAC, strict diagnosis of dystocia, monitoring of fetal distress, vaginal delivery for breech (where possible), peer review and detailed data collection.

Over ten years ago an initiative termed 'Healthy People 2000' set an aim of reducing the United States caesarean section rate to 15% of all deliveries by 2000 (U S Department of Health and Human Services, 1992). The instigators of a collaborative quality improvement strategy involving maternity health professionals argued that their strategy provided evidence to reinforce such a goal of 15% was securable (Flamm et al., 1998). The strategy consisted of a specially organised 12-month collaborative effort involving workshops, weekly conference calls and use of an Internet site, to safely reduce their caesarean section rate. Of 28 organisations involved, 15% achieved reduction of 30% or more and 50% achieved reduction of between 10 and 30% (Flamm et al., 1998).

A further example of the effectiveness of departmental quality improvement policies was demonstrated in a community hospital (Poma, 1998). These

researchers focused on the data of women delivering at the hospital over a period of six years, during which a twofold in-house strategy was implemented. This strategy consisted of review of every caesarean section not meeting guidelines and confidential individual feedback. By comparing outcomes of women delivering in the first three years (when the strategy was not yet implemented) and those in the second three years (once strategy was implemented), the researchers saw reductions not only in primary (from 13.5% to 10.6%) but also repeat caesarean section rates (from 9.0% to 7.9%).

Robson and colleagues (Robson, Scudamore and Walsh, 1996) illustrated a safe reduction in caesarean section in their United Kingdom hospital by introducing a medical audit cycle. Following a retrospective clinical audit of the main cause of overall caesarean section rates during the period 1984-1988, strategies for the management of the primary indication, dystocia, were introduced. During the study period of 1989-1992, change in dystocia management saw caesarean section rates drop from 12% to 9.5%. For spontaneously labouring, nulliparous women with a singleton, cephalic, term pregnancy this decrease was especially marked. These women had previously been identified during audit as having an especially high rate of caesarean sections (representing 19.7% of all sections). Change in management of these women saw a significant decrease in caesarean section rates from 7.5% to 2.4%.

These quality improvement strategies have, on the whole, been successful in the settings in which they were introduced. Generalisability of such strategies to other settings and countries with different social and cultural milieu is a limitation, which

would need to be addressed if such strategies were to be replicated. Myers & Gleicher (1993) did show a steady decrease in caesarean section rates over a 6-year period, thus illustrating sustainability in that institution, but it cannot be ascertained whether such results could be repeated in other settings. Further, the collaborative study (Flamm et al., 1998), although involving different health care institutions, was not randomised, thus raising issues of bias and external validity.

2.5.4 Financial incentives

The fact that privately insured patients have higher rates of caesarean section compared to public patients has been well documented in both developed and less-developed settings (Hurst et al., 1984) (Janowitz, Wallace, Araujo and Araujo, 1984) (Murray, 2000) (Padmadas et al., 2000) (Roberts et al., 2000). As Churchill (1997) notes, the idea that "where payment is involved in health care it is more lucrative for the doctor to perform a caesarean as it can be done in a shorter time than a vaginal delivery and she/he will be paid more" (p81) has persisted as an argument for higher rates of caesarean section. Nowhere is the differential between private and public sectors more evident than in Brazil where caesarean section rates in private hospitals have been estimated to be around 98% (Nuttall, 2000). The issue of caesarean section rates in Latin America will be discussed in greater detail in Chapter 6.

Changing the payment structure for private obstetricians is a strategy that has received attention for attempting to reduce caesarean section rates (King, 1993; Molloy et al., 1993). During the 1980's in Australia, approximately twice as many women in private hospitals, compared with public, were delivered by caesarean

section (King, 1993). Due to this apparent variation, a global obstetric fee was introduced in 1988, whereby fee-for-service for private obstetricians was unrelated to mode of delivery. This attempt to decelerate the number of caesarean sections in the private sector has seemingly had little effect. Rates of caesarean section for women receiving private hospital care have continued to steadily climb over the last decade (Nassar et al., 2001). Australian obstetrician, King (1993) in his commentary on the 'very unsatisfactory state of obstetrical affairs in Australia' (p.304), posited that the reason behind persisting higher rates of caesarean section may now be one of convenience, with private obstetricians favouring operative delivery as opposed to more 'time-consuming' vaginal delivery.

In response to King's commentary, Molloy and Richardson (1993) argued that rate variations could be due to a number of factors other than financial incentive or convenience. Firstly, they argued that private sector obstetricians are in a 'no-win situation'. Prior to the introduction of a global fee they were accused of performing caesarean sections for financial gain and with the advent of a global fee came claims of performing caesarean sections for convenience. Secondly, they argued that differences between public and private patients could account for the higher rate of caesarean section in the latter group. Older women who are having their first child are more likely to have private health insurance and thus be seen by private obstetricians, and these older women concomitantly are more likely to have increased obstetric complications and thus more intervention (Kirsop, 1992). The women who Molloy and Richardson (1993) label 'the informed and assertive private patient' (p89) are, according to these authors, also more likely to be informed about birth trauma and the effect of this on their child's wellbeing and therefore be more

likely to request an elective caesarean section. These requests, they argue, may be voiced in order to avoid another 'extremely difficult birth process in the search for a politically correct vaginal delivery in the public sector' (p89).

Another notion Molloy & Richardson (1993) put forward for higher caesarean section rates in the private sector is one of liability in the event of negative birth outcomes. In the public sphere, burden of accountability is distributed within the hospital in general whereas in the private sphere, burden falls on the specialist obstetrician. Therefore, they argue that with this increased responsibility comes the reality that obstetricians may be hesitant to perform manipulative deliveries and hence opt to perform caesarean section in the event of fetal or maternal distress. Further, with increasingly publicised negligence actions in Australia, Molloy and Richardson argue that there is heightened pressure among obstetricians to secure perfect obstetric outcomes.

A recent Australian population-based descriptive study has called into question the argument that the higher-risk profile of privately insured women can account for their higher rates of caesarean section (Roberts et al., 2000). This study found that a higher rate of caesarean section among private patients was not due to private patients having higher risks of complications. Of around 170 000 women choosing private and public obstetric care, the frequency of women classified as low-risk was similar between groups (48%). When comparing the two low-risk groups (one private, one public), low risk private patients having their first baby had significantly higher rates of caesarean section (16.4% vs 10%).

These findings suggest that issues other than risk-status and financial incentives may be behind higher rates of caesarean section in the private sector. Such issues are discussed in greater detail in Chapter 6.

2.5.5 The role of midwives

Expanding the role of midwives in maternity care has been recommended to avoid the somewhat fragmented nature of standard hospital obstetric care (Homer, Davis, Brodie, Sheehan, Barclay, Wills and Chapman, 2001). This strategy has led to several initiatives calling for 'a lead role and greater responsibility for midwives..in which midwives hold their own caseloads and provide care throughout the antenatal, intrapartum, and postnatal periods' (Turnbull, Holmes, Shields, Cheyne, Twaddle, Gilmour, McGinley, Reid, Johnstone, Geer, McIlwaine and Lunan, 1996, p.213).

A recent systematic review involving five different countries and over 9000 women, considered the emergence of a new model of care typified by 'continuity of care' (Waldenstrom and Turnbull, 1998). This model of care was characterised by continuity of maternity care provided exclusively by one midwife or a small group of midwives. The review focused on the effects of midwife-managed care versus standard maternity care. Although effective in lowering some obstetrical intervention rates such as induction, augmentation of labour and electronic fetal monitoring, midwife-managed care was ineffective in reducing the caesarean section rate.

In contrast to the findings of Waldenstrom & Turnbull (1998), a recent Australian randomised controlled trial found that community-based continuity of care provided by midwives and obstetricians had a significant association with likelihood of caesarean section. Those women receiving community-based continuity of care had lower rates of caesarean compared with those receiving standard hospital-based care (13% and 18% respectively) (Homer et al., 2001).

2.6 Conclusion

This literature review has identified and summarized Level 1 evidence (Muir Gray, 1997) for three strategies that lower the caesarean section rate. One-to-one support for women during childbirth can reduce the likelihood for a caesarean section (Hodnett, 2002). A systematic review of the efficacy of external cephalic version at term found compelling evidence for this technique as a safe and effective method for reducing caesarean section rates, albeit to a limited degree (Hofmeyr et al., 2002). Meta-analysis of the safety of VBAC confirmed that this delivery method should be encouraged and used, given appropriate specialist backup (Rosen et al., 1991).

Although the evidence for effectiveness of one-to-one support for women during childbirth and ECV come from both developed and developing settings, the systematic review of VBAC was restricted to studies conducted in the United States. This limitation needs to be recognised amid concerns over high caesarean section rates in settings as diverse as Turkey (Tatar et al, 2000), India (Padmadas et al., 2000) (Pai, 2000) and Latin America (Belizan et al., 1999). Assessment should be conducted to determine whether such intervention strategies could be implemented and effective in reducing caesarean section rates in countries with diverse social and cultural settings, and associated obstetrical beliefs and practices. Even in developed countries with different health systems, such as Australia and the United States, strategies that are effective in one setting may achieve less success in another. As Tatar et al (2000) note, in their research into caesarean section in a Turkish teaching hospital (with a caesarean section rate of 52.5%), “..the hospital is a conservative one regarding delivery and sticks strongly to the slogan ‘once a caesarean always a

caesarean'.. this, unfortunately, is a predominant view among Turkish obstetricians", (p1232). As these researchers go on to point out, it will take both a change in the policies of the Turkish health sector in addition to informed mothers advocating VBAC, or any of the efficacious strategies outlined in this review, for any halt to the rise in caesarean section in this country. This assertion may be true for all nations, developed and less-developed, experiencing 'epidemic' rates of caesarean section.

The factors that influence caesarean section rates in any setting are complex. When antiquated ideas persist (Tatar et al., 2000), or where practice patterns ignore evidence, caesarean section rates are likely to remain high or rise further. New strategies for reducing caesarean section, and evidence to support them, need to be brought to the attention of maternity health professionals (Medical Leadership Council, 1996; Flamm, Kabcenell, Berwick and Roessner, 1997; Flamm et al., 1998) and more effective ways found to persuade practitioners to adopt them.

2.6.1 Implications for thesis

This literature review formed the first stage of the program planning and evaluation cycle – needs assessment (Hawe et al., 1990). Compared to the plethora of clinical and structural strategies to address rising caesarean section rates, there have been relatively few psychosocial interventions focused on women's decision-making. This finding is critical given that at the beginning of the 21st century, some of the key issues surrounding rising rates of caesarean section focus on women's role in the decision-making for this mode of delivery. On one hand women are said to be increasingly requesting caesarean section (Wilkinson, McIlwaine, Boulton-Jones

and Cole, 1998a; Quinlivan, Petersen and Nichols, 1999; Gamble et al., 2000), while those women who are unprepared for the operation have been found to suffer significant negative psychosocial outcomes (Mutryn, 1993; DiMatteo et al., 1996). Given such issues, an educational or information-based approach for women seems timely. This literature review has demonstrated that to date, only one woman-focused educational strategy has been empirically tested to address caesarean section rates (Fraser et al., 1997).

The following chapters place particular emphasis on the planning, development and evaluation of an information-based program for pregnant women, aimed specifically at encouraging informed decision-making for childbirth. As mentioned in Chapter 1, this program was aimed toward formative evaluation of such a program in the first instance. That is, of interest were women's response to the program and describing the processes involved in developing such a program. The following chapter presents stage two of the program planning and evaluation cycle (Hawe et al., 1990). This stage involves the background to program content in addition to description of the planning phase of the program, which involved close consultation with key stakeholders.

Chapter 3 – Stage two: Program planning - describing the development of a program for pregnant women

3.1 Introduction

It is generally recognised that pregnant women should have access to information about caesarean section (de Costa, 1999; Senate Community Affairs Reference Committee, 1999). The reasons for this are threefold. Firstly, despite increasing rates of caesarean section, researchers have noted that some women remain unaware of current rates and believe ‘it won’t happen to me’ (Churchill, 1997). Secondly, the distribution of caesarean section-related information in the antenatal period presents an opportunity to minimize distress resulting from being unprepared for surgical delivery. Thirdly, educational approaches for women could be argued to influence likelihood of maternal request for caesarean section, an issue receiving much attention in the literature (Amu et al., 1998; Paterson-Brown, 1998; Wilkinson et al, 1998a; Quinlivan et al., 1999). If women are better-informed about the risks and indications for caesarean section, they may be more likely to be actively involved in making informed decisions, which in turn could influence escalating rates.

As seen in Chapter 2, one of the most obvious gaps in the literature surrounding strategies to address increasing rates of caesarean section is that most have tended to focus on structural (e.g audit and review, removing financial incentives) or clinical strategies (e.g. increasing rates of vaginal birth after caesarean and external cephalic version). As previously mentioned, this thesis aimed to address this gap by explicitly developing and evaluating an informed decision-making strategy for pregnant women.

As mentioned in Chapter 1, it is important that prior to novel health promotion program evaluation, considerable attention is given to describing the processes involved in the development of the program (Hawe et al., 1990). This involves describing program rationale and setting, selection and recruitment of participants and development of program resources. This information, in addition to actual process evaluation (which focuses more on the activities of the program once implemented), is essential in the appraisal of innovative health promotion interventions. Health service researchers advocate such an approach in order to gain a more complete picture of the relative success or failure of a program, prior to embarking on large and costly randomised controlled trials (Hawe et al., 1990; Bradley et al., 1999). Further, description of program development ensures that if successful, future researchers benefit from having documentation of the entire research process. If unsuccessful, identification of the exact areas in which the program was problematic can assist in re-design (Hawe et al., 1990).

The current chapter describes in detail the development of a program for pregnant women. In relation to the groups of strategies highlighted in the literature review, the current program could be termed 'psychosocial'. That is, the focus centred on a supportive intervention involving both cognitive and socio-emotional components (Glass, 2000).

There is good evidence to demonstrate the effectiveness of psychosocial interventions in diverse health-related areas, including prevention of cervical cancer (Shepherd, Weston, Peersman and Napuli, 2002) and recurrent coronary heart disease (Ornish, Brown, Scherwitz, Billings, Armstrong, Ports, McLanahan,

Kirkeeide, Brand and Gould, 1990). Psychosocial interventions have also been effective in improving outcomes for women with cancer (Cain, Kohorn, Quinlan, Latimer and Schwartz, 1986) and in areas relating to childbirth. Two systematic reviews of interventions in the areas of breastfeeding (Sikorski, Renfrew, Pindoria and Wade, 2002) and support during labour (Hodnett, 2002) have found psychosocial support to be beneficial. For example, Sikorski & Renfrew (2001) found that contact with professional individuals offering breastfeeding support supplementary to standard care, in the form of appropriate guidance and encouragement, could facilitate breastfeeding to 2 months of age. Despite these findings, psychosocial interventions for pregnant women have largely been absent in the call to address rising caesarean section rates.

The resources developed for the current program had a primary prevention focus in that they were distributed to pregnant women prior to the onset of any indications for caesarean section. This is pertinent given the inherent difficulty of routinely identifying those women at increased risk for caesarean section (Enkin et al., 2000). Therefore, the resources were aimed at encouraging all pregnant women to be informed of the relative risks and benefits of both caesarean section and vaginal delivery, ways of avoiding and alternatives to caesarean section *before* or *as* indications became apparent. It was anticipated that both those who did go on to have (or need) a caesarean section *and* those who had vaginal delivery would at least have had access to information. As Churchill (1997) points out:

“If women are to make informed decisions about what happens to them in hospital and to be empowered to take a full and rewarding part in the birth of their children, they need to realise that caesarean birth is a very real

possibility for many, and they need appropriate information in order to reduce feelings of shock, disappointment and resentment” (p 164).

3.1.1 Contemporary health promotion principles

Prior to outlining the development of the program, it is essential to focus on the health promotion principles acting as a theoretical base for this research. Health promotion has seen a paradigm shift over the last few decades in line with general moves from the narrow ‘old perspective’ of health to a ‘new public health’ perspective (O'Connor and Parker, 1995). Up until the 1970's public health had been dominated by a predominantly individualistic approach to health. This changed in the late 1970's with the introduction of a broader socio-environmental view of health that encompassed an understanding of the social, economic, cultural and political determinants of health. This shift was brought about in part by the realisation that most chronic diseases were caused as much by personal behaviours as environmental factors. The first document said to articulate the principles behind the ‘new public health’ movement was the Ottawa Charter, arising from an international conference in Ottawa, Canada in 1986 (WHO, 1986). The Charter defined a seminal change in focus for public health by concentrating on healthy public policy as opposed to individual behaviour. Similarly, the importance of ‘the individual operating within a particular social and economic context’ was realised (Lawson, 1998, p.23).

Closely associated with the framework of the Ottawa Charter was the principle of empowerment, an oft-mentioned concept in health promotion. Empowerment can be described as “the process whereby decisions are made by the people who have to

wear the consequences of those decisions” (O'Connor et al., 1995, p.179). The notion of empowerment can be divided into several dimensions, including attitudes (self-esteem, self-confidence), consciousness (awareness of extent of problem), skills (how to access information) and structures (resource distribution) (O'Connor et al., 1995).

There is growing evidence to suggest that consumer participation in health-care can lead to improvements in health outcomes (Consumer Focus Collaboration, 2001). For example, a systematic review of 17 randomised controlled trials found that decision-aids were beneficial to patients faced with treatment or screening decisions (O'Connor, Rostom, Fiset, Teto, Entwistle, Llewellyn-Thomas, Holmes-Rovner, Barry and Jones, 1999). Decision aids were defined as “interventions providing information on options and outcomes designed to help people make deliberate and specific choices relating to their health” (McNutt, 2000, p.60). This review of trials carried out over the last two decades found that decision aids were better than usual care in improving knowledge, reducing decisional conflict and in motivating patients to be active in their decision-making without raising anxiety. The trials were carried out in areas such as decision-making about hepatitis B vaccines, hormone replacement therapy, circumcision of newborn infants, screening for breast cancer genes and prenatal screening (O'Connor et al., 1999).

To summarise, in line with the philosophy of the ‘new public health’ movement, the current program sought to:

- Promote social responsibility for health, and
- Increase community capacity and empower the individual

That is, the goal of the current program was to encourage women's active participation in decision-making during pregnancy and childbirth. Central to this aim was to provide women with the resources on which to make informed decisions.

3.1.2 Pregnancy and childbirth information

As mentioned, a central method of empowerment is the provision of information. Preparing women for childbirth by way of written information and formal 'classes' is not a new concept and has been realised as an area of importance for several decades (Crouch and Manderson, 1993). Prior to outlining the information-based resources developed for women in the current program, it is pertinent to focus on women's needs and sources of general pregnancy and childbirth related information.

Social class has been found to be associated with whether women seek childbirth and pregnancy information from books, friends, family members or health care providers (Aaronson, Mural and Pfoutz, 1988). Descriptive evidence from the United States suggests women of higher socio-economic status rely more on books and less on family than women of lower socio-economic status (Aaronson et al., 1988). Similarly, St Clair and Anderson (St Clair and Anderson, 1989) found that inner-city women of lower socio-economic status tended to rely on their social networks for pregnancy-related information, and that this information may actually cause unnecessary worry.

Related to the notion of a relationship between socio-economic status and women's sources of childbirth information is evidence for a relationship between social class and women's expectations and experiences of childbirth. A discourse analytic study carried out in Australia found that women differ in their view of control over the management of their birth depending on social class (Zadoroznyj, 1999). 'Working-class' women tended to be fatalistic about the management of their first birth and to overtly rely on the medical 'experts' rather than actively reading books, for example, to inform decision-making. 'Middle class' women, on the other hand, adopted what was termed an 'activist' orientation to the management of their birth which involved reading and relying on abstract knowledge to inform their decision-making. It is of note that the relationship between social class and narratives of control tended only to exist for women's narratives of their first births. The majority of women in this study took steps to alter control over their subsequent births, regardless of social class.

The way that women perceive childbirth may also be related to socio-economic status. Saisto and colleagues (Saisto, Salmela-Aro, Nurmi and Halmesmaki, 2001) found that pregnancy-related anxiety and fear of vaginal delivery tended to be found in women who were unemployed, dissatisfied with their partnership and who were lacking in social support. These findings point to the importance of psychosocial interventions for pregnant women, particularly those involving an element of social support.

Antenatal classes are used worldwide to prepare women for childbirth, although their effectiveness in randomised controlled trials is equivocal at best (Gagnon,

2002). While the majority of primiparous women attend antenatal classes (Ministerial Task Force on Obstetric Services, 1989), certain women may be under-represented. Two Australian studies (Redman, Oak, Booth, Jensen and Saxton, 1991; Lumley and Brown, 1993) and one United Kingdom study (Cliff and Deery, 1997) found that younger, less educated, unmarried women of lower socio-economic backgrounds were less likely to attend antenatal classes. Reasons for non-attendance at antenatal classes include feeling that classes would not help, that classes are held at an inconvenient time or location (Lumley et al., 1993; Lee and Shorten, 1999) or that they are too technical (Cliff et al., 1997). Although further research comparing birth outcomes of women who attend antenatal classes and those who do not would be pertinent, it is evident that this form of information provision may be missing certain women in society.

In summary, it is important to acknowledge that women derive childbirth and pregnancy information from a variety of sources, often dependent on their social background. These findings guided the author in deciding the types of resources that would form the information distributed as part of the program, i.e the need to incorporate both written and social network information. The development of these resources will be detailed in Sections 3.2 and 3.3 of this chapter. Evidence for both forms of information transfer are outlined below.

3.1.3 Pamphlets

Pamphlets have been popular as a health promotion tool to facilitate behavioural change (Coulter, 1998), despite mixed success in randomised controlled trials (Little, Griffin, Kelly, Dickson and Sadler, 1998; Curro, Lanni, Scipione, Grimaldi

and Mastroiacovo, 1997; Slama, Redman, Perkins, Reid and Sanson-Fisher, 1990). Research has shown that while pamphlets can be useful in increasing knowledge or initiating behaviour change in the short-term, their effectiveness in the long-term is modest (Bennett and Murphy, 1998). Pamphlet content, as well as the context and process of use have implications for effectiveness. Some researchers have noted that changes in behaviour, recall and knowledge are more likely if pamphlets are used in conjunction with either other educational resources (McMaster, Nicholas and Machin, 1985) or with simultaneous counselling (Russell, Wilson and Baker, 1979).

It should be noted however that the effectiveness of pamphlets in initiating behaviour and knowledge change is difficult to evaluate, largely due to differences in study design. For example, some studies have utilised several different types of pamphlet as the sole intervention (Little et al., 1998) while others have used pamphlets as part of a wider strategy (Curro et al., 1997).

The provision of pamphlets is nonetheless one of the simplest methods of facilitating behaviour change. Pamphlets are also advantageous in that, unlike oral communication, the recipient can consult them again if necessary (Bennett et al., 1998). Pamphlets have tended to be distributed to provide consumers or patients with information on which to make informed choices either before (e.g. benefits of screening, contraception) or after (e.g. educate patients in self-care with conditions such as hypertension) a *disease or health problem* has been identified. Where the pamphlets in the current program differed from 'traditional' health promoting pamphlets was that they were aimed at providing women and their partners with

information about a *normal event* as opposed to a behaviour in need of change. This notion of providing consumers, particularly those in a health-care setting, with written health information about events which are comparatively 'normal', was in keeping with the health promotion principles of the study hospital (Women's and Children's Hospital, 2001). The Women's and Children's Hospital has outlined a commitment to providing information for consumers regarding:

- service provision (e.g orientation about the hospital, consumer rights);
- procedural information (e.g. ultrasound)
- general health (e.g. diabetes, infant cardiopulmonary resuscitation, croup, menopause).

Although written information for consumers was available at the Women's and Children's Hospital on both 'normal events' and health 'problems', only two forms of information on caesarean section were routinely provided. These were: an optional class for women booked for caesarean section; and general caesarean section information forming a small part of the antenatal-class curriculum. Both of these were essentially didactic.

3.1.4 Peer support

As basic acquisition of knowledge, i.e information received through a pamphlet or brochure, is argued to be necessary but not sufficient in promoting behaviour change (Rosenstock, Strecher and Becker, 1988), the current program used a two-fold information resource package, incorporating a peer support program with distribution of pamphlets. Furthermore, evidence has shown that particular social

groups tend to use social networks for childbirth-related information rather than written information, and vice-versa (Aaronson et al., 1988; St Clair et al., 1989).

Since the mid-1970's, social support has been recognised as an efficacious coping resource or buffer during stressful life events (Zimet, Dahlem, Zimet and Farley, 1988). Broadly speaking, social support operates by "enhancing self-esteem and a sense of control over the environment..helping to engender positive emotional experiences" (Zimet et al., 1988, p.31). Although debate exists over the definition of social support, in broad terms social support can be characterised by "an exchange of resources between at least two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient" (Shumaker and Brownell, 1984, p. 13). Differences in definition of social support tend to centre on five key dimensions: the direction of the support (i.e support can be given or received); disposition (i.e availability vs. utilisation of support resources); description of support versus evaluation of satisfaction with support; content (i.e the form of support) and network (the social system(s) which provide the support) (Zimet et al., 1988, p. 31).

There is good evidence that social support can be effective in a plethora of different settings. This evidence stems from randomised controlled trials implemented to encourage breastfeeding (Schafer, Vogel, Viegas and Hausafus, 1998; Morrow, Guerrero, Shults, Calva, Lutter, Bravo, Ruiz-Palacios, Morrow and Butterfoss, 1999), provide support for dementia caregivers (Mohide, Pringle, Streiner, Gilbert, Muir and Tew, 1990), provide support for women with breast cancer and (Speigel, Bloom, Kraemer and Gottheil, 1989) and support for parents of low-birth-weight

and premature infants (Brooks-Gunn, McMartin, Casey, McCormick, Bauer, Bernbaum, Tyson, Swanson, Bennett and Scott, 1994). Glass (2000) also notes that social support can be beneficial as a secondary element to health education interventions, to extend or complement an existing intervention.

Ann Oakley's eminent work in the area of social support and pregnancy has bolstered the belief that support confers great benefit for pregnant women, particularly women who are socially disadvantaged. In her most widely cited study (Oakley, Rajan and Grant, 1990), women were randomised to receive either a social support intervention (24-hr contact with and home visits from research midwives, in addition to standard antenatal care) or standard antenatal care only. This research was carried out with a sample of predominantly disadvantaged women (77%) who had a history of delivering low birth weight babies. Social support was found to confer benefit in antenatal, intrapartum, perinatal and postnatal periods. Women in the intervention group were less likely to have an epidural, hospital admission during pregnancy, and were more likely to have vaginal delivery and to have a mean birthweight 38g higher than the control group. Women receiving the social support intervention were also significantly healthier in the first weeks postnatal. Despite this evidence, Oakley notes that such findings have met with some degree of reproach by the United Kingdom medical profession who, she argues, see this form of intervention as 'threatening' or at least irrelevant to clinical practice (Oakley, 1992).

Studies identifying the efficacy of midwife-managed continuity of care could shed light on possible mechanisms underlying the value of social support for pregnant

women (Waldenstrom et al., 1998). The central notion implicit in these studies, as in Oakley's research (Oakley et al., 1990), is the presence of a continuing relationship between pregnant women and their carer, or as Oakley argues, individuals who are "caring for mothers as whole people, and giving personalised attention and help...respecting and encouraging normalcy, not .. justifying expensive and health-damaging interventions" (Oakley, 1992, p.327).

Peer support, a dimension of social support, is often typified by in-home, one-to-one counselling or advice which operates on the principle of 'universality', i.e. in providing individuals with contact with others who have shared similar experiences (i.e. peers), they will not feel alone in their experience. As Curran and Church (1998) found in an observational study of peer support through audio teleconferencing for rural women with breast cancer, "the realization that others have similar problems..empowers participants to share their personal experiences and feelings through the knowledge that others will understand them, group cohesion and the recognition of commonalities" (p.381). An example of such a support program in the Australian setting is the Victorian Prahran Mission's Mothers Support program (Place, 2001). This program involves peer support as part of overall support offered to mothers struggling to cope with mental illness and the day-to-day life with, and needs of, their children. In this case, peer support aims to provide clients with recreational and social activities with women who are past or present clients, and to encourage support through shared experiences.

3.1.5 Conclusion

This introduction has summarised the rationale for the development of a program involving information-based resources for pregnant women. The program was derived from health promotion principles of empowerment and social responsibility, in keeping with the 'new public health' movement (O'Connor et al., 1995). This introduction has also described evidence to suggest women's information needs and sources are influenced by their social background. In particular, some social groups appear to use social networks more than written information. For this reason, a program encompassing both written and social network components was developed. The following sections of this chapter outline in greater detail the development of these two resources.

3.2 Pamphlets

3.2.1 *The target audience*

In South Australia nearly one in four women (24.9%) will have caesarean section (Nassar et al., 2001). Given this statistic and the difficulty in identifying women ‘at risk’ for caesarean section (Enkin et al., 2000), pamphlets were distributed to a consecutive sample of *all* pregnant women attending the Women’s and Children’s Hospital for their 18 week morphology scan.

3.2.2 *Development of the pamphlet information*

Two different types of pamphlets were included in the program:

An **informational pamphlet** – *“Caesarean Section - What Are Your Options: Information for women who are considering caesarean section for the birth of their baby”*

and

A **motivational pamphlet** – *“Making informed decisions about caesarean section: information for all pregnant women, their partners and family”*.

It was decided that women should have access to evidence-based information regarding the relative risks and benefits of caesarean section (informational pamphlet), while also receiving a more ‘informal’ pamphlet expressing women’s experiences of caesarean section in their own words (motivational pamphlet). While the author was responsible for the development of the motivational pamphlet, the informational pamphlet had been developed by a midwife researcher as part of

her Master of Public Health (Appendix 1). Permission was obtained for this pamphlet to be distributed and evaluated for the purposes of the program. This chapter will focus only on the planning and development of the motivational pamphlet.

A discourse analytic study of women who had experienced caesarean section formed the basis for the format of the motivational pamphlet (Carty, Turnbull and Le Couteur, 1997). Ten women had taken part in this in-depth analysis focusing on the way women constructed their experience and role in the decision-making for caesarean section. Certain themes arose from these interviews:

- *'the notion of other',*
- *'denying individual responsibility',*
- *'justifying insisting on a CS',*
- *'medical practitioners as the active agents in decision',*
- *'caesarean as something that just happened',*
- *'women as irrational',*
- *'safety of the baby/only choice',*

Therefore, the aim was to incorporate these themes into the pamphlet, in the form of quotes from participants in the discourse analytic study, to provide the motivational component. Research has found that women's motivation, and underlying attitudes in particular, are critical components of their decision to have caesarean section. As such, these often cannot be counteracted by written or verbal information (Fraser et al., 1997). Therefore, by developing a pamphlet that encompassed both affective

and motivational components, the aim was to ensure the pamphlet differed from, whilst at the same time complemented, the more evidence-based informational pamphlet.

The quotes were followed by some prompts in the form of an alternative ‘narrative’ in a separate box, headed *"what you can do"*. The aim of the quotes and the contrasting narrative were to provide women with different ideas for thinking about the issue raised by each narrative. For example, if a quote raised the issue of caesarean section as a decision made primarily by the clinician, the motivational ‘prompts’ sought to encourage women to seek information during pregnancy regarding situations where caesarean section is necessary and where it could be avoided.

Four themes and associated quotations from the study carried out by Carty and colleagues (Carty et al., 1997) were included in the pamphlet (Table 3.1).

Table 3.1 Themes and associated quotes from discourse analytic study
(Carty et al., 1997)

Theme	Associated quotes
Medical practitioners as the active agent in the decision	<i>Erica: ... "Yeah, he [her obstetrician] said that he would let me go for a trial of labour, but it wouldn't be wise because of all the risks."</i> <i>Dani: ... "as my back cramps got worse, I had, my pelvis was really loose, and I just thought no I'll have a caesarean. I thought no I won't, sort of chopped and changed, and then (.) I went to see the, a different gynaecologist a week before, and she said that I was still really high, and I hadn't dropped, and she said I'm going to probably need to have a caesarean. So that was it, I said right I'm going to have one."</i>
Caesarean as something that just happened	<i>Fiona: ... "they were looking at each other, talking their doctor lingo, and that's when I lost that hour and a half. I don't know what happened, it's just like, sign this, drink that, the next minute theatre."</i> <i>Dani: ... "it was all just a blur, it was like I just lay there and they do what they have to do".</i> <i>Sophie: ... "I would say I was incapable of making any decisions, and it was his opinion [husband's] that helped make the final decision."</i> <i>Alice: ... "I mean in my case I made the decision, but I was just too confused in the end, and it all just came too quickly, but I'm glad that I had a caesarean".</i>
Safety of the baby	<i>Kathy: ... "I think generally they do so many (caesarean sections) now that it's like having your tonsils out."</i> <i>Alice: ... "[asked what the benefits of having a caesarean section were]...probably the only benefit is that he's here and he's okay and nothing went wrong, you know, and it was all by the book. You know, nothing went wrong, nothing could go wrong, it was all procedure, you know, whereas the other way it was all risk taking."</i>
Only choice	<i>Nikki: ... "I think it got to the point where although it was elective, I really had no choice...so yeah, I elected to have it but felt that(.) I won't say I felt pressured to have it, but I felt as though all the medical people were saying that this baby wasn't going to come out of his own accord and so there really was no choice."</i>

Selection of the relevant information, which would form the ‘prompts’ following the heading *‘What you can do’*, was then carried out. In addition to informal consultation with midwives at the Women’s and Children’s Hospital, other important sources of this information were the New Zealand Maternity Service Consumer Council’s “Childbirth choices” (Maternity Services Consumer Council, 1999), the World Health Organization’s “Keeping Birth Normal” (WHO, 1999), the United States International Caesarean Awareness Network (ICAN, 1999) and the International Childbirth Education Association Caesarean Options committee (ICEA, 1999). These groups provide information for consumers (and providers) on avoiding unnecessary caesarean, the procedure itself, birth as a normal event and childbirth choices and rights. This information, along with the quotes, was then condensed to fit onto both sides of a single A4 sheet of paper that could be folded into three to make the pamphlet.

A draft version of the pamphlet, which at this stage was titled *“Caesarean section or vaginal delivery? know your options - Information for all pregnant women”*, was then compiled (Appendix 2).

3.2.3 Piloting the pamphlet

The author of the informational pamphlet had carried out a piloting process involving feedback from both consumers and midwives. Therefore, the author carried out pilot evaluation of the motivational pamphlet with a number of one-to-one interviews with relevant stakeholders.

These key stakeholders consisted of:

- clinicians known to the author and her supervisor through research activities at the Women's and Children's Hospital (one obstetrician, and two midwives). The obstetrician was a member of the research team and was involved in all aspects of development and piloting of resources.
- networks in the local community (three consumers from CARES SA, Caesarean Awareness, Recovery, Education and Support group, South Australia).
- A random sample of ten pregnant women

Clinicians and consumers in the local community were shown the draft pamphlet and asked their opinion on necessary omissions or recommendations of additional information. These stakeholders were also asked about their opinion on timing and method of distribution of the pamphlets.

A random sample of pregnant women were approached to appraise the pamphlet when attending antenatal clinic sessions at Women's and Children's Hospital. The procedure which took place over the course of one week went as follows: Case notes of women in the clinic that day were reviewed in order to identify women who were approximately 16-18 weeks pregnant (i.e equivalent to the time it was expected to distribute the pamphlet to women in the program); a list was then compiled of eligible women and the times they were due for their appointment;

when a woman on the list was known to be in the clinic waiting room, she was approached and invited to evaluate the pamphlet.

Women were told that the pamphlet was being developed to accompany a second more information-based pamphlet. To prevent bias in appraising the pamphlet, women were not told that the author had developed the pamphlet. If queried, the author stated that the pamphlet was being developed by the University of Adelaide.

If women agreed to take part in pamphlet evaluation they were asked to read an information sheet and sign a consent form (Appendix 3). Once consent was obtained, women were asked to read the pamphlet and then complete a short questionnaire (Appendix 4). Once the pamphlet had been read, the questionnaire was distributed and women were left alone so that it could be completed. The questionnaire asked women to indicate whether they agreed or disagreed with questions pertaining to readability (*"The pamphlet was easy to understand"*, *"The pamphlet was easy to read"*, *"There was too much information"*) and appropriateness (*"The options offered in this pamphlet, I could put into practice"*, *"The pamphlet would be helpful for pregnant women"*, *"The issues presented were real-to-life"*). Women were also asked to comment on two open-ended questions regarding features of the pamphlet which interested them and which aspects they would modify.

3.2.4 Results

3.2.4.1 Pamphlet timing

The majority of stakeholders felt women should receive the pamphlets at around 16-18 weeks gestation. This level of gestation was deemed early enough in the pregnancy for women to be encouraged to consider the relevant issues prior to any ‘counter-influence’ from clinicians, friends or family. It was thus decided that pamphlets would be distributed, at recruitment, when women presented for their standard 18-week morphology ultrasound. It was also believed that distributing the pamphlets at this time would help women distinguish them from the myriad of written information they receive at their 12-week booking visit. The timing of pamphlet distribution would also have possible generalisability should the program be replicated. That is, despite the author being responsible for distribution for the current program, it would be relatively straightforward for staff in the ultrasound clinic to distribute the pamphlets when women presented for their appointment.

3.2.4.2 Stakeholder consultation

In summary, the main changes recommended by clinicians and consumers are described in Table 3.2.

Table 3.2 Summary of main changes to draft pamphlet from stakeholder consultation

Section of pamphlet	Suggestion
Title	Change to: “Making informed decisions about caesarean section – information for all pregnant women, their partners and family”.
Cover page	Include a statement stating, “to accompany pamphlet entitled: Caesarean section – what are your options?”
Link	Include link to relevant resources in community and hospital
Quotes and themes	Include only one quote per ‘theme’ and include different headings which are more personalised, for example “The doctor made the final decisions”, changed to “Your role in the decision-making”.
General	Emphasise that women should not neglect their own health and wellbeing. Change minor formatting to ensure pamphlet is simple and clear in layout, including omitting unnecessary underlining, boxes and punctuation marks.

Results of the piloting phase conducted with pregnant women, in terms of readability, appropriateness, interest and changes are as follows:

Readability

Nine out of the ten respondents agreed that the pamphlet was easy to understand, easy to read and disagreed that there was too much information in the pamphlet. One respondent disagreed that the pamphlet was easy to understand and easy to read, and she felt there was too much information in the pamphlet.

Appropriateness

Again, nine out of ten respondents agreed that the pamphlet offered options they could put into practice, that the pamphlet would be helpful for pregnant women, and that the issues presented were real-to-life. The same respondent disagreed with all three of these statements.

Interest

When respondents were asked in the open-ended question which, if any, of the components of the pamphlet interested them, 7 participants provided a number of different responses (3 did not respond):

- *“Everything because this is my first pregnancy”*
- *“Having a birth plan”*
- *“Information about the fact that CS isn’t always the last option, that you have a choice”*
- *“What women thought of their CS experience, I had never had a CS so hadn’t given any thought to what it would be like”*
- *“The comfort you have with your care provider-the decision in most cases can be made prior to birth”*
- *“All of it”*
- *“Anecdotes are useful”*

Changes

Half (n = 5) of the respondents felt the pamphlet did not need changes. Of the remainder, two women did not respond to this question and three suggested changes. Two of the three respondents who suggested changes had indicated satisfaction with the pamphlet throughout the questionnaire, and the one respondent who had indicated dissatisfaction with the pamphlet provided a whole page of written suggestions for change. This woman’s response was followed up by a discussion with the author where she and her partner suggested areas for pamphlet modification.

The main changes women (n=3) suggested were somewhat general and are summarised as follows:

- *Include information on procedural aspects of caesarean section and differences between caesarean section and vaginal delivery*
- *Include more information generally*
- *Change title of pamphlet*
- *Include opening statement: “during labour you may find that things don’t go according to plan...it is important to realise you have options and choices”.*
- *More emphasis on role of the woman’s partner (i.e. encouraging partners to be informed about childbirth options and representing these options on behalf of their partner during labour, particularly if she is unable)*

On the basis of feedback from clinicians and consumers, a number of minor changes were made to the content and layout of the pamphlet. Although several of the quotes and themes included in the pamphlet were changed in line with these recommendations, the general format remained the same. One recommendation was omitted, this being the suggestion to include caesarean section procedural information. It was decided that this issue was outside the scope and objectives of the pamphlet. Further, the revised pamphlet included a link to ‘Suggested Reading’ and ‘Resources’ which could provide women with procedural information if desired.

3.2.5 Testing the readability

Once the pamphlet had been evaluated and revised (Appendix 5), readability was measured using the SMOG Formula (Smith, Gooding, Brown and Frew, 1998). This formula is recommended for health promotion material (Hawe et al., 1990) and determines reading difficulty, ie. an approximate reading grade needed to read and understand the pamphlet. Following the SMOG Formula, the pamphlet was found to have a reading grade of 11, which translates, approximately, to the reading grade required to comprehend *New Idea*, a popular women's magazine. Hawe et al (1990) argue that in order for health information to reach a wide audience, information should have a reading grade of not more than 11 or 12.

3.3 Peer Support Network

3.3.1 *Objectives and function*

Peer support can have a twofold role, one of support when a situation or condition is present or, as in the current program, one of information prior to a potential situation arising. The peer support network was aimed toward providing an informal, one-to-one, home-based avenue for pregnant women to telephone another woman and have a discussion if, and when, they wished. The peer supporters were non-professionally trained women from the local community who had had either caesarean section, Vaginal Birth After Caesarean (VBAC), External Cephalic Version (ECV) or Vaginal Breech Delivery (VBD). Essentially, the peer supporters had experience in exploring caesarean section and its alternatives. As was the case in Oakley's (Oakley et al., 1990) social support intervention, these women offered a potential 'listening service' and source of practical information and support for women in the study if, and when, the need arose.

It was argued that such a network could assist women who had questions they either did not wish to ask staff at the hospital or did not have time to ask regarding caesarean section, or relevant alternatives. Further, the network was developed with the aim that women could telephone their 'peer supporter' and discuss issues on their own terms, from their own home, at a mutually convenient time.

The peer support network was planned on the basis that it was temporary and would function only for the duration of the program. The network was formed while recruitment for the program was being conducted. Women recruited for the

program received general information on the network and their 'peer supporter's' telephone number, in the second half of their pregnancy (approximately 28 weeks gestation). The rationale for this timing was that firstly, the support or information offered by the network may hold more relevance for women in the later stage of their pregnancy and secondly, this timeframe would restrict the peer supporter's need for availability to a period of 10-12 weeks.

During the development of the peer support network, two issues became pertinent. Firstly, it was deemed important to emphasise to program participants that the aim of the network was to provide friendly, informal and non-professional support. Further, if women had any 'serious' concerns regarding medical complications it was important that these were directed toward their care provider or relevant hospital staff. It was also important that program participants understood and respected the privacy of their 'peer supporter' at all times (i.e. by telephoning at mutually convenient times) and that they did not hold unrealistic expectations of her. These issues were highlighted in the information sheet distributed to women when they received the information on the peer support network (See Chapter 4).

To summarise, the aims and intentions of the peer support network were:

- To recognise and acknowledge that talking about shared realities can have great benefits for women, in all manner of settings.
- To acknowledge that women's talk is a valid and valuable source of information and support.
- To provide an avenue for women to contact other women, outside of a hospital/clinic setting.

- To enable women to share their experiences and exchange friendly conversation in an informal manner.
- To encourage women's confidence in their decision-making regarding their delivery.

3.3.2 The target audience

As previously mentioned, both resources were distributed to all pregnant women involved in the program. Therefore, it was argued that the network might meet the needs of different groups of pregnant women, including those:

- who had had previous caesarean section and who wished to talk to someone about alternatives;
- who were planning vaginal delivery but who wished to have information about caesarean section, in the event that the procedure became necessary.
- who developed a clinical indication for caesarean section (such as breech presentation, placenta praevia) and therefore sought advice or support.

3.3.3 Formation - consultation with key stakeholders

As was the case for the development of the pamphlet, ideas for the formation of the peer support network were reviewed by a number of key stakeholders. These included the obstetrician who was a member of the research team and several midwives. Advice and information was also sought from existing community-based peer support groups on how best to establish such networks and ways to 'train' peer supporters (personal communication, J Underdown, M Claire, 3 August 1999).

As a result of these consultations, which took the form of semi-structured interviews, it became apparent that one midwife felt that women might be hesitant to make use of the network. She felt that some women might feel uncomfortable telephoning a stranger in their home. Instead, she suggested that a 'caesarean section' or 'vaginal birth after previous caesarean coffee morning', held in the hospital, might be perceived as less threatening. Although the author took heed of these recommendations, it was decided that the aim of the program was to develop an innovative avenue for women to gain support and information, outside the hospital setting.

It became apparent during consultation for development of the network, that while peer support is not a new form of health promotion in South Australia, there was a lack of such support regarding caesarean section. Formalised community-based support for women seeking information about birthing options, particularly caesarean section, was scarce. It should be noted however that during the course of program development, the author consulted with a group of consumers in the early stages of forming a caesarean section awareness and support group. This group is currently holding regular meetings under the name CARES SA (Caesarean Awareness Recovery Education and Support – South Australia, Appendix 6).

3.3.4 Recruitment of 'Peer Supporters'

Two different forms of recruitment were used to invite women in the local community to become peer supporters. Firstly, a list was developed by the obstetrician on the research team which included the contact details of around 20 women who had had successful vaginal deliveries following either previous

caesarean section or successful external cephalic version (an exercise to turn the breech baby to the 'head down' position in utero) (Appendix 7). The obstetrician, who had been responsible for the obstetric care of all women included in the list approximately one year prior, made initial contact with women. It was decided to take this approach in order to alleviate any doubts women may have had over the 'legitimacy' of the network. Further, it was considered that he may be better able to allay any concerns over the reason for contact.

Of the 20 women on the list, the obstetrician made contact with seven. The remaining women were unable to be reached, primarily due to telephone disconnection or not being home at time of contact. All seven women agreed, in principle, to be involved in the network and to have their details passed on to the author. The author then telephoned these women and confirmed their agreement to being involved in the network. Depending on women's preference, the author either arranged to meet with each woman personally or to send an information sheet (Appendix 8), along with a letter (Appendix 9), to her home. In both cases a consent form for involvement in the network was completed (Appendix 10). Women were also asked a set of predetermined questions including the nature of their experience (e.g, "Did you have an external cephalic version or vaginal birth after caesarean?"), their preference for contact (e.g, "What day and time of the day would you prefer to be contacted?" and "How many women would you like to contact you?"). This information was then collated into a table to enable efficient management of the details of each peer supporter (Appendix 11).

The second technique for recruiting peer supporters took the form of a snowball sampling method (Bowling, 1997). This technique is one in which key informants who became known to the author during program development were invited to be involved in the network and also to suggest other interested people. Two women were recruited through the author's attendance at the aforementioned caesarean section support and information group. The author, while consulting an existing support network during network formation, made contact with another woman who expressed interest in becoming a peer supporter. Lastly, a woman known to the author's supervisor from the Women's Electoral Lobby also expressed interest. These four women were provided with an information sheet and written consent was obtained.

3.3.4.1 Eligibility

In general, women were eligible to become peer supporters if they:

- had had successful external cephalic version, vaginal birth after caesarean or vaginal breech delivery;
- had been well 'debriefed' and felt relatively positive regarding their experience;
- had a desire to support other women.

The obstetrician nominating women whom he felt were 'suitable' addressed the issue of ensuring women felt positive about their own birth experiences. Regarding the women recruited by the author, these women had independently expressed interest in the network and were involved in community groups related to empowering women. These factors were deemed an indication of their interest in

this area and wish to put their experience to 'good use'. Nonetheless, if potential peer supporters expressed any hesitancy or uncertainty about participation, they were not pressed to join the network. The overwhelming response when approaching women to become peer supporters (particularly those nominated by the obstetrician) was that they were both shocked and happy to be asked to use their experience to help other women. All of the women praised the idea of such a network and were enthusiastic about becoming involved. In demonstrating such attitudes it was deemed that these women felt that their personal experiences had been enriching and rewarding, and that they had the potential to offer excellent support and information for women in the program.

Eleven women formed the final community-based peer support network. This included consumers from CARES SA (caesarean support and information group, n = 2) and the local community (n = 9, including n = 7 from obstetrician list). Of these women, seven had had vaginal birth after previous caesarean, three an external cephalic version, and one a vaginal breech delivery. All women were sent a letter at the end of their allocated time as peer supporter, to notify them that they would not be receiving further contact from women in the program (Appendix 12).

3.4 Conclusions

Contemporary health promotion operates closely within the goals and principles of the 'new public health' movement, a movement generated from international meetings and conferences held by the World Health Organization over the last three decades (O'Connor et al., 1995). These principles are closely based around public participation, empowering and enabling individuals to take control of their health and helping people to develop skills they need to make healthy choices (WHO, 1986).

In agreement with these principles, the current program sought to develop and evaluate innovative resources aimed specifically at both raising awareness and providing the 'tools' for active participation in planning for childbirth. This chapter described the planning phase of this program, in line with the planning and evaluation cycle recommended by Hawe and colleagues (Hawe et al., 1990).

The planning of the program was influenced both by a 'gap' highlighted through an examination of the literature focusing on addressing rising caesarean section rates (Chapter 2) and with consultations with key stakeholders in the local community. These consultations demonstrated overriding support and encouragement for the program. All agreed with the potential benefits for women, in particular access to resources which both encouraged and enabled women and their partners to feel confident and informed about events surrounding pregnancy and childbirth. It was remarkable to talk with 'peer supporters' about the program and hear their praise of such an initiative. They often spoke about the lack of support and knowledge regarding relevant options when their caesarean section was discussed or when this

mode of delivery looked like being a possibility. Further, peer supporters were surprised to think that their experiences could potentially assist others and were genuinely excited about being able to make use of their experience.

As previously mentioned, another notable element of the developmental phase of the program was the relative dearth of both hospital and community-based information and support available for women and their families regarding caesarean section.

The following chapter describes the implementation phase of the program along with the development of a postnatal postal questionnaire developed to gain feedback regarding women's use of and satisfaction with the program.

Chapter 4 – Stage three: Program implementation

4.1 Introduction

The previous chapter described the planning and development stage of the program. The following chapter addresses the procedure for recruiting and distributing program resources to a sample of pregnant women. A postnatal postal questionnaire was developed as the primary tool to ascertain women's uptake and satisfaction with the program. The development of this questionnaire is outlined in detail in this chapter.

4.2 Recruitment

4.2.1 Recruitment setting

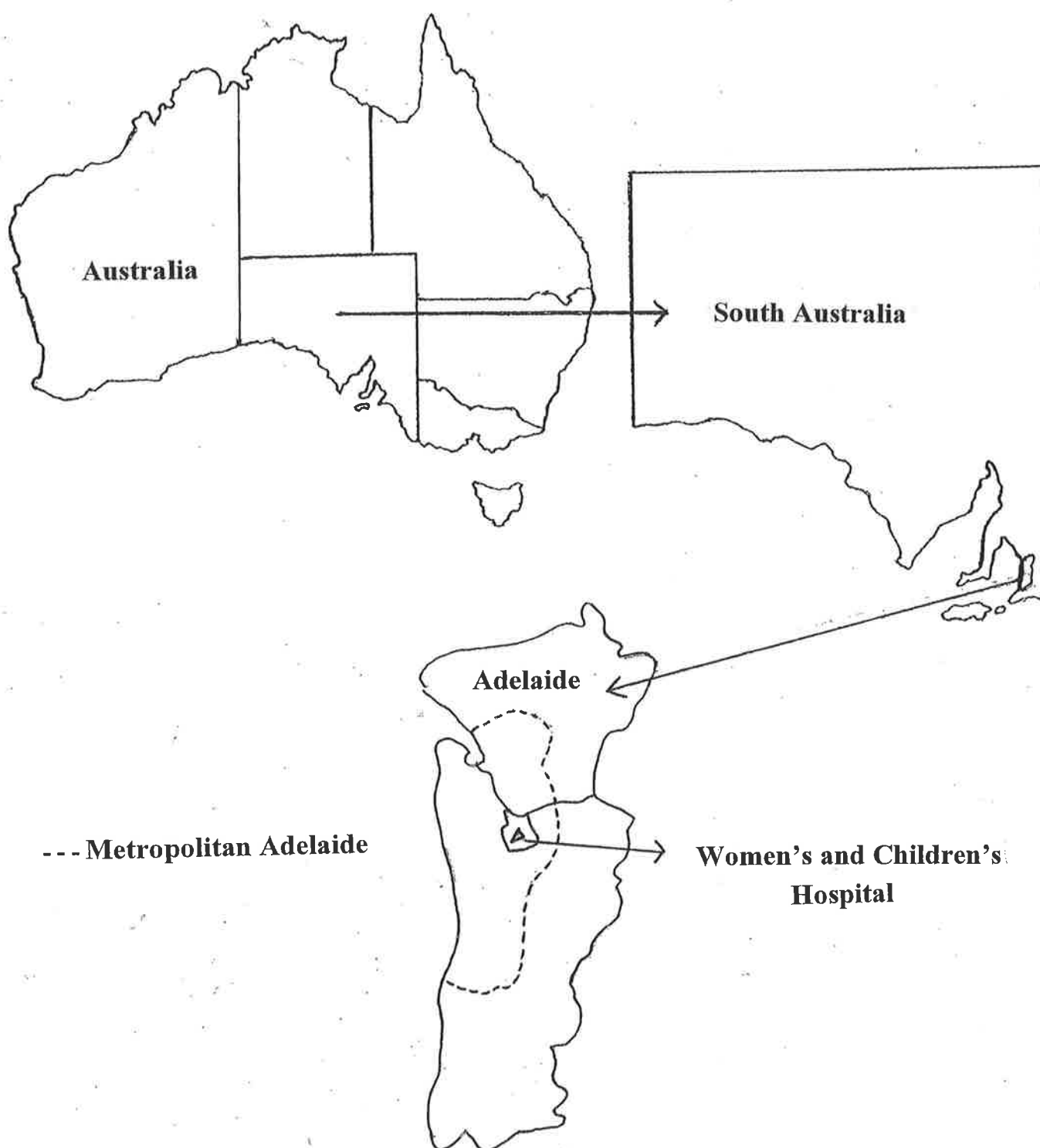
Women's and Children's Hospital, Adelaide, South Australia

South Australia sees approximately 18,000 notified births per year. These births take place predominantly in metropolitan teaching and metropolitan private hospitals (76%), with the remainder in country hospitals (24%) (Chan et al., 2001). The Women's and Children's Hospital is the largest obstetric service of five Adelaide metropolitan public teaching hospitals. Teaching hospitals are classified as either Level III or Level II hospitals. The Women's and Children's is a Level III teaching hospital due to availability of a high-risk pregnancy service and neonatal intensive care unit. Of approximately 9500 births delivered at these teaching hospitals per year, the Women's and Children's hospital delivers approximately 4000 (Chan et al., 2001).

Approximately 91% of women who birth at the Women's and Children's hospital are of European descent, 5% are Asian, 3% are Aboriginal, and 1% are classified as 'other' (including women from Middle East and Africa) (Chan et al., 2001).

Figure 4.1 depicts maps of Australia, South Australia and Adelaide. The Women's and Children's Hospital is located in the metropolitan area of Adelaide which, in 2001, had a population of 1,100,107. South Australia has a population of approximately 1,500,000 (Australian Bureau of Statistics, 2001b)

Figure 4.1 Maps depicting Australia, South Australia, Adelaide



Midwives and obstetricians work together at the Women's and Children's Hospital to offer a variety of obstetric services. These include Birthing Centre team midwifery, obstetrician/midwife shared care, shared care with a general practitioner, and antenatal education with physiotherapists (Women's and Children's Hospital, 2001). Shared obstetric care with a general practitioner is a model of care provided to many patients who are booked into Australian maternity hospitals. This model involves antenatal care shared between a general practitioner located in the women's local setting, and hospital maternity staff.

As was described in Chapter 3, the Women's and Children's Hospital has recently outlined a number of health promotion goals which underscore the importance of patients and their families having access to relevant health information. Furthermore, in line with a 'hospital without walls' philosophy, a number of programs have been instigated which emphasise community-based health care. These programs operate with the recognition that the home and community is an important healing environment. An example of such a program is the Antenatal Care Assessment study (Turnbull, Wilkinson, Stamp, Gerard, Ryan, Sweet, Kruzins and Swan, 2002). This study is evaluating the clinical, psychosocial and economic impact of day care for women developing hypertension, compared with the traditional model of inpatient care. The rationale behind day care is that enabling women to return home to their partner and family, at this potentially stressful time, may have possible benefits.

Following consultation with key stakeholders, it was decided that recruitment would take part within the hospital ultrasound clinic, at the standard 18-week fetal

morphology scan. Reasons for this decision have been discussed in Chapter 3. The ultrasound clinic is located one floor above the antenatal clinic and operates 5 days per week, from 8.00am to 5.00 pm. It provides all routine obstetric, neonatal and gynaecology ultrasounds for both private and public patients. Approximately 30 women are seen per day by 4 ultrasonographers (Women's and Children's Hospital, 2001).

Recruitment took place on every weekday excluding Thursday, as only a small proportion of obstetric ultrasounds were carried out on this day. This sampling method reduced the likelihood of sampling bias in that it ensured all members of the population of interest (pregnant women at Women's and Children's Hospital) had an equal chance of being selected in the sample (Bowling, 1997). Recruitment was restricted to mornings however, as private patients were predominantly seen in the afternoon. As will be mentioned in the section on eligibility (section 4.2.2.2), the program was restricted to public patients. This was due to inherent difficulties in maintaining contact with private patients given that they would be unlikely to deliver at the Women's and Children's Hospital.

A small room close to the clinic waiting area, used for counselling, was made available to the author for recruitment purposes. This room ensured a private and professional setting.

4.2.2 Sample Selection

4.2.2.1 Sample size

Due to the primarily exploratory nature of the study, sample size was based on feasibility considerations rather than power calculations. As the author was the sole researcher carrying out recruitment and distribution of program resources it was essential that the sample be of a relatively 'manageable' size. Therefore the sample consisted of consecutive women presenting in the ultrasound clinic during the period allocated for recruitment.

4.2.2.2 Eligibility

All pregnant women attending the clinic during the recruitment period were eligible to be invited to join the program, regardless of whether they had had a previous caesarean section.

The main eligibility criteria were:

- No more than one previous caesarean section
- Singleton pregnancy
- Public patient
- > 18 years of age
- Ability to complete a questionnaire in English

Regarding the criteria of no more than one previous caesarean section, women who had had two or more previous procedures may have had some pre-existing clinical indication for the procedure. As such, it was decided that distributing resources could be deemed to be inappropriate. On the other hand, program resources could

be highly relevant if a woman had had only one previous caesarean section, as it may be likely that the previous indication for the procedure was due to a complication of the last pregnancy which may not be evident in the current pregnancy.

As previously mentioned, private patients were not included in the program due to the potential difficulty of keeping contact with these women for the duration of the program. Although attending the Women's and Children's Hospital for their ultrasound scan, these women were likely to deliver at private hospitals, making follow-up problematic.

4.2.2.3 Procedure for determining eligibility

Consultation with hospital staff was carried out prior to initiation of recruitment to ensure availability of clinic booking lists one week in advance. The author was then able to review the list for potential study participants. Firstly, those women who had "OBST 2" beside their name were noted. This was a hospital booking code which classified women as being in their 2nd trimester, thus around 18 weeks gestation. Secondly, women's ages were noted to ensure they met the eligible age criteria (> 18 years). Thirdly, private or public status was noted to ensure only public patients were invited to join the program. The eligibility criterion of ability to complete the questionnaire in English had to be assessed either through later case note review (i.e. looking for a special note that the individual did not speak English) or when women attended the clinic and were invited to join the study.

Once details were noted from the clinic booking list, a review of potential participants' case notes was carried out at least one day prior to their coming to the clinic. Case notes were reviewed in the emergency department of the Women's and Children's Hospital where the following details were noted:

- Address (for sending questionnaire should woman consent)
- Obstetric history (no more than one previous caesarean section)
- Any special notes, i.e. major psychological or pre-existing medical condition, English language difficulties etc

If, after case note review, a woman was found to be ineligible for the study she was not approached when attending the ultrasound clinic. If there were any general concerns regarding the potential eligibility of a participant, the author sought a second opinion from her supervisor or the obstetrician on the research team.

4.2.3 Procedure for recruitment

On arrival in the clinic on the day of recruitment, the author 'highlighted' the names of potential participants on the client appointment sheet at the reception area. When a potential participant arrived in the clinic, administrative staff directed her (and often her partner, family and/or friends) to the author in the designated room. Once seated, the author introduced herself and explained the nature of the study. They were told that the University of Adelaide was inviting women to participate in a program which aimed to distribute and evaluate resources for all pregnant women regarding informed decision-making for childbirth. The author then explained:

“Some women have reported that they did not feel involved in the decision-making regarding their delivery, particularly when they have had caesarean section. We are asking all pregnant women such as yourself if they would like to be involved in a program to address this issue. Your participation in the program would involve receiving two pamphlets now and some information about a support group when you are 28 weeks. A questionnaire would then be sent to your home 7 weeks after your baby is born”.

The author then explained the content of the pamphlets and showed them to the woman. It was emphasised that while one of the pamphlets was directed toward women who were considering caesarean section, both pamphlets were written for all pregnant women who may wish simply to know more about caesarean section.

It was important to emphasise to potential participants several points regarding the aim of the program. Firstly, they were told that the program did not aim to encourage women to have caesarean section. Secondly, they were told that by participating in the program, they were not consenting to caesarean section for the birth of their baby. Thus, it was pointed out that the aim of the program was to encourage women to find out more about both caesarean section and vaginal delivery so that they could use this information to make *informed* choices regarding the birth of their child. Women were also reminded that they were under no obligation whatsoever to join the program, and that they could withdraw from the program at any time.

Women who agreed to join the program were asked to read an information sheet which clarified program intentions (Appendix 13). They were then asked to sign a consent form (Appendix 14). Program participants then received the two pamphlets and were reminded that they would be receiving some additional information at 28-weeks gestation. The author emphasised that she would organise this meeting, which would occur in the antenatal clinic. At this point the author attempted to ascertain whether the woman would indeed be attending the Women's and Children's Hospital at 28-weeks. If there was any doubt, for example if a woman was planning to be away from Adelaide at this time, she was ineligible to join the program. Further, if the woman was receiving shared-care there was a possibility that she would attend her general practitioner for this 28-week appointment. Where possible, the author only recruited women receiving shared-care who were planning on attending Women's and Children's Hospital for this visit.

Women who declined to join the program were thanked for their time and directed back to the clinic waiting room. Where possible the author noted the reason for non-participation.

4.3 Distribution of peer support network information

The second component of the intervention consisted of the distribution of information on the community-based peer support network (Appendix 15). As mentioned in the previous section, participants were notified at recruitment that they would be receiving this information when they reached 28-weeks gestation. Women received only a small amount of information regarding the network at recruitment, unless they had specifically requested more detail. They were informed, however, that they were under no obligation to make use of the network and that one of the aims of the study was to determine whether this resource, together with the pamphlets, was useful for pregnant women. That is, they were reassured that even if they did not actively use the resources, this was still of interest to the research team.

In order to determine when each of the participants were returning to the antenatal clinic for their 28 week visit, the author followed a process similar to that carried out for recruitment. On a weekly basis the antenatal clinic staff distributed a list of patients due for their antenatal visit, from which the author could identify program participants. When it was known that a participant was in the clinic, she was approached and reminded of her involvement in the study. If at this point the participant wished to withdraw from the study she was reassured that this was possible. The author then explained the features of the network:

“the idea of the peer support network is to provide you with the contact details of a woman in the local community who has experience with caesarean section, or who chose to explore alternatives to caesarean

section. This woman is available should you wish to ask any questions about caesarean section, or the alternatives to caesarean section, during the course of your pregnancy”.

Participants were advised that this was an informal support network, offering an alternative information source during pregnancy, or a means of accessing information if they did not have time to ask hospital staff questions during antenatal appointments. It was stated, however, that the network was not a source of specialised medical information and that such questions would need to be directed to clinical staff within the hospital.

As the network consisted of eleven women with various obstetric experiences, participants were given details and a choice of who they would prefer. For some women this was highly relevant, for example if a woman was considering vaginal birth after a previous caesarean section she could be matched with a peer supporter who had shared a similar experience. If women did not have a preference, because this was to be her first child, the author assisted in deciding on a peer supporter.

A specially designed card, with the peer supporter's contact details, was given to each participant. It was re-emphasised that even if women had no intention of making use of the network, they were still encouraged to take a card and could report in the later questionnaire their reasons for non-participation. The author then recorded the pairing of each participant and peer supporter which was entered into the peer supporter management table (Appendix 11).

Where women were noted to have reached 28-weeks gestation but did not attend the clinic, reason for non-attendance was sought. Some women changed appointments or did not attend the clinic when booked. When this was the case the author tended to miss these women and hence they did not receive the information on the peer support network. It was often possible, however, to distribute the information to the some participants at a later date, and gestation, when they were re-booked for the clinic.

Some participants were admitted to the antenatal ward during the course of their pregnancy and did not attend the antenatal clinic after this admission. When this was the case, these women were unable to receive the information on the peer support network.

4.4 Development of a questionnaire

4.4.1 *Postal questionnaires*

The potential disadvantages of postal questionnaires are well recognised (Windsor, Baranowski, Clark and Cutter, 1994). Perhaps the most obvious disadvantage is one of low response rates compared to face-to-face or telephone interviews. Research has also identified that postal questionnaires may under-represent certain groups in the community, with certain groups more likely to be non-responders (Cartwright, 1988). This argument remains somewhat equivocal however (Bowling, 1997). Postal questionnaires may also be less reliable than face-to-face interviews, due to less control over who completes the questionnaire, the order in which questions are completed and the degree to which respondents understand the questions. Finally, postal questionnaires assume a certain degree of literacy and commonality of language. This latter disadvantage was controlled for in the current program by ensuring, prior to recruitment, that all participants could complete the questionnaire in English.

Based on the context of the current program, a structured postal questionnaire was deemed to be the most appropriate instrument for measuring outcomes. One reason for this was that as participants may have been both physically and emotionally fatigued from childbirth, posting the questionnaire to their home would enable completion at a time suitable for them.

Another advantage of postal questionnaires is that they eliminate the likelihood of interviewer bias and enable a degree of anonymity, particularly when inquiring

about sensitive topics (Bowling, 1997). Further, considering the thesis parameters, a postal questionnaire was deemed both cost and time effective.

The questionnaire was posted, along with a reply-paid envelope, to participants' homes at seven weeks postnatal. Those evaluating maternity care programmes in the United Kingdom have recommended this time period for data collection, in order to avoid bias involved in asking women to report on aspects of pregnancy and childbirth too soon after delivery (Mason, 1989).

A further consideration when deciding on the use of a postal questionnaire was that research has found the sponsoring organisation of the questionnaire can affect response rates. Some studies have found that local universities have higher response rates compared with independent research organisations (Bowling, 1997).

4.4.2 Development of the questionnaire

Windsor and colleagues (1994) have proposed ten steps to questionnaire design, which guided the author in the design of the questionnaire. These steps are detailed in Table 4.1.

Table 4.1 Ten steps to questionnaire development
(Windsor et al, 1994)

Steps to questionnaire design
1. Formulate objectives
2. State objectives in behavioural terms
3. Review instruments
4. Review necessary skills
5. Construct a preliminary draft
6. Pilot-test the questionnaire
7. Develop data collection protocols
8. Redesign the questionnaire
9. Retest the questionnaire
10. Make a final redesign

4.4.2.1 Formulate objectives

In line with the main questions of process evaluation (Hawe et al., 1990), the objectives of the study were to determine whether:

- *participants actively used the resources and whether the program reached all participants (uptake)*
- *participants were satisfied with the resources they received (satisfaction)*

Further objectives were to explore:

- *the relationship between uptake of the program and subsequent mode of delivery*

- *the effect of the program on women's views of caesarean section*
– *particularly women considering caesarean section*
- *satisfaction with decision-making for caesarean section*

4.4.2.2 *State objectives in behavioural terms*

Did participants actively use the resources they received?

Three questions regarding women's use of the pamphlets were developed. These questions ascertained whether women used the resources, the reasons they did not use them, and their activities with the pamphlets after reading them. Five questions were developed regarding whether women received the information on the peer support network, how they were allocated to their peer supporter and their use of the network. One question relating to whether women felt reassured to have the contact, even if they did not make use of the network was included.

Were participants satisfied with the resources they received?

Women's satisfaction with the resources was ascertained on a 5-point Likert scale (strongly agree, agree, not sure, disagree or strongly disagree). For the pamphlets, eight questions were included which addressed the protocol for assessing the presentation style of pamphlets as recommended by Hawe et al (1990). These are shown in Table 4.2.

Women were also asked to respond to eight questions, on a 5-point Likert scale, to determine satisfaction with the peer support network. These questions related to whether women felt the network was useful and functioned as expected, and

whether they experienced any negative impact as a result of using the network (such as raised levels of anxiety etc).

Table 4.2 Protocol for assessing pamphlets
(Hawe et al, 1990)

Elements for assessment	Content of questions
Attraction:	Does the pamphlet create interest, catch people's attention? What do people like most and least about it?
Comprehension:	Is the pamphlet easy to understand? Is there anything confusing in the pamphlet?
Acceptability:	Is there anything offensive or irritating in the pamphlet?
Persuasion:	Is the pamphlet convincing? Does it persuade the reader to do something?

Was there a relationship between uptake of the program and subsequent mode of delivery?

Included in the socio-demographic questions section was one question regarding mode of delivery.

Did the program influence women's views of caesarean section – particularly those who reported considering caesarean section?

One question was included to determine the number of women considering caesarean section when receiving the informational pamphlet, at 18-weeks gestation. Those women who were and were not considering caesarean section were then asked one question about their views on the procedure having read the informational pamphlet.

Did the program influence women's satisfaction with their caesarean section?

Eight specific questions were included for women delivered by caesarean section. These questions replicated those included in an earlier study of women's response to their caesarean section (Turnbull, Wilkinson, Yaser, Carty, Svigos and Robinson, 1999). The main aim was to compare levels of satisfaction between women in the program and the group of women in the earlier study. All women had delivered by caesarean section in the same hospital but differed in that only one had been involved in the program. The questions related to satisfaction with the decision to have caesarean section, information provision and the decision making process. Women were asked to indicate, on a 5-point Likert scale, their levels of agreement with such statements.

Lastly, all women involved in the program were also asked to respond on 5-point Likert-scales, their opinion on several statements relating to their opinion of community views on caesarean section. The rationale for and the results of this analysis are detailed in Chapter 6.

Likert scales were deemed the most appropriate attitude and satisfaction measurement scale for relevant sections of the questionnaire. This type of scale is traditionally used by social scientists, as it is relatively easy for respondents to complete. The main disadvantage with the Likert scale is that there is no assumption of equal intervals on the scale. That is, although it can indicate ordering of respondent's attitudes, it cannot explain how far apart or close these attitudes might be (Bowling, 1997)

4.4.2.3 Review instruments

Windsor et al (1994) suggest that the next step to questionnaire development is to review current instruments, in order to determine whether an instrument measuring the phenomenon of concern exists. In the case of the present research, the literature review (Chapter 2) revealed no comparable research in this area.

4.4.2.4 Review necessary skills

When designing a questionnaire, Windsor and colleagues (1994) argue that a list of prerequisite knowledge and skills needed for individuals to achieve desired outcome behaviours should be formulated. The ability to both read and write in English were the foremost skills needed in order for women to participate in the program, i.e. to be able to read the pamphlets and complete the questionnaire.

4.4.2.5 Construct a preliminary draft

Once objectives had been identified in behavioural terms, a draft version of the questionnaire was developed. Specific questionnaire items were written, paying careful attention to wording and sequencing.

The questionnaire was divided into four sections. The first three sections related to uptake and satisfaction with both the pamphlets and peer support network. A final fourth section included questions regarding women's opinion of community views of caesarean section, attitudes toward their own caesarean section (if their most recent birth was by caesarean section) and socio-demographic and mode of delivery details.

Where respondents were asked to indicate on a 5-point Likert scale, their levels of agreement with certain favourable or unfavourable statements, positively and negatively worded statements were alternated. Social science researchers advocate this technique in order to avoid acquiescence response sets or “yes-saying” (Bowling, 1997). That is, researchers have found that respondents will be more likely to endorse a statement than agree with its opposite.

In order to be clearly understood by participants with minimal educational experience or from non-English speaking backgrounds, care was taken to ensure that questions were presented in short simple sentences. Additionally, it was important that language was non-judgemental and encouraged frank response regarding use of resources. Given that childbirth and pregnancy is a highly significant and personal event for women and their families, questions were worded in order to respect any differences in opinion and preference.

It was also important that all response categories were mutually exclusive and exhaustive. That is, if women were asked to indicate by ticking in a box, “*how many times did you refer to the pamphlet?*”, it was necessary to include all possible responses (i.e. from 1 to 20 times or ‘don’t know’, ‘can’t remember’), and also that categories did not overlap.

Finally, in order to demonstrate the face and content validity of the questionnaire, each of the questions needed to be appropriate and relevant to the actual objectives of the study (Bowling, 1997). Content validity refers to the importance of continually reflecting on ‘the extent to which the content of the instrument appears

logically to examine and comprehensively include, in a balanced way, the full scope of the characteristic or domain it is intended to measure” (Bowling, 1997, p.133). Face validity on the other hand is a more ‘superficial’ appraisal, relating to subjective assessment of whether the questions *appear* or look relevant. These considerations were ‘tested’ during the pilot evaluation of the questionnaire.

The questionnaire consisted of a combination of closed and open-ended questions. This technique is frequently applied in questionnaires to extract more information from respondents (Bowling, 1997). In the case of the current questionnaire, a question was posed “*Which of the following best describes what you did with the pamphlet after reading it?*”, followed by a choice of boxes including the open-ended choice ‘*Other (please specify.....)*’.

4.4.2.6 Pilot-test the questionnaire

The next step in developing the questionnaire was to pilot-test the draft version. Five people were invited to appraise each section of the questionnaire as if they were answering it. A larger scale pilot-test would have been optimal, however due to the nature of the program, it was deemed inappropriate to distribute the questionnaire to a representative group within the community, i.e pregnant women. That is, as the questionnaire was targeted primarily at women who had been involved in a specific program, the questions would be irrelevant to women who had not been involved.

Therefore, the pilot phase involved a small group of women (n = 5) who were asked to appraise the questionnaire. These women had experienced childbirth and were

associated with the author and her supervisor through the author's university department. Some of these women had previously had caesarean section ($n = 3$). One woman was a trained nurse, one a trained nurse-midwife and one a general practitioner. The remaining two women were general staff at the University of Adelaide. All women were asked to critically evaluate the questionnaire in terms of the considerations noted in the section above. In particular they were asked to note evidence of biased or judgemental language, ease of comprehension, answering and following instructions, mutual exclusiveness of the questions, length and layout of the questionnaire, and face and content validity of the questionnaire.

4.4.2.7 Develop data collection protocols

The questionnaire was pre-coded for quantitative data collection. That is, each response on the questionnaire was given a code number, which could then be entered into a database for tabulation. The pre-coded response choice of '*Other (please specify)...*' was included and open-ended responses recorded in the database for content analysis.

4.4.2.8 Redesign the questionnaire

The draft questionnaire was then redesigned in line with feedback from the evaluation panel. Main concerns raised were:

- instructions to respondents needed to be clearer (e.g Go to Q2)
- some questions needed to be clearer for ease of comprehension
- bias was identified in the wording of some statements regarding caesarean section
- questions relating to education level needed to be altered

- issues of face validity
- minor layout issues

The basis layout of the questionnaire remained the same, with changes made to the wording of certain questions, statements and instructions to respondents.

The final draft of the questionnaire, named University of Adelaide Birth Resources Project Questionnaire (Appendix 16), was then distributed to the Women's and Children's Hospital Research Ethics Committee for approval prior to being sent to participants. Approval was given on the proviso that only those women who delivered a healthy baby were to receive the questionnaire.

4.4.3 Administration of the questionnaire

As the questionnaire was due to be posted to women at 7 weeks postnatal, it was essential that the author maintained a precise record of each woman's estimated delivery date. Delivery dates were initially estimated from women's gestation at recruitment, however the author found it necessary to make regular checks of the hospital computer system to enable precise notification of delivery, particularly in the case of premature delivery.

4.4.3.1 Identifying adverse outcomes

Prior to distribution of questionnaires, it was necessary for the author to ensure women who had experienced adverse outcomes did not receive a questionnaire. Similarly, if a woman had experienced serious complications during delivery or pregnancy resulting in premature delivery or extended hospital stay, the author ascertained whether or not a questionnaire would be appropriate. This section sets

out the protocol devised, in liaison with the obstetrician on the research team, for the detection and management of adverse outcomes.

The author identified from the hospital computer system when a woman had delivered and had been discharged home. Following confirmation of delivery, the author reviewed women's case notes to ensure a live baby had been delivered. Participants' addresses were also confirmed and updated in the case of women who had moved since recruitment. Approximately seven weeks later, and prior to sending out each questionnaire, a list of women who had been identified as delivering their babies and having been discharged home was sent to the obstetrician on the research team. He then circulated this list to relevant paediatric and neonatology staff who could identify if, within seven weeks of delivery, any women or their babies had indeed experienced adverse outcomes.

If, for any reason, a woman was due to have delivered, but there was no record of this on the computer system, the author again checked this woman's situation with the obstetrician.

4.4.3.2 Follow-up and non-respondents

Respondents were identified by a code placed on the front of each questionnaire. A 'master' list of participants' names and codes was then checked when each questionnaire was returned. This enabled the author to identify those who had not responded. The procedure and timing for follow-up of non-respondents was based on an Adelaide University research program operating at the Women's and Children's Hospital, with a high response rate (personal communication, M Swan, July 2000). In line with this procedure the author waited 2-3 weeks for each

questionnaire to be returned. If, after this date, there was no response, the author telephoned the participant and asked whether they had received the questionnaire and whether they were experiencing difficulties in completion. If it was ascertained that they had not received the questionnaire, they were asked if another could be sent. If women simply stated that they had not had time to complete it, the author waited another two weeks and then telephoned them again. The author discontinued any further follow-up after two reminders.

4.4.4 Data Analysis

Questionnaire data were analysed using the Statistical Package for the Social Sciences (SPSS) for Windows, version 10.0 (SPSS Inc, 1999). One-way frequency distributions were used to determine magnitude of response to questions such as attitudes toward resources, use of resources and views on caesarean section. Socio-demographic details were also analysed using frequency distributions.

A second aim of data analysis was to determine whether socio-demographic and obstetric variables including education level, age group, main language spoken at home, parity and type of obstetric care, could predict uptake. Tests for association were analysed using chi-square tests or Fisher's exact test as appropriate. The chi-square test is primarily carried out to determine whether two variables could be deemed to behave independently of each other. That is, a significant chi-square indicates that the two variables, for example parity and level of activity, are associated, i.e. parity is associated with uptake of program resources.

P values were used to demonstrate the significance of association between variables (Windsor et al., 1994). The 5% level of significance is conventionally taken as the level required to declare a result arising other than from chance alone (i.e. a difference between two groups). It should be noted that the reporting of P values per se is somewhat controversial, especially with studies of small sample size or studies which do not follow traditional experimental designs (Brennan and Coft, 1994). For this reason, confidence intervals were calculated to provide an indication of the range of variables considered to be plausible for the population from which the sample was randomly selected (Gardner and Altman, 1986). Confidence intervals were calculated using the Confidence Interval Analysis software package (Gardner, 1992).

Following univariate chi-square analyses, logistic regression was used to identify significant *independent* predictors of program uptake. Logistic regression is frequently employed for the analysis of data where there is a dichotomous outcome variable (Kleinbaum, Kupper and Morgensten, 1982). For explorative univariate analyses, variables associated with a P value less than 0.20 were considered for inclusion in subsequent multivariate models (Hosmer and Lemeshow, 1989). For multivariate analysis, any variables with P values less than 0.05 were deemed to be significant independent predictors of uptake.

4.5 Conclusions

This chapter has outlined the processes involved in implementing the program. The setting has been described, as have the key methodological issues surrounding implementation of the program. In close consultation with relevant clinicians and general staff at the Women's and Children's Hospital, a procedure for the recruitment of a sample of pregnant women and the distribution of the program resources was carefully developed and refined.

This chapter has also detailed the development of a postal questionnaire, which would form the primary means of assessing women's uptake of and satisfaction with the program. Questionnaire development followed the ten stages suggested by Windsor and colleagues (1994). An important component of questionnaire development was a piloting phase, to ensure suitability of questions, comprehension, face and content validity.

The following chapter describes the process evaluation phase of the program. This phase is the final stage in the evaluation cycle utilised for this thesis (Hawe et al., 1990), and details women's responses to the program, as reported in the postnatal questionnaire.

Chapter 5 – Stage four: Process evaluation

5.1 Introduction

“We need to understand how health promotion interventions are interpreted and responded to by different groups of people, and for this we need process evaluation”. (Naidoo and Wills, 1994, p.284).

The previous chapter described stage three of the planning and evaluation cycle - implementation of the program and preparation for program evaluation. The following chapter addresses stage four – process evaluation. Process evaluation can be defined as “assessing the process of program implementation..addressing participants’ perceptions and reactions to health promotion interventions and identifying the factors which support or impede these activities”, (Naidoo et al., 1994, p.284).

The main questions involved in process evaluation (Hawe et al., 1990) form the basis of this final stage. These questions mainly include:

- how well did the program reach the target group (uptake)?
- were participants satisfied with the program?

A further question was answered by the research methodology:

- were the activities of the program implemented as planned?

Several further effects of the program were assessed. These include:

- the relationship between uptake of the program and subsequent mode of delivery
- the effect of the program on women's views of caesarean section - particularly those considering caesarean section
- the level of satisfaction with decision-making for caesarean section, particularly comparing women involved in the program and a non-concurrent control group.

5.2 Results - Recruitment

Of approximately 450 women booked to attend the ultrasound clinic during the recruitment period, 216 were potentially eligible to join the program. The term 'potentially eligible' refers to those women who were in their 2nd trimester and who were over 18 years of age. Further analysis of eligibility was carried out as the author checked potential participants' case notes. Some women, as detailed below, were not deemed eligible if at further scrutiny they were found to have had more than two previous caesarean sections or had a serious medical or psychological condition.

Recruitment was carried out over a period of seven weeks during 2000, on every day the clinic operated. Therefore, all eligible women who presented to clinic during this period were invited to join the program.

As Figure 1 shows, of these 216 potentially eligible women, 50 were not invited to join the program. The predominant reason for not being invited was when women were found not to meet eligibility criteria either on case note review or on attendance at the clinic. A number of women were seen by sonographers prior to the author discussing participation in the program. A small number of women could not be invited due to missing their appointment. After these exclusions a total of 166 eligible women remained, 15 of whom declined to join the study. A total of 151 women consented to join the program (a consent rate of 91%). Reasons for declining to join the program are presented in Table 5.1.

Figure 5.1 Results of recruitment

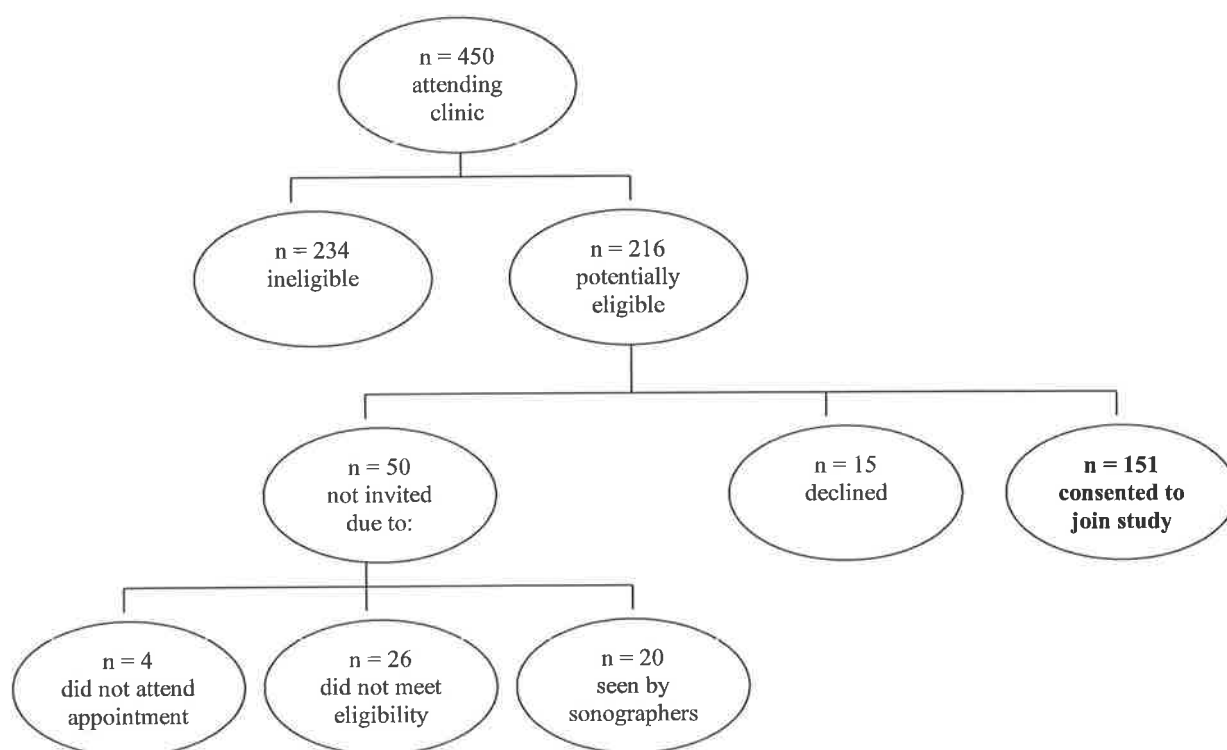


Table 5.1 Reasons for declining to join program

Reason	No. of women stating reason
Objected to or did not feel need for information on caesarean section	5
Too busy to be in a study	3
Objected to being in a study	3
Objected to signing a consent form	2
Partner was not present	1
Unsure about ability to complete a questionnaire with a new baby	1
Total	15

5.3 Results - Demographic characteristics of respondents and non-respondents

Of a total of 148 questionnaires mailed to women's homes (two of the total sample were not sent questionnaires due to adverse outcomes and one woman moved interstate during the study), 92 were returned. This led to a response rate of 62%. Characteristics of respondents (n = 92) and non-respondents (n = 56) are shown in Table 5.2.

Respondents ranged in age from 19 to 41 years, with an average age of 28.9 years. For just under half of the women (47%, 43/92) this was their first child and for just over one-third (32/92) this was their first pregnancy. Just under half (40/92) of all respondents had some tertiary education. English was the main language spoken at home (77%, 71/92) with the remainder speaking a variety of languages, predominantly Greek and Italian. The majority of respondents lived in urban areas with only 11% (10/92) reporting residence in rural areas. Over one-third (33/92) received shared care. The majority of respondents had vaginal deliveries (65%, 60/92). One in five had either an emergency (15%, 14/92) or elective (5%, 5/92) caesarean section.

The sample was representative of the national birthing population in terms of maternal parity, age and mode of delivery (Chan et al., 2001). The respondents and non-respondents were similar in terms of age level, parity and gravidae. Mode of delivery was similar between the groups, however slightly more non-respondents had an instrumental delivery (18%, 10/56 vs 9%, 8/92). Rates for vaginal birth after caesarean (VBAC) also differed in that none of the non-respondents compared with

4% (4/92) of respondents had VBAC. Socio-demographic comparisons between respondents and non-respondents were limited by the fact that only those details from women's case notes were available for both groups (parity, gravidae and mode of delivery). Information regarding education level, language spoken at home etc, derived from questionnaire responses, was limited to respondents.

Table 5.2 Socio-demographic and obstetric characteristics of respondents and non-respondents

	Respondents (n = 92)	Non-respondents (n = 56)
	%	%
Mean age	28.9	28.5
Age range	19-41	19-40
Parity		
Primiparous	47	51
Multiparous	53	49
Gravidae		
1	35	31
2	28	34
3	25	19
4	12	16
Mode of delivery		
Vaginal delivery	65	70
Emergency CS	12	11
Instrumental delivery	9	18
Elective CS	5	2
VBAC	4	-
CS planned but performed as emergency	3	-
Vaginal breech delivery	1	-
Education level		
Tertiary	43	
Some secondary schooling	35	
Higher degree (incl Bachelor, Master or Doctorate level)	22	
Main language spoken at home		
English	77	
Italian	4	
Greek	4	
Russian	2	
Spanish	2	
Hindi	2	
Czech	2	
Other	6	
Locality		
Rural	11	
Urban	86	
Other	2	
Obstetric care		
Shared care	36	
Standard antenatal clinic	24	
Midwives clinic	20	
Birthing centre	14	
Other	6	

CS = Caesarean section ,VBAC = Vaginal birth after caesarean section

5.4 Activities of the program

5.4.1 Assessing program uptake

5.4.1.1 Pamphlets

Table 5.3 demonstrates women's uptake of both pamphlets. While over half reported that they read all of the pamphlets, a substantial proportion of women read only part or did not read them at all. Reasons given for not reading the pamphlets varied, however most women stated that they thought the information was irrelevant to their situation or stated 'other' reasons for not reading. When asked to specify these other reasons in an open-ended question, women responded with such comments as: *"I knew I didn't need a caesarean"* (19 year old primipara), or *"Giving birth naturally, I didn't need to read it"* (35 year old multipara). Although reasons for not reading the motivational pamphlet tended to vary, half of respondents did not read the informational pamphlet citing they thought it was irrelevant to their situation.

Nearly half of participants said they kept the pamphlets but did not look at them again. Around 17% of women did actively use the information, referring to the pamphlets again after reading and around 20% reported discussing the information with their partner or family. None of the women reported keeping the pamphlets and discussing them with their care provider.

Table 5.3 Women's uptake of pamphlets

Variable	Response Categories	Motivational Pamphlet (%) (n = 92)	Informational Pamphlet (%) (n = 92)
Did you get around to reading?	Yes, all of it Yes, part No I can't remember	53 25 17 4	52 20 22 7
If No, was there a reason you didn't get around to reading?		(n = 16)	(n = 20)
	I thought it was irrelevant to my situation Other I didn't have time It didn't interest me I lost it	31 31 19 13 6	50 10 20 15 0
Describe what you did with the pamphlet after reading it		(n = 71)	(n = 69)
	I kept it but didn't look at it again I kept it and discussed it with my partner/family I kept it and referred to it a few times I threw it away I kept it and discussed it with my care provider	45 24 20 11 -	48 25 14 13 -

5.4.1.2 Peer Support Network

Of 58 women who reported receiving information on the peer support network, all but one did not make use of the network (Table 5.4).

Table 5.4. Women's use of peer support network

Variable	Response Categories	% (n =)
Did you receive the information on the Peer Support Network?		% n =92
	Yes	63
	I can't remember	23
	No	14
If did not, specify reason		% n = 13
	Went to GP for 28-week visit	31
	The researcher was not there	31
	I am not sure	31
	Did not attend 28-week visit	7
If you received the information, how were you allocated to your peer supporter?		% n = 53 (5 cases missing)
	I didn't really know so the researcher helped me choose	38
	Other	21
	I can't remember	19
	Interest in her particular experience	15
	Her experience was relevant to mine	7
Did you get around to contacting your peer supporter?		% n = 58
	No	98
	Yes	2
If you didn't contact your peer supporter, specify reason		% n = 57
	I didn't need to	49
	I didn't feel comfortable telephoning a stranger	18
	I felt it was irrelevant to my situation	18
	Other	14
	I didn't have time	1
How much do you agree with the statement: "Even though I didn't contact my peer supporter, it reassured me to know she was there if I needed or wanted to talk to her".		% n = 57
	Agree	47
	Strongly agree	25
	Not sure	16
	Disagree	9
	Strongly disagree	3

Only one participant reported trying to make contact with her peer supporter (her peer supporter was not home and she did not try to contact her again). This participant was a 34-year-old multipara (her third pregnancy) who resided in an urban area, spoke English at home, received Midwives Clinic care and had a vaginal delivery. Her reason for attempting contact with her peer supporter was:

“My baby was breech and they wanted to turn it, I was booked in the next day to have it turned. I tried to get hold of her late that night (but she was not there) to see if she could help me make up my mind whether to have a caesarean or let them turn it. But I decided it was safer to try and turn it and have natural birth – all worked out well.”

Reasons given by women for not contacting peer supporters varied (Table 5.4). Nearly half stated that they did not make contact because they did not feel the need. Feeling that the network was irrelevant to their situation or being uncomfortable telephoning a stranger were also identified as reasons. When asked to explain why they felt the network was irrelevant to their situation, most women reported that they had never had caesarean section before so did not think they would need one this pregnancy, for example:

“I never wanted a c-section, I gave birth the first time without any trouble, so I assumed I would do it again”. (33 year old multipara)

A number of women cited relying on friends and family for support and information so not needing the support offered by the network, for example:

"I have a wide circle of friends with small children..fantastic family support from sisters and in-laws etc, I have talked about birthing with lots of women over the past couple of years, some of which have had c-sections". (31 year old multipara)

"I have personal contact with other women who have had caesarean section, so I would have got my support mainly from them if I had wanted to find out what it was like". (23 year old multipara)

When asked if, despite not contacting their peer supporter, women felt reassured to know support was available if needed, 72% (41/57) agreed, including 25% who strongly agreed (14/57). Women who disagreed with this statement mostly felt uncomfortable with the idea of sharing their experience with a stranger, or felt generally uncomfortable:

"I think I didn't contact her because you never are really sure what outcome your pregnancy is going to be. The reason is I never tempt fate as I've had two previous miscarriages before". (33 year old multipara)

"I would not have contacted her because I felt uncomfortable about talking to someone I didn't know" (33 year old multipara)

"I am not sure if her support was really valuable. This is more of a family affair or a personal thing". (41 year old multipara).

5.4.2 Predictors of program uptake

As program participants did not use the peer support network, analyses of predictors of program uptake were restricted to use of the pamphlets.

Both univariate and multivariate statistical analyses were carried out to determine whether socio-demographic and obstetric characteristics influenced participation in the program. Socio-demographic and obstetric characteristics included education level, age, area of residence (urban or rural), main language spoken at home, type of antenatal care, parity and mode of delivery. After identifying significant socio-demographic predictors of program usage from univariate analysis, logistic regression was carried out.

Two separate outcomes were analysed:

- Likelihood of reading the pamphlets and
- Likelihood of reading the pamphlets and then actively using the pamphlet information.

The first outcome related to whether socio-demographic and obstetric characteristics could predict likelihood of reading the pamphlets – regardless of activity with the pamphlet information after reading. The second outcome related to whether socio-demographic and obstetric characteristics could predict active use of the pamphlets, i.e. when respondents not only read the pamphlets but also discussed the information with their partner or family, or referred to the information subsequent to initial reading.

5.4.2.1 Univariate analysis of association between pamphlet use and socio-demographic and obstetric characteristics.

Chi square tests were carried out to test for levels of significance for each of the variables. As described in Chapter 4, for purposes of selection of potential predictors in the subsequent multivariate models, a significance level of 20% was used for the univariate analyses (Hosmer and Lemeshow, 1989). To present a more precise 'picture' of the research findings, 95% confidence intervals are reported alongside P values.

As can be seen from Table 5.5, significant predictors of pamphlet use were parity, age and education level.

Table 5.5 Factors significantly associated with uptake at univariate analysis*

Reading (n = 92 women)				Motivational pamphlet			Informational pamphlet		
Variable	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P
Education Level									
1. Some secondary	1.0						1.0		
2. Tertiary	1.8	(0.7-4.6)					1.4	(0.6-3.7)	
3. Higher Degree	3.4	(1.0-11.2)	0.12				4.3	(1.3-15.1)	0.05
Parity									
1. Multiparous	2.0	(0.9-4.6)	0.08				3.2	(1.4-7.5)	0.01
2. Primiparous	1.0						1.0		
Age-group									
1. 19-23							1.0		
2. 24-28							0.7	(0.2-3.0)	
3. 29-33							2.0	(0.5-7.9)	
4. 34-41							3.0	(0.7-12.9)	0.09
Reading and active (n = 92 women)				Motivational pamphlet			Informational pamphlet		
Variable	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P
Parity									
1. Multiparous							2.7	(1.0-7.4)	0.04
2. Primiparous							1.0		
Age-group									
1. 19-23							1.0		
2. 24-28							2.6	(0.3-25.3)	
3. 29-33							3.7	(0.4-33.0)	
4. 34-41							9.2	(1.0-83.8)	0.08

* at 0.20 level

When the outcome of interest was likelihood of reading, those women with a higher degree, women who were aged over 34 years and women who were multiparous were significantly more likely to have read the pamphlets, regardless of activity subsequent to reading.

When the outcome of interest was likelihood of actively using the pamphlet information, again those women aged over 34 years and women who were

multiparous were most likely to initially read and then actively use the pamphlet. This relationship existed only for the informational pamphlet. Reading and active use of the motivational pamphlet could not be predicted by social and obstetric characteristics.

5.4.2.2 Multivariate analysis of association between pamphlet use and socio-demographic and obstetric characteristics.

Socio-demographic and obstetric characteristics found to be significantly associated with pamphlet use following univariate analysis (at or below the 0.20 level), were then considered together in a logistic regression model. This enabled identification of *independent* predictors of pamphlet use. As previously mentioned, P values up to the 5% level were considered statistically significant in the logistic regression modelling.

As with univariate analysis, logistic regression was carried out for each pamphlet analysing two separate outcomes: likelihood of reading and likelihood of reading and actively using the pamphlet information.

As can be seen in Table 5.6, education level and parity were significant independent predictors of reading the pamphlets. Having a higher degree was an independent significant predictor of reading both the motivational and informational pamphlets. Parity was an independent significant predictor of reading the informational pamphlet only. Multiparous women were nearly three times more likely to read this pamphlet compared with women having their first child. There were no significant independent predictors of reading and active use.

Table 5.6 Odds ratios for association between socio-demographic and obstetric characteristics of respondents and uptake of pamphlets

Reading (n = 92 women)	Motivational pamphlet					Informational pamphlet				
Variable	Unadjusted OR	95% CI	Adjusted OR	95% CI	P	Unadjusted OR	95% CI	Adjusted OR	95% CI	P
Education Level										
1. Some secondary	1.0					1.0				
2. Tertiary	1.8	(0.7-4.6)	1.9	(0.7-5.0)	0.19	1.4	(0.6-3.7)	1.7	(0.6-4.5)	0.31
3. Higher degree	3.4	(1.0-11.2)	3.6	(1.1-12.0)	0.04*	4.3	(1.3-15.1)	5.5	(1.4-22.0)	0.02*
Parity										
1. Multiparous	2.0	(0.9-4.6)	2.1	(0.9-5.0)	0.09	3.2	(1.4-7.5)	2.8	(1.1-7.5)	0.04*
2. Primiparous	1.0					1.0				
Age group										
1. 19-23						1.0				
2. 24-28						0.7	(0.2-3.0)	0.5	(0.1-2.3)	0.38
3. 29-33						2.0	(0.5-7.9)	1.2	(0.3-5.2)	0.79
4. 34-41						3.0	(0.7-12.9)	1.3	(0.3-6.5)	0.75
Reading and active (n = 92 women)	Motivational pamphlet					Informational pamphlet				
Variable	Unadjusted OR	95% CI	Adjusted OR	95% CI	P	Unadjusted OR	95% CI	Adjusted OR	95% CI	P
Parity										
1. Multiparous						2.7	(1.0-7.4)	1.9	(0.7-5.9)	0.23
2. Primiparous						1.0				
Age group										
1. 19-24						1.0				
2. 24-28						2.6	(0.3-25.3)	2.7	(0.3-26.4)	0.40
3. 29-33						3.7	(0.4-33.0)	3.1	(0.3-28.9)	0.39
4. 34-41						9.2	(1.0-83.8)	6.9	(0.7-66.0)	0.09

*denotes those variables significant at the 5% level

5.4.3 Assessing participant satisfaction and program quality

In addition to measuring program uptake, a third and important component of process evaluation is to measure participant satisfaction and program quality. As Hawe et al (1990) note, the aim of this component of process evaluation is not to assess learning per se but to evaluate quality and presentation of the pamphlets.

Elements of a standard protocol for assessing the presentation style of pamphlets (Hawe et al, 1990) informed the types of statements included to measure satisfaction (see Chapter 4). These questions related to pamphlet attraction, acceptability, persuasion and comprehension.

Tables 5.7 and 5.8 demonstrate women's satisfaction with the motivational and informational pamphlets.

Table 5.7. Level of satisfaction with motivational pamphlet

Satisfaction statements (n = 71 women)	Strongly agree (%)	Agree (%)	Not sure (%)	Disagree (%)	Strongly disagree (%)	Can't remember (%)
Attraction:						
1. Pamphlet told me things I hadn't considered.	4	61	14	15	3	3
2. Pamphlet didn't provide enough information for me.	-	8	20	60	10	2
3. I think this pamphlet should be given to all pregnant women	34	48	13	4	-	1
Acceptability:						
4. Some of the quotes in the pamphlet distressed me.	-	10	11	54	23	2
5. The information in the pamphlet made me anxious	-	8	14	52	23	3
Persuasion:						
6. Pamphlet prompted me (or partner) to ask questions during pregnancy wouldn't have ordinarily thought of.	6	37	15	31	8	3
7. Pamphlet prompted me (or partner) to ask questions during labour wouldn't have ordinarily thought of.	4	29	13	41	10	3
Comprehension:						
8. There were too many ideas presented in the pamphlet.	1	1	21	60	14	3

Table 5.8. Level of satisfaction with informational pamphlet

Satisfaction statements (n = 69 women)	Strongly agree (%)	Agree (%)	Not sure (%)	Disagree (%)	Strongly disagree (%)	Can't remember (%)
Attraction:						
1. I learnt new things about CS from this pamphlet	19	49	12	19	1	-
2. I would recommend this pamphlet to friends	23	58	12	6	-	1
3. I think vaginal birth is safer than CS	21	28	32	15	3	1
4. I didn't know about the alternatives to CS	3	33	22	32	9	1
5. I think fear of labour is the reason a lot of women have a CS	20	36	28	10	4	1
Acceptability:						
6. The information in the pamphlet made me scared about birth in general.	3	10	13	57	17	-
7. The information in the pamphlet made me scared about vaginal delivery.	1	1	9	59	28	1
8. The information in the pamphlet made me scared about CS	3	16	14	48	17	1

CS = Caesarean section

5.4.3.1 *Attraction – Did the pamphlets create interest? Did they capture women’s attention?*

Motivational pamphlet: Overall, 65% (46/71) of women agreed (including 4% who strongly agreed) that the pamphlet told them things they had not considered. The majority of women reported that the pamphlet contained adequate information with 70% (50/71) disagreeing with the statement – *“The pamphlet didn’t provide enough information for me”*. Over 80% (58/71) of women agreed (including one-third who strongly agreed) that this pamphlet should be given to all pregnant women.

Informational pamphlet: The majority of women (68%, 47/69) agreed (including 19% who strongly agreed) that they learnt new things about caesarean section from this pamphlet. When asked their opinion on the statement – *“I didn’t know about the alternatives to caesarean section”*, whilst over one-third (25/69) agreed or strongly agreed with this statement, over half of women (37/69) were ‘not sure’ or disagreed with the statement. When asked whether they thought vaginal birth was safer than caesarean section, responses varied. Over half of women (39/69) agreed or strongly agreed with the statement - *“I think fear of labour is the reason a lot of women have a caesarean section”*. Overall, when asked whether they would recommend this pamphlet to friends, 81% (56/69) of women agreed.

5.4.3.2 *Acceptability- Was there anything offensive or irritating in the pamphlets?*

Motivational pamphlet: Although the majority of women (77%, 55/71) disagreed with the statement – *“Some of the quotes in the pamphlets distressed me”*, just over one-fifth (15/71) of women agreed or were ‘not sure’ about their opinion on this

statement. Similarly, when asked whether the pamphlet made them anxious, although most (75%, 53/71) disagreed with this statement, over one-fifth (16/71) of women agreed or were 'not sure' about their opinion on this statement.

Informational pamphlet: While the majority of women (74%, 51/69) disagreed with the statement, *"The information in the pamphlet made me scared about birth in general"*, approximately one in four women (18/69) were unable to disagree with this statement. The majority of women (87%, 60/69) disagreed that the pamphlet made them scared about vaginal delivery. One in three women (23/69) either agreed or were unsure whether the pamphlet made them scared about caesarean section.

5.4.3.3 Persuasion- Was the pamphlet convincing? Did it seem to persuade the reader to do something?

Motivational pamphlet: When asked whether the motivational pamphlet prompted them (or their partners) to ask questions they would not ordinarily have thought of during pregnancy, 44% (31/71) of women agreed. Further, one-third (24/71) agreed that the pamphlet prompted them to ask questions they would not ordinarily have thought of during labour.

Informational pamphlet: The aim of the informational pamphlet was essentially to provide women with evidence-based information on risks and benefits of caesarean section and vaginal delivery and to offer information on alternatives to caesarean section. Assessment of whether respondents were persuaded in any way by the pamphlet was not carried out. Unlike the motivational pamphlet, which sought to

persuade readers to make informed decisions, the aim of the informational pamphlet was to 'inform' rather than persuade per se.

5.4.3.4 Comprehension-*Was the pamphlet easy to understand?*

Motivational pamphlet: The majority of women (74%, 53/71) disagreed with the statement – *“There were too many ideas presented in the pamphlet”*.

Informational pamphlet: Satisfaction regarding comprehension was not assessed for the informational pamphlet. As previously mentioned, the author had not been responsible for the development of this pamphlet. This pamphlet had previously undergone substantial pre-testing, including assessing level of comprehension.

5.5 Association between program uptake and mode of delivery

Association between program uptake and subsequent mode of delivery was analysed using Fisher's Exact Tests. This test is carried out when expected frequencies in a 2x2 table are low (Kinnear and Gray, 2000), as was the case in the current study. In particular, the number of women delivered by caesarean section or instrumental delivery was relatively small. Larger sample sizes would be needed to draw any robust conclusions from this data. The following analyses simply highlight associations between uptake and mode of delivery.

Pamphlet uptake only was included for analysis, primarily due to the finding that respondents had not utilised the peer support network.

As was the case with univariate and multivariate analyses, data analysis was carried out by separating women into two groups, based on pamphlet uptake, those who:

- Reported either not reading the pamphlet or reading the pamphlet initially but not referring to it again or throwing it away after reading (**Reading**).
- Reported reading the entire pamphlet and referred to it again, or discussed it with family or partner (**Reading and active**).

Tables 5.9 and 5.10 demonstrate analyses of the association between program uptake and mode of delivery for both the motivational and informational pamphlets.

5.5.1 Motivational pamphlet

As can be seen in Table 5.9, the majority of women having elective caesarean section (3/5) had both read and actively used the pamphlet. Of those women having an emergency caesarean section, half (7/14) had read and actively used the pamphlet information. Of those women who had vaginal delivery, most (51/65) did not actively use the pamphlet. Similarly, of those women having an instrumental delivery, all but one (7/8) woman did not actively use the pamphlet. Fisher's Exact Test for association found that these differences were significant.

Table 5.9 Uptake and mode of delivery – motivational pamphlet

		Mode of delivery (total n=92)			
		Elective CS n = 5	Emerg CS n = 14	Vaginal n = 65	Instrumental n = 8
Activity (n)	Reading	2	7	51	7
	Reading and Active	3	7	14	1
Total		5	14	65	8

CS = Caesarean section

Fisher's Exact Test $P = 0.020$

5.5.2 Informational pamphlet

The majority of women (4/5) having an elective caesarean section had read and actively used the pamphlet information. Less than half of women (6/14) who had emergency caesarean section read and actively used the pamphlet information. Of those women who had vaginal deliveries, the same proportion was not active with

this pamphlet information as for the motivational pamphlet (51/65). None of the women having instrumental delivery had been active with the pamphlet information. Fisher's Exact Test for association found that these differences were significant.

Table 5.10 Uptake and mode of delivery – informational pamphlet

		Mode of delivery (total n=92)			
		Elective CS n = 5	Emerg CS n = 14	Vaginal n = 65	Instrumental n = 8
Activity (n)	Reading	1	8	51	8
	Reading and Active	4	6	14	-
Total		5	14	65	8

CS = Caesarean section

Fisher's Exact Test P = 0.005

5.6 Effect of program on women's views of caesarean section

Women were asked, *“when you were given this (informational) pamphlet were you considering a caesarean section for the birth of your baby”*. Ten out of 69 (14%) women who answered this question reported that at that time they were considering having caesarean section. They were then asked, *“tell us about your views on having a caesarean section now that you have read the pamphlet”*. Women were asked to respond to this question regardless of whether they had reported considering caesarean section in the previous question.

To account for the content of women's responses to the latter question, a quasi-statistical enumerative approach (Grbich, 1999) was applied. This approach consisted of noting the frequency of particular responses categorised by predominant themes. Regardless of whether or not women were considering caesarean section, responses were mainly framed in terms of the following themes (Table 5.11).

Table 5.11 Themes of responses relating to women's views on caesarean section after reading informational pamphlet

Theme of response	Total no. Women ¹	Primip	Multip
Medical necessity	34	12	22
Caesarean section not an option - prefer vaginal delivery	7	2	5
Influenced (to either want caesarean section or vaginal delivery) by birth experience	5	1	4
Prefer vaginal delivery but acknowledge need to be prepared for either	4	3	1
² Prefer caesarean section but changed mind	3	1	2
Learnt new information	3	2	1
Pamphlet information helped when did go on to have caesarean section	2	1	1
Fearful of caesarean section	2	2	-
Caesarean section choice of parents depending on situation	1		1
Total	61*	24	37

*8 women did not respond to this question

n.b. 1. One response per woman

2. Those responses highlighted in **bold** demonstrate women whose views were explicitly influenced by pamphlet (n = 8)

As Table 5.11 demonstrates, over half of women viewed caesarean section in terms of medical necessity (55%, 34/61). This response tended to draw on the potential benefit of caesarean section when vaginal delivery was not clinically viable. In these cases, women mostly spoke in terms of preferring caesarean section only as a last resort. For example:

“For me – caesarean has always been a last option. Viable for me only in medical emergency for the safety sake of my child and myself”. (29 year old multipara)

“I believe that having a vaginal delivery is best for both mother and baby and having a caesarean section should only be done if there is a medical reason and no other options are available”. (34 year old multipara).

“If my health or my baby’s health/life was in danger then I would have one”. (22 year old primipara).

Multiparous women were more likely to frame their response in terms of medical risk and benefit, compared with women having their first child (60%, 22/37 vs 50%, 12/24).

With the exception of eight women (see Table 5.11), most reported that their views existed prior to receiving the pamphlet, for example:

“The pamphlet didn’t change my views on caesarean. I have had two vaginal deliveries and would only consider a caesarean if it was an emergency one” (28 year old multipara).

“My views are the same as before I read the pamphlet- that a vaginal active birth is preferable wherever possible. But if myself or my baby were in

danger a caesarean should be seriously considered". (31 year old multipara)

Of the ten women who reported they were considering caesarean section when receiving the pamphlet, three stated that the pamphlet had a direct effect on their views.

"I asked more questions because the first time I had a caesarean it was quickly made and I wasn't aware of the 'pro's' and 'con's'. I would tend to lean more to vaginal delivery". (33 year old multipara)

"I feel differently now that I have read the pamphlet because I have the extra information re: statistics, risks to women etc". (35 year old multipara)

"I wouldn't have it now, only in case of medical reasons would I consider it". (27 year old primipara).

A small number of women reported that they learnt new information about caesarean section:

"If my carer during pregnancy advised I should have a caesarean section I would do so, because I believe they would know best. Now having read the pamphlet I would consider a 2nd opinion". (32 year old primipara)

"I have never considered a caesarean section before unless a medical reason required one, but the pamphlet gave me a better understanding just in case I had to have one". (27 year old multipara)

Some women reported that the pamphlet information assisted them when they subsequently had caesarean section:

"I could not consider having a caesarean for my baby as it is a risky decision. After I found my delivery needed an emergent [sic] decision of a caesarean, I was glad I had read your pamphlets though and made a right decision". (39 year old multipara)

"I had no idea I would end up having an emergency caesarean..however after my labour 'failed to progress' after 15 hours a caesarean was performed. It was absolutely necessary for the health of my baby, and every pregnant woman should be prepared for this operation if necessary. The brochure prepared me at this late stage in labour of what laid ahead". (34 year old primipara)

5.7 Satisfaction with the decision-making for caesarean section – a comparison of women involved in the program and a non-concurrent control group

Approximately one-fifth of women in the current program delivered by caesarean section. As described in Chapter 4, women who had caesarean section were asked to respond to a series of questions relating to satisfaction with their delivery. These responses were then compared with a non-concurrent control group ($n = 278$) which consisted of women delivered by caesarean section in the same hospital, several years earlier, who had been asked the exact series of questions regarding satisfaction with their caesarean section (Turnbull et al., 1999). The groups differed only in that the control group had not participated in the current program. Responses of the two different samples of women to statements regarding their satisfaction with the decision to have caesarean section were then compared.

This exercise was purely exploratory rather than definitive. The aim was to compare satisfaction with caesarean section between the two samples, focusing in particular on whether there were differences in satisfaction with:

- the decision itself
- information provision
- the decision-making process

Selected sociodemographic characteristics of the two groups are presented in Table 5.12.

Table 5.12 Selected socio-demographic characteristics of program group and non-concurrent control group

Characteristic	Program Group % (n = 19)	Non-concurrent control group % (n=278)
Age:		
Mean	28.9	30
Range	18-45	19-41
Type of care:		
Private obstetrician	-	30
Shared care	36	-
Birthing centre	14	10
Midwife clinic	20	22
Standard antenatal care	24	38
Other	6	

These two groups of women were similar in terms of age. The two groups differed in type of obstetric care received. Although similar in the numbers of women receiving birthing centre, midwives clinic and standard antenatal care, the earlier study included women receiving private care, unlike in the program group. Further, the non-concurrent control group did not include women receiving shared care, unlike the program group.

Interpretation of the results for these comparisons were based on the assumption that for positively worded items, only the proportion of women able to “strongly agree” or “agree” with the statement were satisfied. The related assumption was that responses other than “strongly disagree” or “disagree” for the negatively

worded items, were assumed to indicate dissatisfaction. This approach is one that has been applied and recommended in previous Australian research focusing on satisfaction in childbirth (Brown and Lumley, 1994).

As can be seen in Table 5.13, women in both groups were generally satisfied with the decision-making process surrounding their caesarean section, although several differences existed in the reports of women who were involved in the program, compared to the control group.

5.7.1 Satisfaction with the decision itself

Women who were involved in the program were slightly less satisfied with the decision (79%, 15/19 vs 91%, 254/278). Both groups tended to disagree that they felt cheated after the decision to have caesarean section. Women in the control group were more likely to agree that they felt cheated (16%, 46/278 vs 11%, 2/19).

5.7.2 Satisfaction with information provision

While the control group were more likely to be satisfied with the information they received regarding the reasons for their caesarean section (91%, 254/278 vs 83%, 15/18) they were also more likely to report the need for information on other options (7%, 19/278 vs 0%). The control group was less likely to report satisfaction with receiving information to prepare them for the possibility of having caesarean section (69%, 191/278 vs 79%, 15/19).

Table 5.13. Women's satisfaction with their caesarean section
(program group n = 19), (non-concurrent control group n = 278*)

Statement	Strongly agree %	Agree %	Not sure %	Disagree %	Strongly disagree %
Satisfaction with the decision itself					
1. I am satisfied with the decision to have caesarean section	53 50	26 41	16 5	5 3	- 1
2. Now I feel a bit cheated	- 5	11 11	- 9	31 29	58 46
Satisfaction with information provision					
3. I was given good information about why caesarean section was necessary	39 58	44 33	6 5	11 3	- 1
4. I needed more information on other options	- 3	- 4	11 12	63 49	26 32
5. I was given good information to prepare me for the possibility of having caesarean section	32 29	47 40	11 10	10 13	- 8
Satisfaction with the decision-making process					
6. I was unhappy with the amount of say I had in the decision for caesarean section	- 5	- 7	5 6	37 45	58 37
7. I felt pressured by the staff to have caesarean section	5 2	5 3	- 3	42 37	47 55

* For all questions the largest number of missing data was 6

5.7.3 *Satisfaction with the decision making process*

Women who were involved in the program were less likely to report dissatisfaction regarding the amount of say they had in the decision for caesarean section (0% vs 12%, 33/278). They were, however, more likely to report feeling pressured by staff to have caesarean section (10%, 2/19 vs 5%, 15/278).

5.8 Discussion

5.8.1 Overview

This process evaluation has highlighted women's response to a program aimed toward encouraging informed decision-making for childbirth. Factors investigated were women's uptake of and general satisfaction with the program. Also examined was the impact that participation in the program had on women's views of caesarean section, their subsequent mode of delivery and their satisfaction with their caesarean section. There has been a lack of research carried out to evaluate the distribution of information on which pregnant women can make informed decisions regarding childbirth, although such approaches have been advocated (Department of Health, 1993; Horton, 1997; de Costa, 1999; Senate Community Affairs Reference Committee, 1999; Johanson et al., 2001b).

Before a final discussion of the main findings from the process evaluation, it is important to consider the potential strengths and limitations of the program evaluation phase. Attention is also placed on the degree to which the program itself was implemented as planned.

5.8.2 Strengths and limitations of program evaluation

To begin with, response rates to the postnatal questionnaire were low (62%). This was not unexpected given that the sample consisted of women who had recently given birth. In almost all cases, the author needed to telephone women to follow up return of questionnaires. The procedure of telephoning women after allowing two weeks in which to return the questionnaire was beneficial for a number of reasons.

Firstly, it provided a subtle means for reminding women to complete the questionnaire if they had simply forgotten about it. Secondly, it provided a chance for women to discuss any concerns they may have had over the purpose of the questionnaire, or indeed the program. In some cases, women said they had not used the resources so they did not think they should return the questionnaire. In these cases, the author was able to emphasize that all feedback regarding the program, even non-use, was important. Thirdly, this procedure enabled the author to send another questionnaire if the original had been misplaced.

In some cases, contact with the author appeared to highlight to women the importance of their role in the program. When this was the case, women felt keen to return the questionnaire and assist with the research as a whole. Prior to telephone contact, such incentives might not have been as strong. It became evident during follow-up that although questionnaires were posted to women seven weeks following delivery, some women felt under considerable pressure and completing a questionnaire was not achievable. A small number of women reported that they simply had not had time to complete the questionnaire and did not think they would be able to in the near future.

A further factor possibly contributing to low response rates was the fact that several women confused the study with unrelated studies being carried out at the Women's and Children's Hospital, of which they were a participant. Again, when being followed up by the author, such confusion could be clarified.

Response rates also tended to be influenced by women returning to paid work soon after delivery. Follow-up of these women was difficult, as they tended to be out of the house during working hours when the author was attempting to contact them. It was considered inappropriate to contact women at their place of work.

While response rates were low, they were in keeping with similar population-based surveys carried out in Australia with new mothers (Brown et al., 1994). It appears that the protocol of telephoning each woman personally to follow up return of questionnaires was effective to a point. It could be argued that response rates may have been lower had women not been followed-up by the author.

Due to low response rates, a major limitation of program evaluation was the small sample size. Consequently, findings from univariate and multivariate analyses demonstrated that confidence intervals accompanying the odds ratios were wide, reflecting in a lack of precision of the questionnaire estimates (Bowling, 1997).

Issues of non-response bias cannot be excluded, in terms of the substantial number of non-respondents. The current program evaluation found that both groups were similar in terms of socio-demographic and obstetric characteristics. Certainly, however, limitations exist regarding the extent to which conclusions can be drawn about non-respondent's level of satisfaction and uptake of the program.

A further limitation of program evaluation derives from the use of self-administered questionnaires. It is recognised that self-administered questionnaires, unlike face-to-face interviews or telephone interviews, rely on respondents to answer questions

with no input from the researcher. Such questionnaires may result in inaccuracy and error (Kerr, Taylor and Heard, 1998). Inaccuracy may be caused by failure of respondents to understand the sort of answer required by the researcher or failure to understand the question due to literacy skills. While these factors may have limited the accuracy of responses in the current program, postal questionnaires were nonetheless deemed the most appropriate form of data collection given the nature of the sample (new mothers, wide geographic distribution) and constraints of the research process.

Some women in the current study reported difficulties in recalling elements of the program. As two respondents commented:

“I think that giving us pamphlets at 18 weeks and then expecting us to remember the contents or to keep the pamphlet to refer to for this questionnaire is a bit hard. I think you should enclose the pamphlet or photocopy again so we can refer to it again” (34 year old multipara).

“I think this survey should have been sent out sooner – I had forgotten most of the information in the pamphlets and was therefore unable to provide accurate answers” (31 year old multipara).

Problems with recall were unavoidable however, due to the need to wait seven weeks prior to sending the questionnaire (Mason, 1989). Admittedly, the substantial time difference between women receiving the program resources and the

questionnaire may have influenced both the accuracy of women's recall and the likelihood of response to the questionnaire.

Uptake of the program was measured using closed or forced-choice questions and program satisfaction was measured using 5-point Likert scales. It is therefore possible that some details regarding women's use of or satisfaction with the program were obscured or that answers were forced into inappropriate categories (Bowling, 1997). Where appropriate, open-ended questions were included following closed questions, in order for respondents to specify different responses or elaborate on their response. Focus groups, or follow-up interviews would be needed to gain a more in-depth account of reaction to the program, and may provide insight into responses not 'captured' by the questionnaire. It must be emphasised, however, that the primary purpose of the questionnaire was to identify women's uptake and satisfaction with the program in the first instance.

Due to the relative anonymity associated with postal questionnaires, this method of data collection has been said to be useful in minimising social desirability and interviewer bias (Bowling, 1997). This was true of the current questionnaire in the fact that women felt free to respond in an honest, and sometimes negative, manner. Many women responded that they had not used the program resources to any extent and several had criticisms of the resources or of the program as a whole. These were essential findings as a principal aim of the questionnaire was to obtain women's candid opinion of the program and their use of the program. It was evident that the questionnaire succeeded in gaining such information.

While acceptability of the program was high (of all women approached to join the program 92% accepted), subsequent use of the program was modest. This discrepancy could be due to the fact that women found the nature of the study non-threatening. They were assured at recruitment that their participation in the program involved distribution of information that they could use, *if and when they chose*. This could explain the variation between acceptability and subsequent uptake of the program. A small number of women did explicitly convey at recruitment that they saw a real need for such information provision, however this did not seem to be the view of the majority.

5.8.3 Implementation of the program

Part of the purpose of process evaluation is to determine whether the program was implemented as planned (Hawe et al., 1990). The main finding in this respect was that, for a variety of reasons, large numbers of women did not receive the peer support network information.

5.8.3.1 Peer support network

The major limitation in implementing the current program was that peer support network information could not be distributed to all women at their 28-week visit. Nearly 40% of women who responded to the questionnaire said they either did not receive peer support network information or they could not remember receiving the information. The main reasons given were that women either saw their general practitioner for their 28-week visit (as is standard practice for shared-care patients), they 'missed' the researcher or were unsure as to the reason they did not receive the information.

Over one-third of respondents reported that they received shared-care during their pregnancy. As mentioned in Chapter 4, attempts were made during recruitment to identify those women receiving shared care. It became evident, however, that some shared-care patients were unsure where they would visit for their 28-week glucose test. This was because shared-care patients could choose to attend either the hospital or their general practitioner for this visit. Where this was the case, women were nevertheless recruited to join the program.

Interestingly, a discrepancy was found between women's reports in the questionnaire and the author's records of those who did and did not receive information on the network. Figure 5.2 illustrates the number of women who misreported receiving the peer support network information.

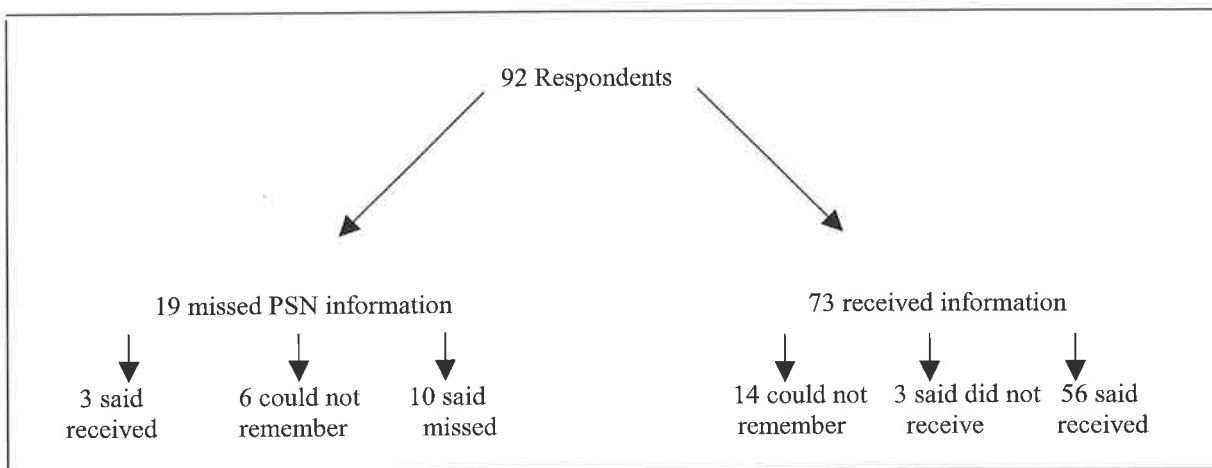


Figure 5.2 Misreporting of peer support network information

One explanation for such disparity may have been the degree of salience women assigned the peer support network. That is, women may have been unclear as to the function of the network, or may not have seen the network as holding much significance for them personally. Further, the network information was distributed

to women at 28-weeks, during the final trimester of pregnancy, when attending the hospital for their glucose challenge test. This test required women to drink a small bottle of drink high in glucose and to wait one hour before having their blood tested for glucose tolerance. It could be argued that women were preoccupied with undergoing the test and thus may not have adequately registered the network information. The author distributed the information and peer supporter contact details to women while they were seated and consuming the glucose drink. It was evident that some women were somewhat pre-occupied and unable to concentrate on the information being distributed.

To conclude, not only did some women not receive the peer support network information, some women did receive the information but were unaware of the fact. Such findings illustrate the potential benefit in distributing information to pregnant women in a quiet one-to-one setting, as was the case with pamphlet distribution. Women may have been more likely to remember the network, or even understand its function better, if the setting for distribution had not been in the busy antenatal clinic while having their glucose challenge test. This appointment was chosen for distributing information on the peer support network as the obstetrician had recommended it, during the program consultation phase, as an appointment where most women would be likely to attend.

5.8.3.2 Recruitment setting

A further issue became apparent concerning the setting for program recruitment. One program participant, who reported in the questionnaire that she felt frightened by the resources and the program in general, indicated in retrospect that she felt

being approached at her 18-week ultrasound scan was inappropriate. This finding raises concern over the fact that women may have felt confronted when receiving information on caesarean section at their 18-week scan, which may have influenced their experience of having the scan. Such a finding needs to be taken into account for further studies distributing information to pregnant women with care taken in deciding the appropriate setting and time-frame for distributing information.

5.8.4 Review of the main findings

5.8.4.1 Program uptake

Half of the sample reported reading all of the pamphlets. Of those who did read, few women reported subsequently discussing the pamphlet information with their partner or referring to the information again subsequent to reading. The author noted that many women appeared to read the pamphlet in the clinic waiting room, immediately following recruitment. This finding may explain why women reported reading the pamphlet, but few reported actively using the pamphlet to refer to again or to discuss with their partner.

Likelihood of reading the pamphlets was influenced by socio-demographic and obstetric characteristics. Having a higher degree increased the likelihood of reading compared to those women who had some secondary schooling as their highest level of education. Multiparous women were nearly three times more likely to read the informational pamphlet, compared with women having their first child. When focusing on reading and actively using the pamphlet information, although not a significant independent predictor, being older (aged 34-41) was marginally

associated with likelihood of actively engaging with the pamphlet information, compared to younger women.

These findings reflect similar studies that have found socio-demographic factors such as age and educational attainment to be associated with participation in health promotion programs. Glazier and colleagues (Glazier, Goel, Holzapfel, Summers, Pugh and Yeung, 1997) found that certain subgroups of women did not benefit from an educational pamphlet on triple-marker screening distributed during pregnancy. Women in six geographically and demographically diverse Ontario sites were randomly allocated to receive a pamphlet on triple-marker screening or a similar pamphlet on daily activities during pregnancy (n=133 women in intervention and 64 women in control). Women aged 25 years and younger and those not speaking English at home were least likely to benefit from the pamphlet. Those with tertiary education were found to have high levels of knowledge regarding triple-marker screening regardless of whether they received the pamphlet. Further, several observational studies have found having higher educational attainment to be associated with higher involvement in health promotion activities (Street, Voigt, Geyer, Manning and Swanson, 1995; Miller, 1996; Galuska, Will, Serdula and Ford, 1999; Miller, 1996).

As socio-economic status was not explicitly measured in the current program, level of educational attainment could be deemed a proxy for social background. In Australia, low socio-economic status is determined by a number of indicators, one of which is being without educational qualifications (Australian Bureau of

Statistics, 2001a). As such it could be that findings of higher use of pamphlets among higher educated women was related to socio-economic status.

A discourse analytic study mentioned in Chapter 3 (Zadoroznyj, 1999) found a relationship between social class and narratives of control regarding pregnancy and childbirth. 'Middle class' women, who could be expected to be of higher education, tended to adopt an 'activist' orientation in managing their birth. This involved reading and relying on abstract knowledge to inform their decision-making in the antenatal period. 'Working class' women, on the other hand, were more likely to be fatalistic about their birth and to rely on their care provider's knowledge. Therefore, it could be expected that in the current program, those women of higher education were also of less social disadvantage, and hence may be more likely to see value in participating in the program.

The fact that parity was an independent predictor of whether or not women read the pamphlets could be explained by perceived relevance of the pamphlets. That is, women having their second or third child may have found the information more salient given previous experience of childbirth. These women may have been more accepting of the notion of being prepared for caesarean section, particularly if they had had one previously, and be more interested in engaging with the pamphlet information. Primiparous women may instead have higher expectations of the 'perfect delivery' and thus be unlikely to accept that a caesarean section could eventuate. Informal discussions with program participants in the current study found that while multiparous women tended to assume their birth would be similar

to their previous experiences, they were more likely to see the relevance in receiving the program resources.

It has been suggested that the effectiveness of information provision may vary depending on who is providing the information (Bennett et al., 1998). For example, analyses have found that likelihood of behavioural change can vary according to the particular doctor delivering brief anti-smoking advice (Bennett et al., 1998). Such findings could have implications for the current program in that the author, rather than health care professionals, distributed the pamphlets. Uptake may have been substantially greater if obstetricians or midwives were responsible for pamphlet distribution.

As previously mentioned, a further reason for low uptake of the pamphlets in general was that the pamphlets were seen as irrelevant, essentially because women were not expecting to need caesarean section. The following quote from a program participant illustrates this notion:

“As I was intending to have a natural birth and there were no obvious reasons why this would not be possible, I felt that there was little relevance to my situation” (28 year old primipara).

Such a view is consistent with previous research which found that women are unwilling to accept the need for information on caesarean section, believing the likelihood of needing the procedure to be low (Fawcett, 1994; Churchill, 1997).

Some women in the current study could however see the potential advantages of having such information, as the following quote demonstrates:

“It is a great idea that students present these pamphlets to pregnant ladies as most do not pick up pamphlets on things like c-section, ventouse or forceps if they are planning a natural birth. It is considered as something that ‘will not happen to them’. It is also good to have someone explain it and to ask questions early in the pregnancy so it is something you consider could happen and when it does happen, if you have had the information, it does not seem so overwhelming and scary” (24 year old primipara).

Given that most (77%, 71/92) program participants spoke English at home, and eligibility to join the program included the ability to complete the questionnaire in English, it could be assumed that inability to understand pamphlet language was not the cause of low levels of program uptake. Further, univariate analyses provided no evidence to suggest women who spoke English as a second language were less likely to read the pamphlets.

The peer support network does not appear to have been a useful component of this program. Process evaluation identified that women generally felt they did not need support and information regarding caesarean section, or they felt the peer support network was irrelevant to their situation. Again, this could be because women may not actively seek to prevent an event which they do not perceive as being likely to happen to them. Further, when women were asked to elaborate on reasons for not using the network, they responded that they would prefer to speak to family and

friends about childbirth experiences, on a casual level, rather than contact an unfamiliar person.

It has been argued that a primary difficulty when measuring *social support* relates to the issue of how to best define such a concept (Zimet et al., 1988). Lin (1986) defines social support as “perceived or actual instrumental and/or expressive provisions supplied by the community, social networks, and confiding partners” (p.18.). This issue has implications for the current study in the fact the program evaluation measured women’s uptake of the peer support network at the instrumental level rather than the perceived level. The majority of women (72%, 41/57) indicated that they felt reassured to have the phone number of their peer supporter, even though they did not contact her. Therefore, it could be argued that the peer support network had an indirect influence on women’s sense of empowerment in the form of perceived social support.

The notion of perceived social support has been recognised in the psychological literature as the subjectively assessed support of friends, family and significant others (Zimet et al., 1988). This support may not be tangible in the form of involvement in a specially organised support group, but may stem from support inherent in an individual’s social, community or familial network. It could be argued that the intrinsic knowledge that such support exists may be just as valuable as specially organised social support. Therefore, in relation to uptake of the peer support network, it cannot be discounted that women may have indirectly benefited from perceiving the availability of support offered by the network, even if they did not physically make use of it.

During the planning phase of the program, a stakeholder member raised concern over the fact that women may be hesitant to utilise the peer support network due to feeling uncomfortable telephoning a stranger. Certainly, discomfort in telephoning a stranger was cited by nearly 20% (10/57) of the sample. One program participant indicated in the postnatal questionnaire that she used the Internet during pregnancy for support and information. This finding suggests that the effectiveness of the peer support network may have been improved if operated using a different medium, such as face to face coffee meetings or contact through a website.

To conclude, it certainly appears from process evaluation that wider exploration of the best means for providing women with information (especially in terms of peer support) is warranted. This issue is discussed in greater detail in Chapter 7.

5.8.4.2 Satisfaction

While women were generally satisfied with the program, it was evident that the pamphlets disturbed around one in five women. These women responded that the pamphlets had caused them to feel distressed or had made them anxious about birth in general or about caesarean section.

The notion that providing information can have the opposite, and in fact detrimental, effect on recipients has been found in a randomised controlled trial focusing on over 1000 women who received debriefing following operative birth (Small, Lumley, Donohue, Potter and Waldenstrom, 2000). This trial found that midwife-led debriefing did not result in improved postnatal maternal morbidity and in fact could have contributed to negative emotional health problems for some

women. Similarly, an observational study carried out by Fawcett (1994) revealed that a small number of women and their partners who participated in a caesarean birth information program had negative reactions to the information, regardless of subsequent mode of delivery.

In the current study, two women in particular expressed concern over the intention of the program and the way in which it was implemented:

“Because caesarean has never been a considered option for me - I was surprised that this study was being offered to all women. To me it seems to be promoting caesarean as a viable option. While this is not necessarily incorrect it does to me seem unnatural and possibly inappropriate. Surely the public purse needs to be taken into account when promoting/offering such options. I would have liked to see a peer support person for ‘caesarean section after vaginal birth’ and/or ‘medical emergency caesarean’”. (29 year old multipara).

“It is good to know a little about what goes on. When I was approached I found that the lady kept coming up to me all the time, it made me ‘scared too, I told my midwife that day. I wanted to go in with an open mind, not scared thinking I had to have a caesarean. Not good being approached at your scan either’”. (25 year old primipara)

Responses such as those outlined above, and the fact that one in five women were distressed by the pamphlet information, are vitally important in highlighting an unintended consequence of the program. Furthermore, such responses add to the general understanding of women's response to the program. It appears that not only did women not perceive the need for such informational resources, some women felt confronted by receiving information relating to caesarean section.

5.8.4.3 Uptake and subsequent mode of delivery

Of additional interest in evaluating the current program was an investigation of any association between uptake of the program and subsequent mode of delivery. It could be argued that women's obstetric background might influence likelihood of perceiving the need for information. Similarly, having access to such information may have influenced women's mode of delivery, either directly or indirectly.

A statistically significant inverse relationship, in an unexpected direction, was found between uptake of the pamphlets and mode of delivery. The majority of women (between 60-80%) who had elective caesarean section had actively used the pamphlets, i.e referring to them subsequent to reading or discussing the information with partner or family. In contrast, the majority (between 80-100%) of women having vaginal and instrumental delivery did not actively use the pamphlets. It could be that women who had elective caesarean were more 'open' to the information, given that caesarean section may have already been a real possibility for these women when they received the pamphlets.

These findings imply that women who were expecting to have caesarean section (either due to past obstetric history, current clinical indication or personal preference) were more likely to perceive the pamphlets as being relevant. On the other hand, women who are expecting to have vaginal delivery (and it could be assumed this is the case for the majority of women) were not receptive to the information. Responses of women in the questionnaire, pointing to the fact that they felt the pamphlets were irrelevant to their situation, certainly correspond with this view. This analysis of mode of delivery and program uptake reinforces that relevance appears to play a central role in determining pamphlet utilisation.

While these findings clearly deserve attention, due to the nature of cross-sectional study design it is difficult to establish causality. Exposure and outcome data were collected together at one point in time, that is, women were asked about their uptake of the resources and their mode of delivery in one postnatal questionnaire. Further, the study design did not involve a control group. As such, statistical associations between variables could be determined, rather than causality per se (Bowling, 1997). It remains uncertain whether uptake of the pamphlets influenced mode of delivery or vice versa.

5.8.4.4 Effect of program on women's views of caesarean section – particularly those considering caesarean section.

Women who had read the informational pamphlet were asked about their views on caesarean section. This exercise was carried out to determine whether such views were influenced by the pamphlet information. It was found that most (56%) women's views of caesarean section were based on medical necessity, i.e a

beneficial mode of delivery when vaginal delivery was not safe or possible. Such a finding is consistent with a discourse analytic study carried out by Carty and colleagues (Carty et al., 1997) which found women often made sense of their caesarean section using discourse around medical benefits and risks. In the current study, multiparous women were more likely than women having their first baby to hold a view of caesarean section based on medical necessity (22/37 vs 12/24).

In general, women stated that their views were based on existing opinion rather than being influenced by the pamphlet per se. Of interest was the finding that of ten women who reported considering caesarean section when receiving the pamphlet, three stated that the pamphlet influenced their views. This analysis highlights the importance of women's existing views of caesarean section. These views may potentially have had implications for women's willingness to utilise program resources such as those in the current study. If women's views of caesarean section are based on need due to clinical complication, it is not surprising that very few women utilised the program resources. These findings are in accord with the belief that women do not consider caesarean section as something that may occur for them (Churchill, 1997), and instead take the opinion that they will only consider the procedure if it becomes clear that it is a real possibility for them.

5.8.4.5 Satisfaction with decision-making for caesarean section

Analyses were carried out to determine levels of satisfaction with caesarean section for women in the current program who were delivered using this mode of delivery. These responses were then compared with another group of women who had birthed in the same hospital and had been asked the same questions about

satisfaction with their caesarean section (Turnbull et al., 1999). The aim was that the latter group could act as a non-concurrent control group in that they had not had access to the program resources. Accepting that the number of women having caesarean section in the current study was too small to draw statistically reliable conclusions ($n = 19$), this exercise was purely exploratory.

Similar patterns were found between both groups in terms of satisfaction with caesarean section. As found by Turnbull (1999), while half the women "strongly agreed" that they were satisfied with the decision to have caesarean section, 41% of the control group and 26% of the program group only "agreed" with the decision. Further, between 11% (program group) and 19% (control group) reported they needed more information on other options. Only approximately 30% of women in both groups "strongly agreed" that they had been given good information to prepare for the possibility of caesarean section.

Between the two groups, some differences in satisfaction were evident. While 18% of women in the control group were unable to report satisfaction with the amount of say they had in the decision for caesarean section, only 5% of women in the program group were unable to report satisfaction. Again, due to sample size differences between the two groups, it is difficult to draw robust conclusions about the influence of the program on women's satisfaction with the decision-making for caesarean section.

These findings, along with related studies (Turnbull et al., 1999) call into question the findings of an observational study of 100 women conducted in the United

Kingdom, which argued that women were well informed and took considerable part in the decision-making for caesarean section (Mould, Chong, Spencer and Gallivan, 1996). This study assessed the extent to which women contributed to and were satisfied with the decision for caesarean section and found that for these women caesarean section was an acceptable form of delivery, particularly when elective. It has been argued that Mould et al's (1996) findings have substantial shortcomings, notably because women gave feedback on their satisfaction directly to the clinicians involved in their care.

The results of this exercise suggest that further investigation into women's satisfaction with caesarean section is warranted. When women were asked, in an anonymous postnatal questionnaire, to report on their level of satisfaction, it is disturbing that a considerable proportion were reporting some degree of lack of involvement in the decision-making and lack of information provision.

5.9 Conclusion

This process evaluation was important in highlighting the response of pregnant women to the provision of information focused on informed decision-making for childbirth. Key findings were:

- There was a degree of resistance to the program resources, with women citing that they felt them to be irrelevant to their situation.
- When focusing on pamphlet use, women who had had previous pregnancies and those who were of higher educational background were significantly more likely to use the pamphlets.
- One in five women reported being disturbed by some pamphlet information.
- The peer support network was not utilised. The main reasons women reported for not utilising the network were not feeling the need, or feeling uncomfortable telephoning a stranger.
- The program may have had some impact on women's consideration of caesarean section, their mode of delivery and their satisfaction with the decision-making for caesarean section, however due to the cross-sectional design of the study it is difficult to establish causality.

Taken together, these findings have implications for future interventions seeking to distribute similar information to pregnant women, and raise important questions over the reason women did not engage with the program. Furthermore, the fact that certain groups of women did not utilise the program information means that if future studies of this sort are developed, emphasis would need to be placed on developing innovative strategies appealing to women from different obstetric and educational backgrounds. These issues are addressed in Chapter 7.

The following chapter moves away from program evaluation and explores the issue of culture of caesarean section. Women's perception and attitudes toward caesarean section, and their response to the current program, may be inextricably linked to wider cultural perceptions of caesarean section. The following chapter also explores the issue of maternal request for caesarean section.

Chapter 6 – Culture of caesarean section

6.1 Introduction

“In a climate when many couples are choosing to limit the size of their family, and cosmetic surgery is increasingly acceptable, some women may be comfortable with the decision to have a scheduled operative delivery.”

(Quinlivan et al., 1999, p.214).

As mentioned in Chapter 1, this thesis sought to explore the issue of a culture of caesarean section. As a background to this issue the rate of obstetric intervention in Latin America is described to illustrate the existence of a culture of caesarean section in this region. Women’s role in such a culture, in the form of maternal request, is discussed. Two studies, using different methodologies, which aimed to explore evidence for the existence of a culture of caesarean section in Australia are then outlined. The studies were conducted as part of the research described in Chapter 5.

The term ‘culture’ can be defined as ‘the general customs and beliefs of a particular group of people at a particular time’ or ‘a set of shared attitudes, values or ways of thinking and behaving’ (Proctor, 1995). In relation to caesarean section, the notion of culture in this thesis refers to the way in which women and the broader community perceive caesarean section and childbirth and how this has changed in the 21st century. Such change can be demonstrated in the ‘normalizing’ of caesarean section in both Western and non-Western settings.

It has been argued that caesarean section is increasingly seen as an acceptable alternative to vaginal delivery, rather than an undesired consequence of obstetric complications (Hemminki, 1997). Shifts in the perception of caesarean section could be seen to reflect broader cultural ideals and socio-environmental changes. As described in Chapter 1, the trend toward delayed motherhood is evident in many Western settings. For these women intervention could be seen to offer a safe and convenient opportunity to fulfil both their role as childbearer and worker (Crouch et al., 1993).

Suggestions of an increasing culture of caesarean section have been heard in reports from diverse settings including India (Parthasarathy, 2000) Mexico (Zarembo, 2001) and Italy (Zanetta, Tampieri, Currado, Regalia, Nespoli, Fei, Colombo and Bottino, 1999). As Parthasarathy (2000) notes, choosing the day of delivery has been shown to influence women's preference for delivery in India:

"Some women in Kerala prefer caesarean operations because by that way they can choose an auspicious day for the birth of their child..choosing the star that way is according to the superstitious parents the best way to get the child a lucky future" (p.1).

Women in Mexico have been reported to print their birth announcements prior to their scheduled caesarean section (Zarembo, 2001). Cultural shifts in Italy, such as women having fewer children and delaying the onset of childbearing, coupled with a general societal appreciation of new life, has influenced the number of women having caesarean section (Zanetta et al., 1999).

The media has entered into the debate over an emerging culture of caesarean section. A headline in a national Australian newspaper “*Natural birth ‘riskier’ than drink driving*”, generated much debate within Australia. The article reported on the assertion, made by a visiting leading obstetrician from the United Kingdom, that the inherent risks involved in vaginal delivery – such as pelvic floor damage and the long term sequelae of urinary and faecal incontinence – will ultimately result in maternal preference for caesarean section (Kerin, 2001).

The following section will describe the debate occurring in regions of Latin America over the existence of a culture of caesarean section. These regions offer a unique example of where social norms for ‘acceptable’ obstetric interventions reflect inherent socio-cultural factors, ultimately leading to excessive rates of caesarean section (Nuttall, 2000). Although somewhat of an ‘extreme’ example of ‘caesarean culture’, the situation in Latin America is an effective illustration of the inter-play between socio-cultural factors and the field of obstetrics.

6.2 Latin America – an example of a culture of caesarean section

Regions of Latin America have been recorded as having the highest caesarean section rates in the world (Belizan et al., 1999). Caesarean section rates of 80 to 90% are not uncommon in Costa Rican private obstetric clinics (Tyndall, 2001). Women are said to believe that in order to secure optimum obstetric outcomes, they would prefer to pay for their care, which implies 'buying a guarantee that doctor knows best and assurance that doctor will do everything' (p.2). Related to this issue is the perception that modern technology, such as the availability of caesarean section, should be embraced given that it represents the opportunity to avoid suffering associated with vaginal birth (Tyndall, 2001).

In Nuevo Leon, Mexico's wealthiest state, half of all babies are born by caesarean section (Zarembo, 2001). Caesarean section rates are around 70% in private hospitals. Anecdotal reports suggest that these rates may be associated with women's view of caesarean section as the norm. As one woman living in the state capital, Monterrey, said:

"I told the doctor I didn't want a natural birth. I didn't want a long labour..in fact I hardly know anyone who has had a natural birth".
(Zarembo, 2001, p.21).

A Monterrey gynaecologist argues that one reason for women's preference for caesarean section may stem from the desire to avoid pain – something which she sees as purely 'cultural'. Women might also be influenced by the view that vaginal birth will damage sexual organs and ultimately adversely affect sexual activity

(Tyndall, 2001). This issue would be an important factor given Latin American societal perceptions of women's genitals being primarily for sexual intercourse, as opposed to childbearing (Nuttall, 2000). Furthermore, Tyndall (2001) believes that excessive rates of caesarean section in Latin America reflect women's internalisation of 'paternalistic values' such as lack of faith in ability to give birth and an ultimate belief in technology, medicine and capitalism (i.e. you get what you pay for).

In contrast, it has been noted that obstetricians in Mexico may be engendering high demand for caesarean section by portraying the procedure as a distinctive or common way of birthing, particularly to women of higher socio-economic status (Castro, 1999). As a result, individuals from other social groups may then perceive caesarean section as a procedure for the 'privileged' and hence influence their desire for operative delivery. Similarly, Brazilian anthropologist Cecilia De Mello E Souza argues that assumed maternal preference for caesarean section in Latin America could actually be concealing clinician preference. She argues that clinicians have appropriated women's fear of labour, of body disfigurement and concern for sexual performance to justify their own preference for caesarean section (Bastian, 1999).

A recent study from Brazil has found that women's 'preference' for caesarean section may actually stem from an attempt to avoid perceived poor quality labour care associated with vaginal delivery in the public hospital system (Behague, Victora and Barros, 2002). This study combined both epidemiological and ethnographic methods to study a population based birth cohort of over 5000

women. A sub-sample of 80 women from the birth cohort was then interviewed to explore health seeking behaviour, and interactions with medical institutions.

In line with previous studies (Murray, 2000), Behague and colleagues (2002) found that caesarean section was more common among wealthier and more highly educated women. Interestingly, 40% (32/80) of women in the ethnographic arm of the study expected to have caesarean section. Their preference for caesarean section tended not to be based on accurate information about the risks and benefits of the procedure, but in order to avoid substandard care and medical neglect associated with 'antagonistic relationships with healthcare providers' (p. 945). These women were often lower to middle class women who sought medical intervention in order to avoid a 'risky and negative experience' of vaginal delivery (Behague et al., 2002, p.943). According to some women, physicians were often negligent in their care of women based on social and economic prejudice. Therefore, women attempted to avoid vaginal delivery by employing a number of methods such as pressuring obstetricians for intervention, seeking and paying to see an obstetrician known for performing caesarean section and attending hospital outpatient clinics, rather than local facilities in the hope of getting to know obstetricians (Behague et al., 2002).

To conclude, high rates of caesarean section in Latin America have been said to stem from both clinician and maternal preference for delivery by caesarean section. As the studies mentioned above demonstrate, a reduction in caesarean section rates in this region would involve change in many levels of society, including the motivation to do so.

6.3 Women's role in a 'culture' of caesarean section – maternal request for caesarean section

Non-clinical explanations for rising rates of caesarean section have tended to place great emphasis on the role of maternal request for the operation. Maternal request could also be seen to be representative of a wider 'culture of caesarean section' reflecting widespread cultural beliefs that this form of delivery is 'routine' (Armstrong, 1990). The main arguments appearing in the literature around maternal request have focused on whether women are indeed requesting caesarean section and reasons for request. Debates over methodological limitations inherent with studies of maternal request, in addition to whether women should in fact be able to choose caesarean section, have also been heard.

6.3.1 *Are women requesting caesarean section?*

The issue of maternal request for caesarean section has been raised in numerous settings worldwide (Tranquilli and Garzetti, 1997; Paterson-Brown, 1998; Amu et al., 1998; Sachs et al., 1999; Wagner, 2000). The debate has been bolstered by a survey that found 31% of female obstetricians in London would choose caesarean section for themselves in the absence of clinical indication (Al-Mufti, McCarthy and Fisk, 1997). Although receiving criticism over the generalisability of its findings (van Roosmalen, 1999), this study has been commended for prompting a timely debate on the topic of maternal request for caesarean section (Paterson-Brown, 1998; Amu et al., 1998).

The incidence of maternal request for caesarean section shows great variation depending on research methodology and setting. A recent critique of the literature

on maternal request for caesarean section found instances of maternal request ranged from 1.5% to 28% of all caesarean section deliveries. For elective caesarean section, instances of maternal request ranged from 5% to 48% (Gamble et al., 2000).

Churchill (1997) carried out two surveys in the United Kingdom, one in 1991/2 and again in 1996. Women who had experienced caesarean section received a questionnaire distributed in the postnatal ward. She found that of around 300 women surveyed at each time period, the rate of women indicating request for caesarean section had increased from 13% in 1991/2 to 21% in 1996.

An audit of elective and emergency caesarean sections was carried out in one hospital in South Australia (Wilkinson and Turnbull, 1998b). The surgeon entered data onto a dedicated computer installed in the operating theatre immediately after the operation. The surgeon was requested to record the indications for the operation, as well as the decision making sequence used. Of over 500 consecutive caesarean sections, 25% (134/529) were performed fully or partly due to maternal request. Of elective caesarean section, 48% (70/145) were carried out fully or partly for maternal request. Where the caesarean was performed as an emergency either before or during labour, maternal request accounted for 17% of all procedures.

A study from Western Australia (Quinlivan et al., 1999) found that 27% (170/633) of women having elective caesarean section in one public hospital had requested the procedure. The authors noted that in all cases the patient, the doctor performing the

surgery and the reviewing medical staff were unanimous in their agreement that maternal preference was the primary indication for caesarean section. Furthermore, medical opinion had been in accord that trial of labour was a reasonable and safe option. Reasons for maternal requesting were not explored in this study.

Turnbull and colleagues (1999) surveyed a consecutive sample of women ($n = 278$) seven weeks after their caesarean section. They found approximately 28% of women reported they had 'insisted' on caesarean section. Interestingly, one-third of women reported that they were not involved in the decision-making for their caesarean section. This research highlights the complexity of women's role in and involvement in the decision-making for caesarean section.

A similar study explored women's involvement in the decision-making for caesarean section in Scotland (Graham, Hundley, McCheyne, Hall, Gurney and Milne, 1999). A sample of 166 women's perceptions of the decision-making for delivery, and the information they had received, were recorded in an interview carried out by a research midwife at several days postpartum. Women's views were again obtained by self-completion questionnaire at 6 and 12 weeks postnatal. Information from medical records was used to verify or further explore issues raised by participants. Graham and colleagues (1999) found that of women delivering by caesarean section, 7% indicated a preference for caesarean section, which directly influenced their decision-making.

A further Scottish study found that of over 8000 caesarean section deliveries (representing 87% of all caesarean sections carried out in Scotland over a one year

period), 8% were associated with maternal request (Wilkinson et al., 1998a). Of all elective caesarean sections, 20% were carried out due to maternal request. Clinicians entering data directly onto a computer in the labour ward formed the mode of data collection for this study. The clinician entering the data had been involved in either the decision-making process for caesarean section, or in performance of the procedure.

The recent National Sentinel Caesarean Section Audit carried out in the United Kingdom found that maternal request for caesarean section – as reported by clinicians - accounted for 5% of indications for primary caesarean section, and 12% for repeat procedures (Paranjothy et al., 2001).

An unpublished study from Sweden found that of over 3000 women who completed a questionnaire in early pregnancy (16 weeks gestation), just over 8% reported that they would prefer to be delivered by caesarean section (personal communication, Hildingsson, May 2001). Women who were anxious, not only about birth but also about life issues in general, were more likely to prefer caesarean section. However, following logistic regression analyses, independent predictors of preference were found to be previous caesarean section, fear of giving birth and previous negative birth experience.

The notion that maternal request for caesarean section may be influenced by cultural and socio-economic factors has been posited. Lam (1993) argued that during a review of indications for caesarean section over 6 months, in several Hong Kong hospitals, no caesarean sections were performed for maternal request. He

posits several suggestions to explain this finding, including the possibility that Chinese women are less demanding, they may have less freedom of choice, or that Chinese doctors may be less susceptible to patient's suggestions. He notes that the hospitals involved in the review saw women from low socio-economic sectors - women who are not known to discuss their wishes or problems with doctors.

6.3.2 Why are women requesting caesarean section?

Various reasons why women may request caesarean section have been suggested, ranging from issues of maternal convenience to influence of clinicians. To date, these suggestions have tended to be in the form of opinion-papers with few empirical studies confirming alleged reasons for request. The following sections will describe the main factors said to be associated with maternal request for caesarean section.

6.3.2.1 Convenience

There have been claims that women value the ability to schedule birth around child-care or employment, and that this may account for the apparent increase in request for caesarean section (Kirby and Hanlon-Lundberg, 1999). While it has been speculated that the perceived convenience of caesarean section may influence preference for this mode of delivery, no empirical studies have found convenience to explicitly influence maternal request for caesarean section.

Some studies have found, however, that convenience may account for women's decline of vaginal birth after previous caesarean section. Two observational studies, carrying out interviews with over 300 women in the United States (Abitbol, Castillo, Taylor, Rochelson, Shmoys and Monheit, 1993) and 100 women in Hong

Kong (Lau, Wong and Li, 1996), found that refusal to attempt vaginal birth after previous caesarean section was associated with the perceived convenience of elective caesarean section. Abitbol and colleagues (1993) found that of 125 women refusing vaginal birth after caesarean section, 60% were 'mostly working women or women with tight schedules' (p.131) who refused on grounds of convenience.

One observational study has suggested that health professionals may perceive caesarean section as convenient. This study from the United Kingdom (Johanson, El-Timini, Rigby, Young and Jones, 2001a) surveyed over 80 health professionals and found that convenience played a part in their opinion of caesarean section. Interestingly, while the majority of nulliparous health professionals agreed that women should be able to demand caesarean section they also perceived caesarean section to be more dangerous and more expensive compared with vaginal delivery. The authors noted that this apparent paradox could be attributed to the fact that health professionals perceived caesarean section as easier, less painful and more convenient than vaginal delivery.

6.3.2.2 Influence of current or past experiences

Empirical evidence suggests that past birth experience can be associated with request for caesarean section. In their review of literature documenting reports of maternal request, Gamble & Creedy (2000) found that where reasons for request were explored, 'the majority of women requesting caesarean section had had a previously complicated birth or were experiencing increased obstetric risk in the current pregnancy' (p.261). Two of these studies (Churchill, 1997; Ryding, 1993) are outlined below.

Churchill (1997) conducted two surveys, five years apart, and found that very few primiparous women reported asking to have caesarean section (8% in 1991/2 and 9% in 1996) compared with women who had had previous caesarean section (22% in 1991/2 and 37% in 1996). Reasons for request were predominantly the perceived clinical need for repeat caesarean section, a desire to avoid an emergency procedure and reasons relating to safety of the baby. As one respondent commented, *"I didn't want to go through labour and end up having an emergency section like last time"* (p.120).

A study carried out with 33 Swedish women (Ryding, 1993) identified prior childbirth experience, fear of labour pain and concern over fetal well-being as significant concerns for these women demanding caesarean section for personal reasons. The common fear for primiparous women was that of vaginal rupture. These women had been referred to and had accepted consultation with a psychotherapeutically trained obstetrician after being identified as insisting on caesarean section in the absence of clinical indication. The author did note that although none of the women were deemed psychotic, two multiparous women were diagnosed as borderline personality and one primiparous woman had a very serious mental condition. Two of the five primiparous women had been sexually abused.

A review of indications for elective caesarean section over a period of six months in a United Kingdom hospital found maternal request was the third commonest reason for the procedure (18% or 16/90 women) (Atiba, Adeghe, Murphy, Felmingham and Scott, 1993). Of women requesting caesarean section, 14 (88%) had had a previous caesarean section for failure to progress, fetal distress or cord prolapse and

two women had previously experienced unfavourable outcomes (forceps delivery with complications and vaginal delivery resulting in cerebral palsy). The authors noted the potential of previous negative experiences to 'lead to resolve never to go through labour again' (p.246).

6.3.2.3 *Fear of consequences of vaginal delivery*

Armstrong (1990) notes:

"there is widespread but erroneous acceptance amongst doctors and parents alike that a normal vaginal birth is dangerous and traumatic for the child and that a caesarean guarantees a superior outcome" (p.136).

The notion that women might aim to avoid damage to the pelvic floor by scheduling caesarean section, with "the promise of maintaining the vaginal tone of a teenager", (Wagner, 2000, p.1678), has been heard as one reason why women may choose to have caesarean section. Again, although this explanation has been proposed, among the few studies examining reasons for maternal request for caesarean section none have cited this issue as influencing request.

Vaginal delivery is not without physiological morbidity. One study focusing on genital tract trauma in over 5000 vaginally delivered women found that 85% experienced some form of trauma. First or second degree lacerations occurred in two-thirds of women and outer vaginal tears occurred in one-half (Albers, Garcia, Renfrew, McCandlish and Elbourne, 1999). These authors also found episiotomy to be associated with an increased likelihood of rectum and vaginal vault tears.

The emerging evidence surrounding the incidence and sequelae of obstetric trauma associated with vaginal delivery (Sultan, Kamm, Hudson, Thomas and Bartram, 1993) has reportedly “challenged some deep rooted obstetric and midwifery teachings” (Paterson-Brown, 1998, p.462). In particular, an attempt to determine the prevalence and severity of pelvic floor damage and incontinence with nearly 1000 women in the United Kingdom, found that instrumental vaginal delivery conferred the greatest risk (MacArthur, Bick and Keighley, 1997). This increasing awareness has been highlighted by the fact that 80% of doctors who indicated they would prefer to give birth by elective caesarean section cited fear of perineal damage as the main reason for their preference (Al-Mufti et al., 1997).

Idama & Lindow (1999) assert that a driving force behind the “fashion” for elective caesarean section could be the desire to avoid pelvic floor damage. In a letter to the *British Medical Journal*, these obstetricians criticised studies focusing on the incidence of genital tract trauma during vaginal delivery on a number of grounds. Firstly, some studies have been based on small sample size, leading to the possibility of bias in case selection. Secondly, there has been a lack of long-term follow-up and thirdly, failure to consider confounding variables such as family history, connective tissue disorders and lifestyle; factors that they argue may contribute to predisposing an individual to pelvic floor damage.

Sultan & Stanton (1996), in a commentary appearing in the *British Journal of Obstetrics & Gynaecology*, reported increasing awareness among obstetricians of requests for elective caesarean section to avoid trauma to the pelvic floor and perineum. These authors concluded that for the majority of women, minimising

trauma rather than electing caesarean section is the logical approach. The fact that most damage occurs during first vaginal delivery (Sultan et al., 1996) points to the value of prevention rather than 'compulsory' elective caesarean section.

6.3.2.4 Fear of childbirth

Some women may request caesarean section due to actual fear of childbirth, although only one unpublished empirical study has found evidence to verify this assertion (personal communication, Hildingsson, May 2001).

Interestingly, evidence has found that fear of vaginal delivery may have psychosocial antecedents. A survey carried out with over 200 women in Finland found that women's personality type, the dynamics of her partnership, employment status and degree of social support influenced fear of vaginal delivery (Saisto et al., 2001). For example, increased satisfaction with the partner relationship meant women were less likely to fear vaginal delivery. General maternal anxiety and low self-esteem were also highly correlated with anxiety around vaginal delivery. This research emphasises the importance of identifying and supporting women and their partners who may fit such a 'profile' in order to address anxiety around vaginal delivery.

6.3.2.5 Clinician preference/influence

'Liberal attitudes toward caesarean section among obstetricians' (Sultan et al., 1996, p.731) could have the potential to influence requests for caesarean section. The importance of clinician preference can be illustrated by the fact that in one Australian study, over 70% of women deciding to have caesarean section,

regardless of whether it was elective or emergency, stated that information from the doctor was the main reason for their decision (Turnbull et al., 1999).

The aforementioned survey carried out by Al-Mufti and colleagues (1997) has prompted a number of similar surveys focusing on obstetricians' preferred mode of delivery for themselves or their partners. A North American survey of 117 obstetricians attending an American College of Obstetricians and Gynecologists congress found that 46% would personally prefer to be delivered by caesarean section (Gabbe and Holzman, 2001). Just over half of male and one-third of female obstetricians said they would prefer caesarean section. The number of obstetricians who would personally select caesarean section increased with increasing fetal weight, with 88% preferring caesarean section if the baby was estimated at 4.6kg or more. The sample was not representative of obstetricians as a whole given that nearly 70% of respondents were older than 40 years, with most aged between 51-59 years.

A survey of over 400 Australian and New Zealand Fellows, Members and Australian Trainees of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (Land, Parry, Rane and Wilson, 2001) found that 11% would choose elective caesarean section for themselves or their partners pregnant for first time with uncomplicated singleton pregnancy. As Al-Mufti and colleagues found (Al-Mufti et al., 1997), fear of faecal and urinary incontinence was the primary reason for such a decision (82%). Preference for caesarean section also increased with increasing fetal weight, with over half of respondents preferring caesarean section if fetal weight was over 4.5 kg.

A study of Irish obstetricians found that preference for caesarean section in the absence of clinical indication was significantly lower than that reported for London obstetricians (Al-Mufti et al., 1997). McGurgan and colleagues (McGurgan, Coulter-Smith and O'Donovan, 2001) found that of 165 obstetricians, 7% would prefer caesarean section for themselves or their partners for a first-time, uncomplicated, singleton, cephalic presentation at term in the absence of any clinical indications. Preference rose to 38% if the fetus weighed 4.5kg. Interestingly, a highly significant association was found between obstetrician's personal preference and a caesarean section rate greater than 16% at their hospital of employment.

Lastly, the aforementioned survey carried out by Johanson and colleagues (2001) found that of 88 health professionals who were asked "If you had completely free choice, would you choose to have your baby delivered by caesarean section", 13% agreed. This proportion rose to 20% for nulliparous health professionals.

Despite issues regarding generalisability of findings such as those outlined in the surveys above, it does appear that personal preference for caesarean section in the absence of clinical indication does exist among some obstetricians. Fear of physiological morbidity arising from vaginal delivery is a key factor in influencing such a preference. Given that personal preferences of obstetricians are well placed to influence the status of caesarean section in modern obstetrics, the findings of these surveys are concerning.

Clinician reaction to maternal request for caesarean section, real or hypothesized, is a further issue recently explored in a number of observational studies. A postal survey of 151 obstetricians in England and Wales (Cotzias, Paterson-Brown and Fisk, 2001) suggests that obstetricians may feel at ease meeting the request. Cotzias and colleagues (2001) sent questionnaires to every fifth consultant on an alphabetical list in order to determine clinician reaction to maternal request for caesarean section. They found that 69% of obstetricians would agree to maternal request in the absence of clinical indication. Of these respondents, 62% claimed their practice in this regard had changed recently.

Findings from the National Sentinel Caesarean Section Audit carried out in the United Kingdom, suggest a different picture (Paranjothy et al., 2001). Of over 160 consultants, from 40 units participating in the audit, most (80%) agreed with the statement that 'birth was a natural process that should not be interfered with unless necessary' (p.105). There was agreement that women's preferences were a priority in decisions regarding mode of delivery, however obstetricians were more likely to agree that a woman could have vaginal birth (68% agree/strongly agree) if she wanted rather than agree that she could have caesarean section if wanted (56% agree/strongly agree). Furthermore, the majority (78%) agreed that elective caesarean section was not the safest option for the mother. Most believed, however, that elective caesarean section could be beneficial in reducing the chance of urinary (68%) and faecal incontinence (78%). All but two consultants said that they believed there was a shift in obstetric culture towards a lower threshold for performing caesarean section.

The fact that obstetrician response to maternal request for caesarean section may be influenced by maternal age and parity was ascertained by a clinician survey carried out as part of the National Sentinel Caesarean Section Audit (Paranjothy et al., 2001). Obstetricians were asked about their clinical management of response to maternal request for caesarean section in the absence of clinical indications. Interestingly, most reported that they would advise vaginal delivery but accepted maternal choice for elective caesarean section. Obstetricians were, however, influenced by maternal age and parity. They were most likely to agree to schedule an elective caesarean section if the woman was aged over 40 years and had no previous pregnancies. In this case, 31% would agree to book an elective caesarean section and 62% would recommend vaginal delivery but accept maternal choice as to vaginal or elective caesarean section. Obstetricians were least likely to agree to caesarean section in younger or multiparous women.

As previously mentioned (see Section 6.2), the notion that women in Latin America might have a preference for caesarean section (Gomes et al., 1999) has been challenged by recent research that finds clinician preference plays a key role. Potter et al (2001) assessed the preferences of over 1000 pregnant women in the public and private hospital sectors of Brazil. Face-to-face interviews were carried out in the early antenatal period, late antenatal period and one month after delivery. Despite large differences in caesarean section rates between public (31%) and private patients (72%) there were no significant differences in preferences for caesarean section between the two groups. Importantly, between 70-80% of women in both public and private sectors reported in the antenatal interviews that they would prefer to deliver vaginally. The authors suggest that high rates of

caesarean section in private hospitals might reflect large numbers of unwanted procedures rather than demand per se. They believe that obstetrician's beliefs regarding the safety of caesarean section, their inability to elicit women's preferences, the expectancy that women will want caesarean section and issues of convenience may all contribute to high numbers of unwanted caesarean sections in private hospitals.

A study from Chile (Murray, 2000) also found that despite large differences in caesarean section rates between the public and private sectors, the minority of women receiving private care reported wanting that mode of delivery (range 6-32%). As Pittrof (2001) notes, causes of high caesarean section rates "may be less related to what obstetricians do than to what they don't do: encouraging women to believe in their ability to have a vaginal delivery" (p.3).

To conclude, few empirical studies have focused on reasons behind maternal request for caesarean section. In addition, assumptions have not been subject to empirical analysis. Issues of convenience, fear of vaginal delivery and fear of damage to the pelvic floor have all been implicated in maternal request for caesarean section. It does appear that past obstetric experience or current complications are implicated in maternal request. Studies focusing on clinician preference for caesarean section, and suggestions that clinicians may influence requests for caesarean section do appear to be well-placed to influence request for caesarean section. As yet, no studies have sought to test these hypotheses.

The following section involves discussion of a different debate surrounding maternal request – that of the issue of a woman's right to elect caesarean section.

6.3.3 *Should women be able to choose caesarean section?*

“The first woman in England powerful enough to demand chloroform in childbirth was Queen Victoria. At the end of the 20th century, medical and social prejudices against women sidestepping their biblical sentence to painful childbirth are still with us”, (Showalter and Griffin, 1999, p.1401).

“Women's equal access to quality medical services, rather than assumptions about the proper form of labour and delivery, should be our central concern”, (ibid).

“If we believe in choice, it has to apply even if a woman makes a choice we did not expect, one that does not help us to achieve service targets or one that we just don't like” (Bale, 1999, p.34).

A debate over management of women who request caesarean section has been heard in the *British Medical Journal* (Paterson-Brown, 1998; Amu et al., 1998). This debate revealed two opposing 'camps', those who advocate women's right to choose caesarean section (Norman, Crowhurst and Plaat, 1999; Sachs et al., 1999) and those who advocate caution around maternal request (Stirrat and Dunn, 1999; Idama et al., 1999; van Roosmalen, 1999; de Zulueta, 1999).

Arguments promoting women's right to choose caesarean section tend to centre on the relative risks of vaginal delivery versus caesarean section. Paterson-Brown (1998) argues that recent evidence associating vaginal delivery with substantial morbidity has challenged the notion that vaginal delivery is always safer than caesarean section. Further, she argues that society has developed an 'intolerance to risk', reflected in pre-pregnancy counselling and antenatal screening, which may act to facilitate acceptance for caesarean section.

A report from the United Kingdom, *'Changing Childbirth'*, recommends that women be fully informed and involved in making decisions about their care (Department of Health, 1993). Some have argued that rather than concentrating on whether women should be able to request caesarean section, the focus should be on ensuring women make informed choice, regardless of the resultant choice (Paterson-Brown, 1998). That is, if an informed woman chooses caesarean section, then this ought to be respected. Determining whether women are truly informed, or deciding what constitutes informed-choice, is open to debate (Page and Penn, 2000; Young, 2000). As one clinician remarked: "I wonder if any doctor has the time to give, or any patient the patience to listen to, full unbiased information on what is known", (Wagner, 2000, p.1678).

Feminist writers have also considered the issue of women's right to choose caesarean section. Pringle (1998) asserts that the politics of pain and power within childbirth are complex, she states: "It can be argued that women have a right to control the resources of medicalised childbirth to their own advantage" (p 47). In interviewing female obstetricians and gynaecologists, Pringle (1998) found

acknowledgement of the view that natural childbirth is heralded as the 'test of womanhood' or the standard to aim for. These clinicians criticised the fact that undue pressure may be placed on women to achieve normal vaginal delivery which could be seen to reflect 'the hallmark of what it means to be a woman' (p.48). Similar arguments could apply for the avoidance of other forms of obstetric intervention such as pain relief. Crouch and Manderson (1993) argue that the notion of childbirth as 'a test of womanhood' can also prevent women from feeling 'able' to utilise options for pain relief.

Those who are concerned over so-called 'maternal-choice caesarean section' have used terms such as "irresponsible" (Stirrat et al., 1999, p.120) and "a blatant misuse of power" (DeMott, 2000, p. 265) to describe support for women choosing caesarean section. Concerns over the fact that women might not be fully informed or making a 'rational' choice when requesting caesarean section, have been voiced (Amu et al., 1998). Indeed, performing caesarean section based on maternal request without full exploration of reasoning has ethical implications.

A critical aspect surrounding concern over maternal request for caesarean section lies with evidence associated with the relative risks of caesarean section and vaginal delivery. Despite the association between significant pelvic floor damage and vaginal delivery (Sultan et al., 1993; MacArthur et al., 1997), caesarean section is associated with greater maternal and fetal morbidity and mortality (Lilford et al., 1990; Enkin et al., 2000). Those concerned at the prospect of 'maternal-choice caesarean section' argue that these risks should not be dismissed and vaginal delivery remains the safest option available to women (Idama et al., 1999).

The following section discusses methodological issues and inherent shortcomings in studies exploring maternal request for caesarean section. It is vital that these limitations are recognised in order for better understanding of women's assumed role in rising rates of caesarean section.

6.3.4 Methodological and conceptual issues relating to 'maternal request'

While many reasons have been offered as to why women might request caesarean section, little empirical evidence has offered support for such explanations. In addition, a recent critical review of studies focusing on maternal request (Gamble et al., 2000) highlighted several key conceptual and methodological issues. The primary criticism has tended to center on the fact that emphasis on reported instances of maternal request for caesarean section might obscure the influence of external factors, such as the nature of the relationship between data collector and participants, timing of data collection and definitions of request. Studies have also varied in their definition of maternal request, with some reporting on women's 'preference' for caesarean section (Geary, Fanagan and Boylan, 1997) and some on actual maternal 'request' (Churchill, 1997; Wilkinson et al., 1998a) or 'demand' for the procedure (Ryding, 1993).

6.3.4.1 Source and timing and of data collection

In some studies highlighting instances of maternal request for caesarean section, the influence of the data collector and the data collection timeframe needs to be acknowledged. Wilkinson & Turnbull (1998) collected data regarding indications for caesarean section via a specific computer and printer installed in the operating

theatre. The clinician could then enter data directly onto the computer following the operation. Similarly, Quinlivan et al (1999) carried out an audit of computerised clinical notes, entered by clinicians, to determine indications for elective caesarean section. In both instances, the data relied on the clinician's judgement of maternal request.

In studies such as these the issue of bias needs to be acknowledged regarding both timing and source of data collection. Clinicians who were involved in the decision-making or performance of the caesarean section may feel the need to justify the decision for caesarean section or may overestimate the extent to which women actually requested the procedure.

Women's willingness to report involvement in the decision making for caesarean section may be influenced by the person collecting the data. In the study carried out by Mould et al (1996) a Senior House Officer conducted interviews with women two to three days following their caesarean section, and "a number of doctors undertook the six week check" (p.1074). Mould et al (1996) found that, in general, both women and surgeons agreed with the indication for the procedure, women reported contributing to the decision and were satisfied with the decision and the operation. They also found that nearly half of women said they would prefer caesarean section for a subsequent delivery. A number of limitations have been highlighted with this research. Firstly, it is not explained in the article whether the interviewers had been members of the care team. It could be expected that women may have been reluctant to criticise their care provider directly. Secondly, it is difficult to determine what women meant when they said they had contributed to

the decision for caesarean section. As Hemminki (1997) points out in a commentary of Mould et al's (1996) research, if women had listened to and agreed with the clinicians explanation of the importance of conducting caesarean section, could this be deemed contributing to the decision?

An illustration of how the source of data collection could introduce bias can be seen in the studies carried out by Quinlivan et al (1999) and Graham et al (1999). These studies both found discrepancies in medical notes, or between medical notes and women's responses. Graham et al (1999) found that in 10 out of 12 cases of caesarean section for maternal request, discrepancies existed between women's responses in the postnatal questionnaire and medical notes. Similarly, Quinlivan et al (1999) found out of 633 elective deliveries, 170 (27%) were attributed to maternal request. In all of these 170 cases, the patient, the doctor performing the surgery and the reviewing medical staff each agreed that maternal preference was the leading indication. In a further 61 cases there was disagreement between the opinions of operating surgeon, patient and review panel as to whether maternal request was the dominant factor as opposed to medical factors. These cases were then re-coded in line with the correct medical indication. These apparent discrepancies or non-consensus highlight possible shortcomings inherent with studies using data coded under the category 'maternal request' to report instances of maternal request for caesarean section (Gamble et al., 2000).

Women may be more or less likely to say they contributed to the decision for caesarean section depending on timing of data collection. A number of studies have attempted to address this issue by collecting data at several different instances.

Mould et al (1996) collected data on satisfaction and participation in decision-making on the second or third postnatal day and again at the six-week postnatal visit. Graham et al, (1999) interviewed women between the third and fourth postnatal day and sent a self-completion questionnaire at 6 and 12 weeks postpartum to determine women's views on the decision-making for caesarean section.

Nevertheless, research has shown that women are remarkably loyal to their own birth experience (Porter and MacIntyre, 1984; Weaver, 2000), which may influence women's motivation to say they contributed to the decision for caesarean section, regardless of when data are collected. The fact that women may feel the need to be respectful when evaluating their care, in light of the fact that care providers may be responsible for data collection, introduces an important issue of bias.

6.3.4.2 Information regarding alternatives

While reports of maternal request for caesarean section have received attention, little consideration has been given to the amount or quality of information women have had on which to base these decisions. Turnbull and colleagues (1999) did attempt to explore women's reaction to being offered alternatives to caesarean section, such as vaginal birth after caesarean section, vaginal breech delivery and external cephalic version. Given the option of a vaginal delivery, 38% of women with a breech presentation, and 34% of women who had had previous caesarean section, chose caesarean section.

In the study carried out by Wilkinson et al (1998), although maternal request accounted for 8% of all caesarean sections where a trial of labour would have been appropriate, no attempt was made to collect information on how well informed women were or at what stage of pregnancy they received information on alternatives. In order to fully understand the reasoning behind women's request for caesarean section, it would seem critical that studies involve some exploration of these factors.

To summarise, there are important methodological and conceptual limitations inherent in studies focusing on maternal request for caesarean section. These include firstly, reliance on women giving 'accurate' feedback on their birth experience, particularly when it involves feedback to clinicians involved in their care and secondly, the precision of audits identifying 'patient request' as the primary indication for caesarean section.

The issue of maternal request for caesarean section highlights a unique dilemma surrounding childbirth in the 21st century. To date, existing studies reporting maternal request have been associated with methodological limitations and few have provided empirical evidence for why women may be requesting caesarean section. To address these limitations, the following section of this chapter outlines two studies carried out as part of the larger study described in this thesis. These studies focus on women's consideration of caesarean section and their views in terms of the existence of a community culture of caesarean section.

6.4 Is there evidence for a culture of caesarean section in Australia – evidence from two studies utilising different methodologies.

The following section describes two studies conducted in the context of the wider program. It was decided that questions which specifically addressed issues surrounding a culture of caesarean section would be included in the questionnaire sent to women as part of the program evaluation, as described in Chapters 4 and 5. It is not well understood, for example, whether women in Australia perceive caesarean section as an increasingly acceptable alternative mode of delivery, although such assumptions have been made in line with rising rates of this procedure (Armstrong, 1990). Therefore, women's opinion of community perceptions of caesarean section, and the extent to which women were thinking about caesarean section in early pregnancy, were investigated. The main questions were:

- Do women believe there is a cultural acceptance of caesarean section?
- How many women are considering caesarean section in early pregnancy?
- Is there a clinical basis to women's preference for caesarean section?

6.4.1 *Women's opinion of community views of caesarean section*

6.4.1.1 *Aim*

To determine women's opinion of community sentiments regarding caesarean section.

6.4.1.2 *Method*

A section was included in the questionnaire distributed to women at seven weeks post-natal, which asked the extent to which they agreed, on a 5-point Likert scale, with six statements about community views of caesarean section, for example, "*It is common for people to think that caesarean section offers an easier way of giving birth*". Statements were conceptualised from a review of literature commenting on cultural shifts in perception of caesarean section (Armstrong, 1990; Hemminki, 1997; Gomes et al., 1999; Nuttall, 2000; Johanson et al., 2001b; Quadros, 2001). These shifts include caesarean section being seen as guaranteeing a superior outcome and more preferable, acceptable, safer and convenient than vaginal delivery (Armstrong, 1990).

Statements were framed in terms of women's opinion of community views of caesarean section. Such a 'one step removed' approach has been advocated in order to minimise bias when obtaining opinion on topics that may be sensitive, threatening or embarrassing (Bowling, 1997). Bowling (1997) notes respondents may feel the need to create a good impression if they are aware that it is they who are being studied, i.e to avoid what she terms 'social desirability bias' when people wish to present themselves at their best. Therefore, the aim was to explore

women's perceptions of how they see the community perceiving caesarean section, rather than asking their opinion explicitly.

One-way frequency distributions were used to determine the magnitude of response to the statements. 95% confidence intervals were reported alongside the estimates to indicate the precision of the estimate (Bowling, 1997).

Table 6.1: Women's opinion of community views of caesarean section

Community statements (n = 91 women)	Strongly agree % (95% CI)	Agree %	Not sure %	Disagree %	Strongly disagree %
1. People tend to think of CS as a more convenient way of birthing	12 (6 – 21)	41 (31 – 52)	25 (17 – 36)	20 (12 – 29)	2 (0 – 8)
2. CS is now seen as a routine way of having a baby	11 (5 – 19)	37 (27 – 48)	15 (9 – 25)	33 (24 – 44)	3 (1 – 9)
3. CS is still seen as major surgery	22 (14 – 32)	38 (28 – 49)	14 (8 – 23)	25 (17 – 36)	-
4. It is common for people to think that generally a CS is safer than a vaginal delivery	9 (4 – 17)	22 (14 – 32)	30 (21 – 40)	36 (26 – 47)	3 (1 – 9)
5. It is common for people to think that CS offers an easier way of giving birth	20 (12 – 30)	52 (41 – 62)	14 (8 – 23)	12 (6 – 21)	2 (0 – 8)
6. The media seems to portray CS as a better option than vaginal delivery	9 (4 – 17)	14 (8 – 23)	42 (32 – 53)	29 (20 – 39)	6 (2 – 14)

6.4.1.3 Results

The range of responses from all women is given in Table 6.1. It was evident that on the whole women did perceive a community acceptance of caesarean section. Most women (72%, 66/91) agreed that caesarean section is seen as offering an easier way of giving birth. Approximately half of the sample agreed that caesarean section is seen as a more convenient and routine way of having a baby. Nearly one-third (28/91) agreed that caesarean section is seen as safer than vaginal delivery and one quarter (23/91) responded that caesarean section is no longer seen as major surgery. Women's views on the statement "The media seems to portray caesarean section as a better option than vaginal delivery" were more widely spread: 23% agreed, 35% disagreed and 42% were not sure of their opinion of this statement.

The following section describes the second study, exploring preference for caesarean section.

6.4.2 Women who report a preference for caesarean section

6.4.2.1 Aim

To determine how many women were considering caesarean section at 18 weeks gestation, and whether there was a clinical basis to this consideration.

6.4.2.2 Method

Women were asked in the postnatal questionnaire if, at the time they were invited to join the program (18 weeks gestation), they were considering caesarean section. The question asked was: 'When you were given this pamphlet were you

considering caesarean section for the birth of your baby?'. This question was intended to be general in order to establish both those women who were vaguely considering caesarean and those who were specifically intending deliver by this mode of delivery. Secondly, this approach was used in light of previously mentioned limitations in the measurement of women's request for caesarean section. That is, earlier studies have employed a variety of methods to determine women's preference for caesarean section, which have introduced substantial bias (see Section 6.3.4). This study therefore sought to ask women about their preference directly, in an anonymous self-completion questionnaire.

The obstetrician on the research team, who was 'blind' as to the aim of the exercise, carried out independent analyses of responses in the questionnaire. He was asked to determine, from a hospital-based clinical database, the risk status of all women who answered the question on consideration for caesarean section. The obstetrician's assessment of risk status was based on women's broad past obstetric history. Examples of consideration included the likelihood of a macrosomic baby, previous severe pre-eclampsia (in the case of high-risk) and previous miscarriage at less than 12 weeks (in the case of moderate risk). This exercise was carried out retrospectively. That is, the obstetrician's assessment of risk status was in relation to each woman's obstetric history when they were at 18 weeks gestation, the time that women were asked to reflect whether they were considering caesarean section.

As can be seen in Table 6.2, women were then separated into four groups according to their risk status, ranging from High (deemed by the obstetrician as having an

80% risk of having caesarean section) to Negligible (the risk of having caesarean section was deemed less than 5%).

Table 6.2 Classifications developed by the obstetrician for grouping women according to risk status

Risk Status	Likelihood of caesarean section (approx.)
High	80%
Moderate	40%
Low	10%
Negligible	< 5%

Once classified according to these groups, the author identified those women who had reported considering caesarean section to determine the obstetrician's assessment of their risk status for caesarean section. That is, the author was able to evaluate whether women's consideration of caesarean section had clinical basis.

6.4.2.3 Results:

Of 92 women who returned questionnaires, 69 responded to the question regarding whether they were considering caesarean section at 18 weeks gestation. Of these women, ten (14%) reported that they were considering caesarean section at this time. The fact that 25% of the sample did not respond to the question reflects the fact that only those women who had read the informational pamphlet were instructed to answer the question.

Table 6.3 demonstrates that, of the women indicating they were considering caesarean section, the obstetrician classified two as high-risk for caesarean section, six as moderate risk and two as low-risk.

Table 6.3 Clinician independent assessment of risk status for caesarean section for women considering the procedure at 18 weeks

Risk status as determined by clinician	Number of women
High-risk (80%)	2
Moderate-risk (40%)	6
Low-risk (10%)	2
Negligible-risk (< 5%)	0
Total	10

Eight of the ten women had a history of previous caesarean section. These women had been classified as high-risk and moderate-risk. Of the two women classified as low-risk who were considering caesarean section, one was primiparous and one was multiparous but had no history of caesarean section.

6.4.3 Discussion

Between 25 to 70% of women in this study agreed that there is some degree of community acceptance for caesarean section. It appears that childbearing women may be cognisant of a cultural shift in perceptions toward caesarean section. Women were asked their opinion of community views of caesarean section, for this reason the degree to which women themselves subscribed to such views is unknown.

It may be of interest in future studies to address whether certain groups of women in the community are more or less likely to perceive shifts in the acceptance of caesarean section. Certain socio-demographic groups might be more likely to perceive caesarean section as acceptable, and it may be these women who could be the focus of an educational campaign such as the program outlined in this thesis. In addition, it would be interesting to determine whether those women who are seen to have higher rates of caesarean section (Roberts et al., 2000; Bell et al., 2001) are more likely to agree with statements pertaining to a culture of caesarean section.

In general, women's consideration of caesarean section was clinically based, a finding consistent with previous studies. As part of the National Sentinel Caesarean Section Audit, a survey was carried out of maternal views of caesarean section (n=2475) (Paranjothy et al., 2001). This survey found that 5% (n=131) of women, when surveyed at approximately 35 weeks gestation, expressed a preference for caesarean section. Women who had delivered by caesarean section previously were more likely to express such preference. These findings are also in accord with the conclusions of a review of studies focusing on maternal request for caesarean section (Gamble et al., 2000). These researchers found few instances of maternal request for caesarean section in the absence of clinical complications of the current or previous pregnancies.

It is possible that asking women to reflect on consideration of caesarean section, retrospectively, may have influenced reports. Women were asked their consideration for delivery in the second trimester of their pregnancy, seven weeks after delivery. It is therefore difficult to assess the accuracy of women's reports. It

may be more reliable for further studies to ask women, *at 18 weeks*, if they are considering or have a preference for caesarean section.

Only those women who read the informational pamphlet were asked about their consideration of caesarean section. This was because the question was partially designed to address the issue of whether the informational pamphlet, which was expressly designed for women who were considering caesarean section, influenced consideration. Preferably, and in future studies, a single question on preference for caesarean section should be included in order to determine consideration of caesarean section for the entire sample.

The fact that women in both studies were involved in a broader program may have influenced the external validity of the findings. Women may have been biased in being aware of the types of answers the researcher was interested in, i.e. accordance with a culture of caesarean section. As Bowling (1997) points out, study participants can often recognize 'clues' from the researcher and then 'behave in a manner consistent with their perception of the hypothesis in an attempt to please the experimenter.' (p.195). It would be necessary to carry out similar studies with a sample of women not involved in the program, in order to rule out issues of bias. This said, it is significant that nearly 15% of women were willing to report they were considering caesarean section for the birth of their baby. It does not appear that being involved in the broader program resulted in women feeling less likely to admit to considering caesarean section, as might be expected.

6.5 Conclusion

This chapter has introduced the notion of a culture of caesarean section, particularly as it relates to the obstetric climate in Latin America. Furthermore, it has explored, within the context of the wider program evaluation, two studies addressing the existence of a culture of caesarean section in the Australian setting.

Culture of caesarean section refers to the way in which society could be seen to 'normalize' this mode of delivery as an acceptable alternative to vaginal delivery. Maternal request for caesarean section has been argued to be indicative of such a culture, and numerous studies have attempted to measure the incidence of such request. A critique of the maternal request literature (Gamble et al., 2000) pointed out that women's exact role in requesting caesarean section is unclear given that most studies are associated with substantial methodological limitations.

The two studies outlined in the final section of this chapter utilised two distinct methodologies to address the issue of culture of caesarean section. Firstly, women were asked their perception of community views of caesarean section. More specifically, they were asked whether society perceives caesarean section as routine, more convenient, safer and easier than vaginal delivery. Secondly, the aim was to determine the extent to which women in one Australian hospital were considering caesarean section in early pregnancy and whether such consideration was clinically justified, as deemed by the obstetrician on the research team.

Although limited to the views of women participating in the program, rather than the wider community, it was found that women do perceive some community

acceptance of caesarean section. Anecdotal reports from women in the program, when asked their general views on caesarean section, are consistent with this perception:

“I think a caesarean, being major surgery, should not be considered an “easy way out”, and if a vaginal delivery is possible, it is the best way. I believe there are too many caesarean sections within our society” (34 year old multipara).

“I think caesarean section should be avoided if there is a high likelihood of a normal vaginal delivery taking place. Some women who have never given birth think that a caesarean section might be easier/less traumatic but after having given birth vaginally once, they’d probably be glad that they didn’t have recovery from major surgery to cope with as well as having a new baby. This was true for me!” (23 year old multipara).

The findings of the second study support the suggestion that most cases of request or preference for caesarean section have some clinical basis (Gamble et al., 2000). This suggests that in addressing rising rates of caesarean section, appropriate counselling and information provision needs to be a priority for women with a previous caesarean section or with current clinical complications.

The following chapter provides an overview of the thesis and discusses factors that may account for the findings of process evaluation. Implications of the current

research for future approaches to the issue of rising caesarean section rates in the 21st century are also discussed.

Chapter 7 – Discussion

7.1 Thesis overview

This thesis sought to explore the development and evaluation of a program for pregnant women aimed at addressing rising rates of caesarean section. The thesis also examined the concept of a culture of caesarean section, drawing particularly on the issue of women's request for caesarean section. Prior to a broader discussion of the implications of the thesis findings, each chapter is reviewed below.

7.1.1 Chapter one – caesarean section throughout history to present day

Chapter 1 provided an historical overview of caesarean section. Over the course of several centuries, caesarean section has evolved from a somewhat desperate measure to a relatively safe and 'acceptable' alternative to vaginal delivery (Armstrong, 1990). Reference was made in this thesis to current escalating rates of caesarean section worldwide, and key factors said to be associated with rising rates. These factors range from medicalisation of childbirth (Thomson, 2000) to changing maternal demographics (Chan et al., 2001; Nassar et al., 2001).

The indications for and risks associated with caesarean section were also described. The number of indications for caesarean section has increased in recent decades (Llewellyn-Jones, 1990). In Australia, primary indications for caesarean section include cephalopelvic disproportion or failure to progress (termed 'dystocia') and previous caesarean section (Chan et al., 2001; Quinlivan et al., 1999). The physical risks involve higher likelihood of maternal morbidity (Lilford et al., 1990), and significant mortality inherent with major surgery (Enkin et al., 2000). For the

baby, the main risk is respiratory distress syndrome (Enkin et al., 2000). A drive toward greater emphasis on the psychosocial sequelae associated with caesarean section has been evident since the early 1980s (Oakley, 1983). The literature has since established psychosocial ramifications ranging from less immediate and long-term satisfaction with the birth (DiMatteo et al., 1996) to severe post-traumatic stress reactions (Ryding et al., 1998).

Finally, the research methodology and rationale for the thesis were discussed. The research framework involved four stages, derived from a program development and evaluation cycle described by Hawe and colleagues (1990). In the first stage, needs assessment was conducted through a systematic review of the literature. The second stage involved development of the intervention method, involving close consultation with relevant stakeholders. In the third stage, the program was implemented with a sample of pregnant women. Finally, process evaluation was conducted whereby the entire process of program development and implementation was assessed through a survey of program participants. This final stage involved measuring program acceptability in addition to measuring whether the program was implemented as planned. This framework is advocated by health promotion workers to enable a thorough assessment of novel programs prior to implementation on a large, and often costly, scale (Bradley et al., 1999). The process is also self-reflective in allowing for program redesign or re-implementation where necessary.

7.1.2 Chapter two – needs assessment

Chapter 2 consisted of the first stage in program development and evaluation – needs assessment (Hawe et al., 1990). For the purpose of this thesis, needs assessment took the form of a systematic literature review exploring strategies implemented worldwide to address rates of caesarean section.

The literature review identified Level-one evidence (Muir Gray, 1997) for three strategies, one psychosocial and two clinical, demonstrating significant reductions in caesarean section. The psychosocial strategy found to be associated with a reduction in the risk of caesarean section involved one-to-one support during labour (Hodnett, 2002). The two clinical strategies involved vaginal birth after caesarean section (VBAC) and external cephalic version (ECV) (Rosen et al., 1990; Hofmeyr et al., 2002).

The literature review assisted not only in informing the author of efficacious strategies for caesarean section reduction, but also of a ‘gap’ in the approach of strategies to date. That is, psychosocial strategies have been under-utilised, despite having the potential to reduce rates of caesarean section (Hodnett, 2002). Further, the series of studies carried out by Fawcett and colleagues, mentioned in Chapter 1, found inconclusive evidence for the benefit of detailed caesarean section information on adaptation to unplanned caesarean section. While they found a real need for information among those experiencing unplanned caesarean section (Fawcett, 1981), no difference in physical or psychological outcomes were found between those who received detailed information incorporated into antenatal

classes and those who received traditional childbirth preparation classes (Fawcett et al., 1993).

Therefore, the lack of psychosocial strategies in addition to the contradictory nature of the findings of Fawcett and colleagues (1981; 1993) highlighted the significance of assessing an innovative psychosocial approach to addressing rising rates of caesarean section. The study was aimed at developing and evaluating a program providing pregnant women and their partners with the resources to assist in making truly informed decisions regarding childbirth. Such an approach could assist women in adapting to unanticipated caesarean section. Further, women who are better-informed about the risks of and alternatives to caesarean section may influence rates of this intervention.

7.1.3 Chapter three – developing the program

Chapter 3 involved stage two of the cycle recommended by Hawe and colleagues (1990) – program development. As Hawe et al (1990) note, detailed description of program planning assists in enabling further research to duplicate the program if successful or, if unsuccessful, allows for identification of problem areas.

The goals and principles of the ‘new public health’ movement were central in guiding program development (O'Connor et al., 1995). A key aim was that of empowering women to make their own decisions and assume equal responsibility for their care during pregnancy and childbirth. This aim was operationalised by the development of two resources incorporating both written information and social-network based information for women and their partners. In keeping with

principles of the 'new public health' both resources were developed in careful consultation with key stakeholders, including midwives, consumers and an obstetrician who was a member of the research team.

7.1.4 Chapter four – implementing the program

Stage three, or the implementation phase of the program was described in Chapter 4. A group of women from a level-three tertiary hospital in metropolitan Adelaide, South Australia were invited to join the program. They consisted of a consecutive sample of pregnant women presenting for the 18-week morphology scan in the ultrasound clinic, over the course of two months. The program consisted of women receiving two pamphlets at recruitment followed by information on a peer support network when returning to the hospital for their standard 28-week visit. A questionnaire was developed which was posted to women's homes at seven weeks postnatal to determine both uptake of and satisfaction with the program. The questionnaire also included sections seeking to determine women's consideration of caesarean section when invited to join the program, their satisfaction with their caesarean section (if applicable) and their views on community sentiments regarding caesarean section. These latter sections were included in the questionnaire in order to explore the notion of a culture of caesarean section – a belief that caesarean section may increasingly be seen as an acceptable alternative to vaginal delivery (Armstrong, 1990).

7.1.5 Chapter five – process evaluation - what did women think of the program?

The planning and evaluation cycle recommended by Hawe et al (1990) involves process evaluation as the fourth stage. Process or ‘formative’ evaluation is carried out to determine whether program participants are receiving the program, whether it is implemented as planned and whether participants are satisfied. This stage is essential in order to determine such outcomes prior to larger-scale measurement of actual clinical and psychological outcomes.

Generally, women did not make use of the program and in particular, the peer support network was not utilised. Feedback from women in the postnatal questionnaire suggests that women found the program to be irrelevant to their situation. In other words, women were not expecting to need caesarean section so did not see the relevance in actively utilising the program resources. Although most women were satisfied with the resources, one in five did express some distress caused by the pamphlet information and half of the sample did not actively use the resources. While all program participants received the two pamphlets (as these were distributed at recruitment) there appeared to be a shortcoming in implementation of the peer support network. That is, substantial numbers of women either ‘missed’ receiving the network information or misreported whether they had indeed received it.

7.1.6 Chapter six – a culture of caesarean section?

In terms of this thesis, the term ‘culture’ refers to the view of caesarean section as increasingly acceptable – particularly in terms of being seen as routine, easy, and

more convenient than vaginal delivery (Armstrong, 1990). While the notion of a culture of caesarean section has been referred to in recent papers specifically relating to Latin America (Gomes et al., 1999; Nuttall, 2000; Quadros, 2001; Behague et al., 2002), the idea has not been explored in the Australian setting.

Maternal request for caesarean section, arguably indicative of a wider culture of caesarean section, has been the focus of recent studies and opinion papers (Quinlivan et al., 1999; Dimond, 1999; Johanson et al., 2001a; Cotzias et al, 2001; Turnbull et al., 1999). Methodological and conceptual issues surround exploration of this issue at the empirical level, particularly regarding matters of data collection. In some studies, individuals in the care team, directly involved in women's care, have recorded data on maternal request (Gamble et al., 2000). This thesis therefore sought to incorporate innovative methods to address how women perceive caesarean section.

Two studies were carried out, focusing both on women's perceptions of broader community views of caesarean section and women's own consideration of caesarean section. It was found that the majority of women agreed that a community perception exists of caesarean section being easier and more convenient. An appreciable proportion of women agreed that caesarean section is now seen as routine, safer than vaginal delivery and no longer major surgery.

The second study found, in terms of women's consideration of caesarean section, that almost 15% of women involved in the program were considering caesarean section at 18 weeks gestation. As previously mentioned, this consideration may

have ranged from vague consideration to specific preference for caesarean section. The obstetrician on the research team, using the study hospital's clinical database, carried out independent analysis of women's risk. For the majority of women considering caesarean section, clinical risk was seemingly the basis for their preference.

The following section of this chapter will debate the wider implications of program evaluation findings relating to the concept of a culture of caesarean section.

7.2 Factors influencing program uptake

This thesis has explored both the development of a program encouraging informed decision-making for childbirth and assessed how it was received by a sample of pregnant women. There may be specific reasons why women did not actively use the program, such as perceived relevance of information, mode of transfer and ease of accessing information, in addition to the influence of external socio-environmental factors.

7.2.1 *Perceived relevance*

As discussed in Chapter 5, women reported that they did not actively use the pamphlets or the peer support network due to the perceived irrelevance of the resources. It has been argued that adult learners need to find a meaningful link before they will engage with an education program (McConnell-Imbriotis, 2001). An individual woman may perceive her chance of having caesarean section as small, and hence not attach much meaning to 'risk' or statistics. In other words, they may feel they are expecting to have a normal delivery and that caesarean section literature is irrelevant. Effective adult education creates meaning and purpose in relation to the experience of the learner (McConnell-Imbriotis, 2001), therefore if women had never had caesarean section they may not have been motivated to engage with the program. As Brookfield (Brookfield, 1986) notes: 'As a rule, they [adult learners] like their learning activities to be problem centred and to be meaningful to their life situation, and they want the learning outcomes to have some immediacy of application' (p.31).

It was inevitable that some women in the current program would perceive the resources as irrelevant, due to past experience or the fact they were having their first baby. It was acknowledged during program development that distributing information to all pregnant women, regardless of clinical 'risk', may have meant some women perceived the information as worthwhile generally, but not relevant to them individually. Nevertheless, it was believed that in order to reach program objectives of empowering all women to be actively involved in decision-making, all pregnant women should have access to information on which to make informed decisions.

Furthermore, while relevance may have been a key motivator in women's reaction to the program, wider societal 'normalisation' of caesarean section (Armstrong, 1990; Churchill, 1997) may have been just as significant. Pregnant women may not place a high priority on 'prevention' of an intervention which they may perceive as safe, acceptable and routine. Therefore, program relevance needs to be acknowledged in terms of both women's past experience and cultural perceptions of caesarean section.

7.2.2 Mode of information transfer and ease of access

The resources in the current program may not have been actively utilised due to mode of information transfer, i.e being print- and peer-based. The sample consisted of women ranging from a 22-year old, lower educated woman having her fourth baby to a 41-year old tertiary-educated woman, having her first baby. It is evident that despite consultation with key stakeholders and attempts to incorporate both written and social-network advice, mode of information transfer may not have

been tailored to necessarily reflect the different needs of such groups. Determining the optimal means to reach women from different social backgrounds might therefore be the first step for future research in this area. For example, a voucher for free coffee and an informal talk at a local shopping centre may be less threatening for young, lower-educated women than telephoning a stranger as per the peer support network. On the other hand, older, higher-educated women may prefer to receive pamphlets or brochures which they can read and discuss with their partner. As McConnell-Imbriotis (2001) notes, '[material] needs to be designed in such a way that it meets the needs of people from the whole spectrum of socio-cultural and socio-economic backgrounds..it also needs to be designed to encompass the whole spectrum of different learning styles' (p.336). Future approaches may need to include in the planning phase a detailed consultation with different groups of women to ascertain the best means of providing information.

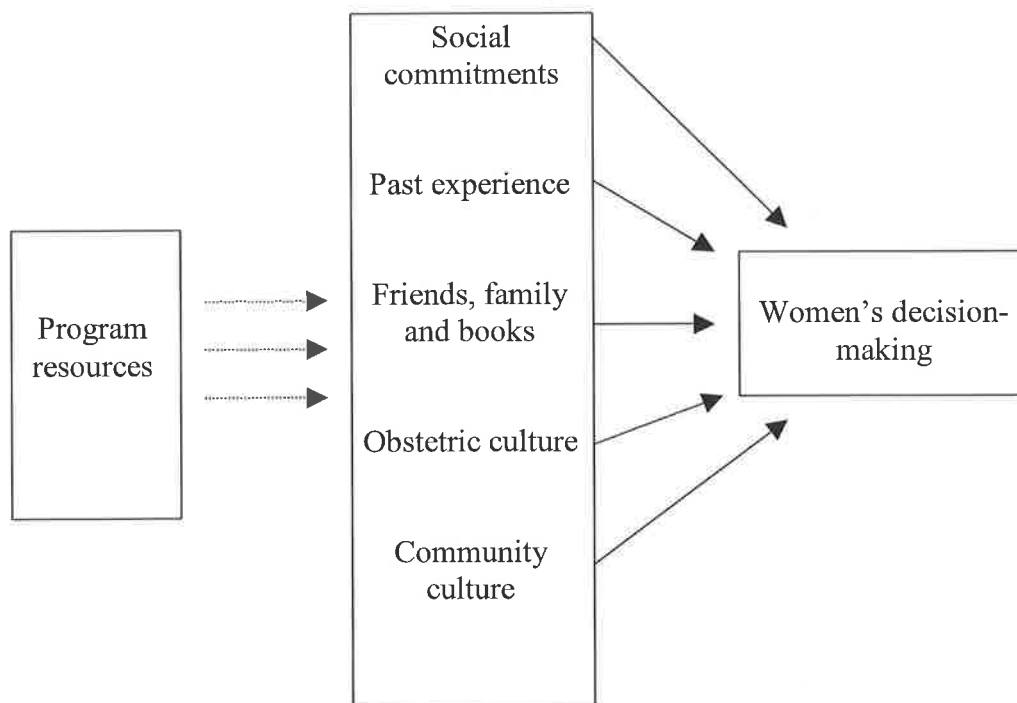
Women received their peer supporter's name and telephone number. For some women however, telephone contact may have represented a significant emotional 'risk'. Women may have felt uncertain about burdening their peer supporter or about the degree to which concerns or queries warranted telephoning their peer supporter. It may be necessary to offer women several different means of obtaining social-network support. Women may feel less self-conscious if making contact by email or by attending a casual get-together with several other women. A further factor in influencing uptake of the program is that during pregnancy, women are faced with many different issues, including on-going social and family commitments. Anything perceived as non-critical or time-consuming may therefore be ignored or seen as a low priority during this time. It would be

important for further research to develop resources which acknowledge this issue and to ensure resources are straight-forward and easily available for women to use and do not represent an emotional ‘risk’.

7.2.3 External socio-environmental factors

As can be seen in Figure 7.1, numerous factors could potentially compete with resources distributed within the context of the current program. It is important to appreciate the influence on women’s reactions to the program from many additional factors at play in the wider environment, ranging from broader social commitments to the community culture.

Figure 7.1 Socio-environmental factors influencing program uptake



7.2.3.1 *Social commitments*

Women's decision-making for childbirth may not be based solely on information supplied by care providers, and it has been suggested that decision-making is not 'uni-dimensional and uncomplicated' (McClain, 1987, p.507).

Using the example of women facing the possibility of vaginal birth after caesarean, McClain (1987) sought to describe the complexity which typifies women's choices for repeat caesarean section or attempt at vaginal delivery. Two semi-structured interviews, one in the last few months of pregnancy and one at 2 months postnatal were carried out with 100 women in United States. The interviews found that social motives were central to women's decision-making, in particular that women were strategic decision makers. Women were more likely to cite such factors as consequences of delivery method for partners and other children, and recovery from birth, rather than clinician advice as the primary influence on their decision. As an example, several women cited wanting their partners to participate in a 'natural' vaginal delivery to better appreciate their wives courage and strength. One respondent wished to attempt vaginal birth but felt that her partner would fail to provide her with the support she needed to succeed, so chose repeat caesarean section. Women also attempted to negotiate decisions with their care providers to reflect these 'social motives'.

McClain's (1987) findings may apply for decision-making for childbirth in general, not only decision-making following previous caesarean section. The findings suggest that it may have been necessary for resources distributed as part of the current program to compete with complex social commitments and strategies

including partner relationships, child-care responsibilities, future childbearing and work commitments, in order to influence women's decision-making.

7.2.3.2 Past experience

Resources aimed toward informed decision-making for childbirth may need to compete with the strong influence of women's past obstetric experience. Studies focusing on women's decision-making for mode of delivery have found that past obstetric experience is of great importance in determining women's preference (Gottvall and Waldenstrom, 2002; Churchill, 1997; Gamble and Creedy, 2001). For example, a prospective cohort study of over 600 women found that a negative experience of first birth significantly influenced the number of subsequent children and the interval to subsequent birth (Gottvall et al., 2002). In addition, Chapter 6 described the role that past experience plays in maternal request for caesarean section (Ryding, 1993; Gamble et al, 2001; Peake, Robson and Pearce, 2002).

In general, it could be determined that caesarean section information distributed as part of the current program might be seen as less relevant in comparison to one's own experience. When focusing on women in the current program reporting consideration of caesarean section at 18 weeks (see Chapter 6), in almost all cases consideration was likely to be based on previous obstetric experience or existing conditions. For the majority this included previous caesarean section, but for some women additional factors such as maternal obesity or previous pre-eclampsia may have contributed to preference for caesarean section.

In light of such arguments it may have been expected that multiparous women would be less likely to engage with the current program, given the strength of their past experience in determining decision-making. In fact, multiparous women were significantly more likely than women having their first baby to read the pamphlets. This could be explained by the fact that multiparous women may be more amenable to the benefits of receiving information regarding caesarean section, understanding from previous experience the need to have an 'open mind' with respect to events during pregnancy.

7.2.3.3 Friends, family and books

Anecdotal reports from women in the program suggest that support and advice from friends and family is highly regarded, not to mention customary, during pregnancy. Although some women may 'criticise' the nature of the advice, family and friends appear to represent a significant role in influencing women's decision-making. While the majority of pregnancy and childbirth preparation publications promote natural childbirth (Crouch et al., 1993), at the same time, advice and stories from family and friends often involves an array of information, from 'horror stories' to mis-informed opinion (St Clair et al., 1989). Consequently, most women will obtain an array of information from family and friends and from childbirth preparation literature, all of which would influence decision-making and reaction to resources as in the current program.

7.2.3.4 Obstetric culture

Toward the completion of this thesis two studies became evident which focused on the influence that obstetric culture has on the probability that pregnant women make truly informed choices from health-promotion leaflets. The studies, a

randomised controlled trial involving over 1000 women (O'Cathain, Walters, Nicholl, Thomas and Kirkham, 2002) and a related qualitative study (Stapleton, Kirkham and Thomas, 2002), assessed the evidence-based 'informed choice' leaflets, widely distributed in the United Kingdom, with little prior evaluation. The authors found that leaflets did not promote informed choice. No difference was found in the proportion of women in the intervention and control group who reported that they exercised informed choice. The authors concluded that these findings were related to 'time pressures on staff working within a culture that supported existing normative patterns of care rather than informed choice' and 'choice and decision making seemed to be heavily circumscribed by the pressures and norms of the local obstetric culture' (Stapleton et al., 2002, p.642). Some quotes included in the qualitative study illustrate this assertion:

"it's a consultant led service. You may disagree with what your consultant says but if you're working for that consultant that's what you've got to tell the patient...Whether you like it or not that's what you do, whether you totally disagree, you've got to do it". (Registrar, intervention site, Stapleton et al, 2002, p. 642).

"We let them [women] do what they want to do and then when things go wrong we get sued. We are...afraid to go against the women's wishes....[But] you get very skilled at smelling a rat. We know now when trouble is approaching and that woman [who had requested something with which the obstetrician disagreed] smells like trouble". (Obstetrician, intervention site, Stapleton et al, 2002, p. 642).

These studies highlight an important factor potentially influencing women's decision-making during pregnancy, and the likelihood that information-based approaches will achieve their goal. Programs aiming to introduce informed-choice resources for women, such as the current program, may need to compete with existing forces which shape the local obstetric culture of any given care-setting. While providing women with resources on which to make informed choices is important, of equal importance may be interventions which seek to modify the clinical culture. As an example, the second quote above highlights how this particular obstetrician has developed a 'strategy' for identifying women whom he perceives as difficult. Such defensive practice, the extent of which is unknown, may need to be addressed before women and their care providers are able to engage in equal partnership of the childbirth experience.

7.2.3.5 Community culture

There is little doubt women's decision-making for childbirth is made in the context of contemporary societal norms and values (Crouch et al., 1993). A striking example is the link between the current trend toward delayed motherhood and women in the workforce (Nassar et al., 2001). Women could be said to face considerable pressure in order to achieve recognition, status and a good income in the current workforce climate. The more women internalise these 'goals' the more likely they will be faced with increased pressure which needs to be reconciled with actual and perceived demands of motherhood (Crouch et al., 1993).

The existence of a 'culture of caesarean section', referred to in Chapter 6, could be argued to be inextricably linked to women's reactions to the program described in

this thesis. In other words, women may have been more likely to perceive the information as irrelevant given the 'normalization' of caesarean section. Due to the growing acceptability of caesarean section (Armstrong, 1990), women may feel that caesarean section is not something that needs to be actively avoided, or see the need to engage with material that might be seen to advocate avoidance of caesarean section. Certainly feedback from women in the postnatal questionnaire, and discussions with program participants during program implementation suggest this may be the case. As Mutryn (1993) notes, societal perceptions of caesarean section as 'more prevalent, more routine and more acceptable may lessen perception on the part of both consumers and healthcare providers of its adverse psychosocial effects' (Mutryn, 1993, p.1273). Therefore, low participation in the current program may be accounted for firstly, by the fact that caesarean section might be seen as a safe and routine intervention available when vaginal delivery is not possible and secondly, that potential negative psychological and physical ramifications associated with caesarean delivery may not be recognised by the majority of pregnant women.

Some authors have noted the existence of cultural ideals of a 'good birth' and of 'natural' labour (Crouch et al., 1993; Weaver, 2000), which may have implications for women's appraisal of the current program. That is, women may have seen the information as subscribing to the perceived obligation for women to have an 'ideal and natural' vaginal birth. On one hand women may (either subconsciously or consciously) appreciate the availability of caesarean section and may then object to information that seemingly contradicts this view, for example in pointing out risks associated with the procedure. Conversely, as expressed by one program

participant, women who subscribe to the notion of natural non-interventionist birth could have been distressed by or disinterested in the program, seeing it as representing promotion of caesarean section.

To conclude this section, women-focused public health education programs to address rates of caesarean section need to acknowledge that women's decision-making for childbirth reflects complex personal and societal values and norms. While not discounting the value of information provision in itself, such factors will inevitably influence the degree to which women are willing to actively engage with such information.

The following section outlines future directions for research focusing on addressing rising rates of caesarean section. Further research in line with the current program is detailed, in addition to exploring novel research methodologies.

7.3 Future research

The previous section has outlined possible influences on program uptake, reflecting both factors specific to the program and also wider socio-environmental factors. The following section is divided into two parts, firstly, exploring areas for re-development of similar information-based approaches and secondly, a discussion of new approaches to the issue of rising rates of caesarean section.

7.3.1 *Further information-based approaches*

The research described in this thesis has emphasized the complexity surrounding information-based approaches for women as a means of addressing rising rates of caesarean section. While women of higher education and those having their second or subsequent child were more likely to engage with the pamphlets, the program was generally not actively used by the sample. On one level, these findings suggest that information-based approaches for women may not be the necessary solution for addressing caesarean section rates. Nevertheless, it could be argued that even if women do not appear to actively use information, information provision is vital. The way in which program uptake was measured, i.e. 'did you get around to reading the pamphlet?' 'Which of the following statements best describes what you did with the pamphlet after reading it?', may have accounted for actual use but not 'perceived' support arising from the program resources (Hawe et al., 1990). That is, although women may not have read all of the pamphlets or discussed the information with their care provider, simply knowing they had the information may have influenced their sense of empowerment. Over 80% of women who read some part of or all of the two pamphlets reported that they would recommend the pamphlet to friends or that they thought the pamphlet should be distributed to all

women. Therefore, while on the whole it appears that women *themselves* did not actively use the information, there is evidence that they saw a need for other pregnant women to have access to such information. Although it could be argued that other women may not react any differently to the program, the attitude “*I don’t need the information, but others might*” is consistent with previous research (Churchill, 1997).

In line with the evaluation cycle described by Hawe et al (1990), a 5th stage involves information from process evaluation being used to re-design or re-implement a program, applicable when it is shown in process evaluation not to be functioning in its optimum form. In this case it would be futile to look for effects of the program, for example, in the form of a randomised controlled trial. Equally, re-designing the program, as opposed to disregarding the approach for addressing rising caesarean section rates, would seem prudent given that women’s access to information remains imperative.

Researchers (Turnbull et al., 1999) and three specific editorials (Horton, 1997; de Costa, 1999; Johanson et al., 2001b) have called for educational approaches for pregnant women in order to address rates of caesarean section. Further, evidence for peer support (Schafer et al., 1998; Morrow et al., 1999) demonstrates the efficacy of this mode of information transfer. The current program was developed on the basis of these findings, in addition to consultation carried out with stakeholders. Given general lack of utilization of the program, more in-depth consultation with consumers might be a necessary component of further research. As previously mentioned, if women are to benefit from educational programs,

representatives from different age, educational, social and cultural backgrounds could be involved in deciding the ways in which they think an educational approach for pregnant women could best be instituted. As Brookfield (Brookfield, 1986) notes:

'programs that are based on learner's characteristics and engage learners in a dialogue about content, aims, and methods are likely to provide settings for meaningful learning. In contrast, programs in which organizational and institutional needs are the dominant ones in giving form and function to the program and in which learners' aspirations and experiences are not considered are likely to be much less successful in prompting personally significant learning'. (p.258).

Consultation with consumers may need to involve an explicit question such as *'what would you like to know about caesarean section?'* in addition to *'in what form should this information be provided?'* It may be the case that women would like specific sorts of information regarding caesarean section, such as procedural details or other women's experiences of caesarean section, if indeed they want information at all.

In terms of uncovering the actual context of women's motivation to use (or not use) the program, the current research may have benefited from larger qualitative dimensions. Although assumptions can be made as to the reasoning behind low uptake of the program, a predominant limitation with quantitative methodology is the inability to uncover actual motivation or intricacies behind behaviour and

attitudes (Bowling, 1997). The conduct of focus groups or exploratory interviews with women in the post-natal period, may have allowed richer understanding of factors influencing women's appraisal of the program and the impediments that resulted in the program not reaching all participants. Such qualitative approaches could aim to ascertain the extent to which external socio-environmental factors (see Section 7.2.3), as opposed to the program resources, impinged on women's decision-making and subsequent experience. Responses to these sorts of questions would be beneficial in adding depth to the quantitative data on women's uptake and satisfaction.

A final point relates to the generalisability of the evaluation findings, which relate only to women receiving maternity care in a public sector level-three teaching hospital. While the evaluation has raised substantial questions over the effectiveness of such an approach, it is unclear how other women, in different care settings, may appraise such a program. Prior to re-designing or disregarding such an approach at the outset, it may be reasonable to conduct similar program evaluation in diverse maternity care settings as well as other large public and private metropolitan hospitals. These could include community-based antenatal clinics, general practitioner shared-care clinics and rural maternity hospitals. For example, it would be of interest to compare reactions of women in the current program to those in the private and public hospital sectors, or to women living in metropolitan or rural areas, in order to determine differences in reaction to such a program. In particular, given that rates of caesarean section are higher in the private sector (Chan et al., 2001), focusing on reactions of women in this sector could be informative.

To conclude, given that the program generally was not utilized, and some participants expressed experiencing distress from reading some pamphlet information, it would be inadvisable at this stage to conduct an impact or outcome evaluation. Instead, it would appear that at the least, evaluation of the program in a different setting or extensive program re-design and re-implementation is warranted (Hawe et al., 1990).

7.3.2 Future directions

Information-based approaches aside, further areas of study could be explored to address the issue of increasing caesarean section rates. Firstly, a large-scale survey of community sentiments regarding caesarean section could be conducted in order to obtain an accurate indication of community views of caesarean section. This could be carried out by a nationwide population-based community survey sent to individuals, both male and female. Similarly, surveys could be replicated in several different settings worldwide to determine whether certain cultural perceptions of caesarean section are particular to certain settings. While the current survey demonstrated some agreement with perceptions of a community acceptance of caesarean section, the sample size limits the generalisability of these findings.

Perhaps strategies to address caesarean section rates should take heed of the findings of the systematic literature review (Chapter 2). Promotion of one-to-one support for labouring women, external cephalic version and vaginal birth after caesarean would seem important areas for addressing high rates of caesarean section. Unfortunately, until clinical practice adopts such evidence and women are

made aware of the benefits of such interventions, caesarean section rates are likely to rise further.

Lastly, debate exists over the definition of an appropriate caesarean section rate for a given population. The relevance of the 'ideal' 15% caesarean section rate, as set by the World Health Organization in 1985, (WHO, 1985) has been questioned by obstetricians in the United States (Sachs et al., 1999; Horton, 1997). A revision of the 'appropriate' caesarean section rate could be an area for further exploration, to offer insight into how different groups perceive the 'ideal' rate. This could be carried out using the Dephi technique (Bowling, 1997), one of several methods for establishing and developing consensus. A postal questionnaire could be sent to key informants including clinicians, policy makers and consumers to determine their appraisal of appropriate rates of caesarean section. Certainly, the findings of a cross-sectional survey of 15 obstetric staff in one hospital in Adelaide found less than half agreed that the optimum rate of caesarean section should be 15-20%, and one-third did not know what the optimal rate should be (Golois, 2001).

7.3.3 Summary of recommendations for future directions

Recommendations for future directions, based on the research conducted as part of this thesis, are summarized below:

- Prior to re-designing or re-implementing the program, similar evaluations should be conducted in different care-settings.

- Stages 1-4 of the planning and evaluation cycle should be repeated, with careful consultation with a diverse range of consumers in the planning phase.
- Similar program evaluation may benefit from larger qualitative dimensions in order to uncover the subjective nature of program resistance.

Further strategies being proposed are to:

- Conduct a large population-based community survey to delineate community views of caesarean section.
- Encourage clinicians to adopt evidence for one to one support during labour, external cephalic version and vaginal birth after caesarean section.
- Encourage public education to raise awareness of the efficacy of these strategies.
- Conduct an appraisal of the 'ideal' caesarean section rate using the Delphi technique for establishing and developing consensus. This technique would generate a consensus of the appropriate rate by distributing a number of questionnaires to clinicians, policy makers and consumers.

7.4 Conclusion

Caesarean section has been described as the “most politically fraught of operations” (Belizan, Althabe, Barros and Alexander, 2000, p.6). It is certainly clear, from researching this area over the course of the thesis, that issues around caesarean section remain central to current-day obstetrics.

This thesis aimed to address the fact that despite calls for public education approaches to caesarean section reduction, little is known about whether women want or need such information or about the processes involved in women incorporating this information into their decision-making.

Understanding resistance to knowledge transmission is particularly important to health promotion. Generally speaking, program evaluation tends to put emphasis on the success or failure of interventions at the expense of understanding the manner in which programs are received. The findings generated from this thesis have therefore challenged recent suggestions that all pregnant women should receive adequate information regarding caesarean section in order to make a considered choice for mode of delivery (Horton, 1997; de Costa, 1999; Irvine, 1999, Johanson et al., 2001b). The findings also have implications for future strategies involving information-based approaches for pregnant women. Further approaches will need to pay particular attention to issues of relevance, means of information transfer and also to acknowledge the potential competing influence of personal and societal norms and values on women’s decision-making.

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Appendix 1

Informational pamphlet

- * infection

however, they are not common and they are usually short lived and much less severe than the risks associated with caesarean section.

Benefits of a vaginal delivery

- * less risk to mother and baby both physically and psychologically
- * less postnatal pain
- * quicker recovery from birth
- * able to breastfeed without delay
- * less time spent in hospital
- * less impact on future deliveries

What choices are available to you?

Vaginal Birth After Caesarean (VBAC)

If your first caesarean was due to one of the complications already mentioned that related only to the previous pregnancy then you may be able to have a vaginal delivery with this pregnancy.

Even if your cervix did not dilate the first time, each delivery is different and research has shown that most of these mothers can safely attempt to have a baby naturally as long as the labour is carefully monitored. i.e. it is safer for the mother and baby to deliver vaginally than to have a routine repeat caesarean section.



So what do I do now?

Some suggestions that you should consider:

- * Ask as many questions as it takes for you to understand your choices.
- * Attend antenatal classes. There may even be VBAC classes in some areas.
- * Read as much as you can, some suggested books follow.
- * Talk to other women who have experienced ECV, VBAC or breech delivery. Seek positive people who will encourage you.

Remember, it is your birth, you are in control, be positive. If you are not satisfied with the support you are receiving from your caregivers, it is your right to seek a second opinion.

Suggested reading:

These books may be available at your local library:

Fallows, C. (1997). *Having a Baby. The Essential Australian Guide to Pregnancy and Birth*. Doubleday: Sydney.

Armstrong Z. (1990). *Caesarean Birth. A Reassuring Guide for Australian Parents*. Viking O'Neil: Melbourne

Bennett, A., Etherington, W. & Hewson, D. (1993). *Childbirth Choices*. Penguin Books: Victoria.

Enkin, M., Keirse, M.J., Renfrew, M., & Neilson J. (1995). *A Guide to Effective Care in Pregnancy and Childbirth*. Oxford University Press: Oxford.

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Resources

for further information you can contact

MAMA (Mothers & Midwife Action Group)
Contact Lucina Loro-Parham Ph 8356 1069

Adelaide Hills Active Birth Centre, contact Julie Pearse
Ph 8370 9391

Women's & Children's Hospital Birthing Centre
Ph 8204 7000

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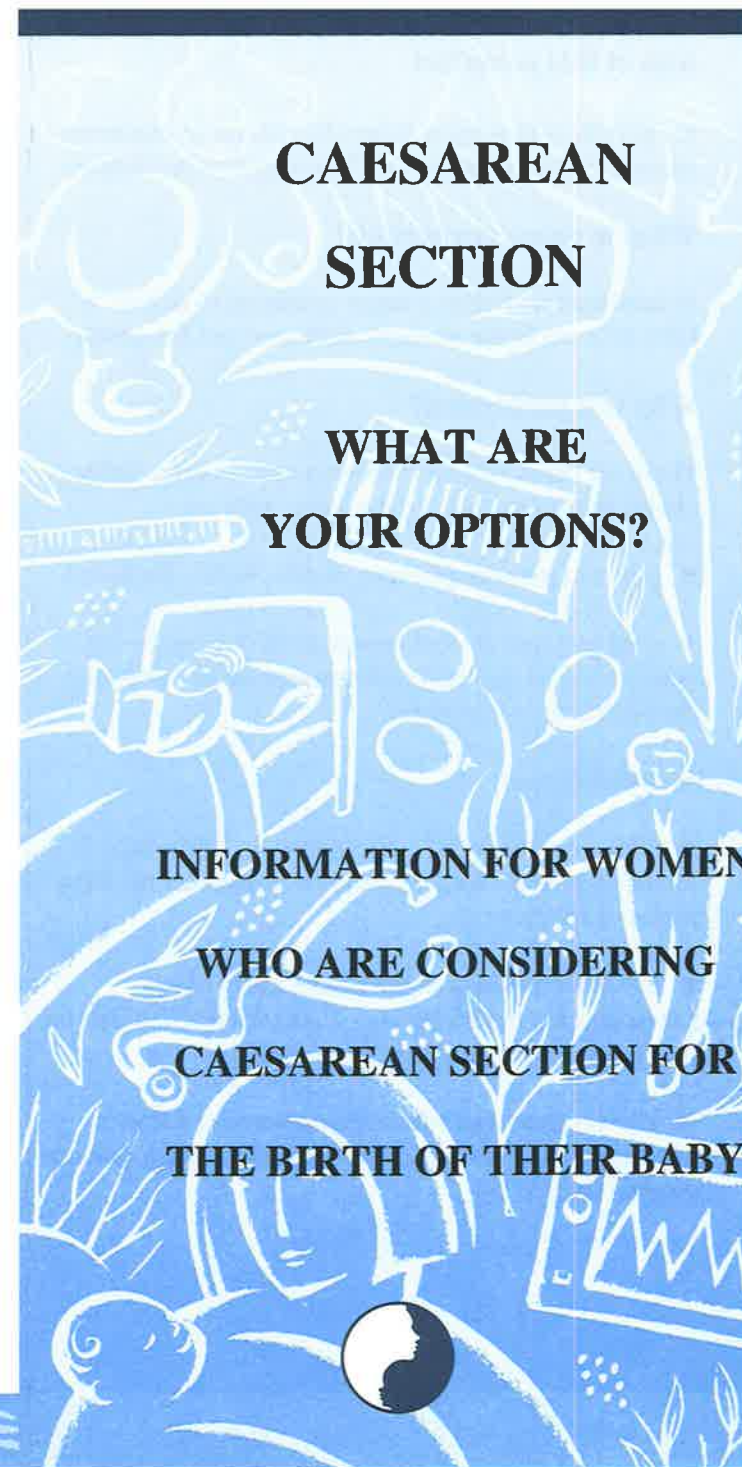
Where does the information in this pamphlet come from?

Much of the information in this pamphlet comes from the Cochrane Database of Systematic Review. This is a worldwide organization that reviews mostly randomized control trials from the world's most important journals in all languages. It is updated quarterly.

CAESAREAN SECTION

WHAT ARE YOUR OPTIONS?

INFORMATION FOR WOMEN WHO ARE CONSIDERING CAESAREAN SECTION FOR THE BIRTH OF THEIR BABY



Aim of this pamphlet

To provide information about alternatives to caesarean section for you to discuss with your doctor or midwife.

What is caesarean section?

A caesarean section is a major operation to deliver a baby by a cut in the mother's abdomen and her uterus.

Why is it performed?

There are times when a caesarean section is the safest choice for the mother and the baby, such as:

- * placenta praevia (placenta coming before the baby)
- * cord prolapse or cord presentation (where the cord delivers before the baby and pressure on the cord may starve the baby of oxygen)
- * foetal distress
- * CPD - cephalo pelvic disproportion, (if the baby is too large and the mother's pelvis too small for the baby to pass through)
- * Evidence strongly suggests that many repeat caesareans are not necessary. Naturally this depends on the reason for the first caesarean section.
- * It is controversial whether a caesarean section is necessary when the baby is in a breech position (bottom coming first).

Fear of labour!

Many women wonder if a caesarean is better than going through labour due to fear of pain or the unknown. Obviously, only the woman going through childbirth is in a position to judge her pain. However, if she wishes she can decide to modify such pain with childbirth preparation including:

- an active birthplan
- medication

If a woman really wishes to have a pain free labour, this is possible with the use of an epidural which is available at all times at the Women's and Children's Hospital.

Objective research has shown that the pain associated with a caesarean is far greater and lasts a lot longer, and often affects your postnatal recovery.

It may take six weeks or more to recover from a caesarean section. Many women report that the pain of labour is soon forgotten when you are holding your baby.

If it is your second birth remember that each labour and delivery is different and are usually shorter with each successive delivery.

Benefits of a caesarean section

The baby can be born quickly in an emergency. If the mother has an illness that makes labour dangerous to her health or the baby's, or one of the conditions previously mentioned exists, then it is the delivery of choice.

How safe is a caesarean section?

There are risks associated with having a caesarean delivery such as:

- * respiratory difficulties for the baby
- * delayed bonding and first breastfeed
- * considerable postnatal pain for the mother reducing her ability to care for her baby
- * higher risk of postnatal depression
- * slower recovery from the birth
- * risk to future pregnancies
- * infection
- * bleeding
- * blood clots to the lungs or legs
- * damage to bladder and bowel
- * anaesthetic complications from allergies to anaesthetic or breathing in stomach contents.

How safe is a vaginal delivery?

Statistics suggest that a vaginal delivery is about six times safer than a caesarean section, for the woman. There are risks associated with a vaginal delivery such as:

- * interference with bladder and bowel function
- * bleeding

Appendix 2

Draft motivational pamphlet

* Write a birth plan (a sort of 'game plan' for how you want things to happen during delivery), your care provider should show you where to do this. Talk about it with your care provider and partner/support people.

DURING DELIVERY:

* Encourage your partner/support people to ask questions, especially if you are unable to.

* When you are admitted to hospital give a copy of your birth plan to all labour attendants.

* You can have your partner/support people with you at all times. Make sure they keep you informed of what is happening during your birth, and they know what you have written in your birth plan.

"The safety of the baby is the most important thing"

Alice: [asked what the benefits of having a caesarean section were]...probably the only benefit is that he's here and he's okay and nothing went wrong, you know, and it was all by the book. You know, nothing went wrong, nothing could go wrong, it was all procedure, you know, whereas the other way it was all risk taking.

* In certain pregnancies a CS will be necessary, and it will be in your (and your baby's) best interest. However, with a low-risk pregnancy a CS carries a great deal of risks for the mother and baby (see accompanying pamphlet).

* If you have complications where you may need a CS, discuss with your care provider ALL of your options ie. determine whether a vaginal delivery is completely out of the question.

* The safety of the baby will never be compromised, so make sure that you do not neglect your own health and wellbeing. A 'happy' birth involves a safe and healthy baby and, importantly, it involves a satisfying personal experience for the mother.

"A caesarean was the only option available"

Nikki:...I think it got to the point where although it was elective, I really had no choice...so yeah, I elected to have it but felt that(.) I won't say I felt pressured to have it, but I felt as though all the medical people were saying that this baby wasn't going to come out of his own accord and so there really was no choice.

What You Can Do:

* During your pregnancy, talk with more than one care provider. Ask questions until you feel confident with the provider and the type of delivery you are planning.

* If your baby is BREECH, you can ask your care provider about exercises to turn the baby, seek a second opinion if you want to.

* If you have had a caesarean, think about VBAC (vaginal birth after caesarean), this may be possible for you.

Caesarean Section or vaginal delivery? - KNOW YOUR OPTIONS

INFORMATION FOR ALL
PREGNANT WOMEN

What is the aim of this pamphlet?

Some women have said that their caesarean section (CS) was something that "just happened". The feedback in this pamphlet was collected from a group of women who had recently given birth by CS, at Women's and Children's Hospital. Generally, this is the way they talked about their experience of having a CS.

By providing you with some options, the aim of this pamphlet is to encourage your role as an active participant in the birth of your baby.

Below is some of this feedback, followed by some suggestions for things you can do:

"The Doctor made the final decisions"

Dani:...as my back cramps got worse, I had, my pelvis was really loose, and I just thought no I'll have a caesarean. I thought no I won't, sort of chopped and changed, chopped and changed, and then (.) I went to see the, a different gynaecologist a week before, and she said that I was still really high, and I hadn't dropped, and she said I'm going to probably need to have a caesarean. So that was it, I said right I'm going to have one...

Erica:...Yeah, he [her obstetrician] said that he would let me go for a trial of labour, but it wouldn't be wise because of all the risks.

* Although a CS is not being demanded, these women are telling how they were influenced in their decision for a CS.

What You Can Do:

* **Read, Read, Read.** Find out about the situations where a CS may be necessary and where a CS may be avoided (refer accompanying CS pamphlet).

* **You can find out about CS (and birth in general) by:**

- talking to women who have had a CS
- talking to your care provider
- reading books and magazines
- watching videos
- going to childbirth classes

* **Try to choose a care provider who you feel comfortable with.** If you are not happy with your care provider or the services they are prepared to provide, you can change to another at any time.

* **If you can, look around at more than one birth facility.** Note their views on vaginal birth after caesarean (VBAC), induction, their rates of CS etc.

"My caesarean seemed to just 'happen' - I had no control!"

Dani:...it was all just a blur, it was like I just lay there and they do what they have to do.

Fiona:...they were looking at each other, talking their doctor lingo, and that's when I lost that hour and a half. I don't know what happened, it's just like, sign this, drink that, the next minute theatre.

Sophie:...I would say I was incapable of making any decisions, and it was his opinion [husband's] that helped make the final decision.

Alice:...I mean in my case I made the decision, but I was just too confused in the end, and it all just came too quickly, too quickly, but I'm glad that I had a caesarean.

* For these women, their CS was something that 'just happened' to them and they felt unable to make a decision.

* Although you may be 'groggy' at times during your delivery, there are things you can do to ensure you aren't forgotten during the whole process, especially if an emergency CS becomes necessary.

What You Can Do:

DURING PREGNANCY:

* **Talk Talk Talk.** Talk about the delivery of your baby early on in the pregnancy. Encourage your partner/support people to talk with you about delivery.

* **Ask Questions.**

- Ask about tests/procedures you don't understand.
- Always ask for the results of any test done and what the results mean.

* **Plan to have a support person to be with you during labour**

Appendix 3

Piloting of motivational pamphlet, information sheet and consent forms

Study Information Sheet
Caesarean Section Pamphlet Study

This is an invitation to you to take part in a study that aims to develop and distribute a pamphlet for all pregnant women, such as yourself, in order to encourage active participation in the birth of your baby. We are asking a small number of pregnant women if they would like to take part in the study.

The study is being run by the Department of Public Health at the University of Adelaide. Ethics approval for this study has been obtained from the Women's and Children's Ethics Committee.

We are showing a small number of women a **pamphlet regarding caesarean section** and then asking them to **complete a short questionnaire**. Information obtained from these questionnaires will be used to assist us in developing the pamphlet.

The researcher who will be showing you the pamphlet is Ms Ruth Walker. Ms Walker is currently completing a Doctor of Philosophy in Public Health at the University of Adelaide.

Please be assured that your confidentiality will be maintained at all times. If you agree to be involved in the study, your name and details will be kept strictly confidential and will not be published in any way.

While the study will not benefit you or your baby directly, the information you provide will be of real help in educating pregnant women and their families.

Your answers will not affect your care in any way.

You are under no pressure whatsoever to join the study and you can drop out at any time.

If you would like to participate in the study, all you need to do is read all of the information contained in this letter and complete the associated consent form.

You are free to speak with a family member or friend about this information.

If you have any further questions you can contact the Project Coordinator, Ms Ruth Walker on 8303 3468, or alternatively Dr Deborah Turnbull on 8303 3460 at the Department of General Practice, University of Adelaide.

University of Adelaide
Department of Public Health
Consent Form

Caesarean Section Pamphlet Study

Name of responsible investigator or supervisor: Dr Deborah Turnbull, Dr Chris Wilkinson

Name of person who issues the form: Ms Ruth Walker

I (PLEASE PRINT NAME) hereby
consent to my involvement in the research project entitled: **Caesarean
Section Health Promotion Study**

1. I consent to participate in the above project. I acknowledge that the nature of the project, including procedures, have been explained to me in a letter that I have been given.
2. I understand that while the study may not benefit me or my baby directly, the information I provide will assist in improving maternity care in general.
3. I understand that the confidentiality of the information I provide will be safeguarded.
4. I understand that my answers will not affect my care in any way.
5. I understand that I am under no pressure whatsoever to join the study and I can drop out at any time.
6. I have had the opportunity to discuss the project with a family member or friend.
7. I understand that the project has the approval of the hospital's Ethics Committee.

Signed: **Date:**
(Participant)

Appendix 4

Piloting of motivational pamphlet questionnaire

Caesarean Section Pamphlet Questionnaire

This questionnaire is a confidential evaluation survey of the pamphlet you have just read. There are no right or wrong answers. Please complete the questions on the basis of the pamphlet entitled: *Caesarean section or vaginal delivery? Know your options.*

Please circle your response.

Q1. The pamphlet was easy to understand **agree / ~~disagree~~**

Comments?

Q2. The pamphlet was easy to read **agree / ~~disagree~~**

Comments?

Q3. There was too much information **agree / ~~disagree~~**

Comments?

**Q4. The options offered in this pamphlet,
I could put into practice.** **agree / ~~disagree~~**

Comments?

**Q5. This pamphlet would be helpful for
pregnant women.** **agree / ~~disagree~~**

Comments?

Q6. The issues presented were real-to-life.

agrec / disagree

Comments?

Q7. What aspects of the pamphlet, if any, interested you?

Q8. What changes, if any, would you make to the pamphlet?

Thankyou for your participation.

Appendix 5

Motivational pamphlet

Women think CS is safer:

Kathy:..."I think generally they do so many [caesarean sections] now that it's like having your tonsils out".

- * It may not always be safer to have a CS (refer accompanying pamphlet).

- * In certain pregnancies a CS will be necessary for the safety of the baby, and it will be in you and your baby's best interest to have one. However, a CS is not always necessarily safer than a vaginal delivery. A CS can result in problems for your baby such as respiratory difficulties and unnecessary prematurity, as well as considerable risks for yourself. There may be alternatives to CS which will not harm the baby and which will be better for your health than a CS (refer accompanying pamphlet).

What You and your Partner/Family Can Do:

- * If you have complications where you may need a CS, discuss with your care provider ALL of your options ie. determine whether a vaginal delivery is completely out of the question.

- * It is important that you do not neglect your own health and wellbeing. A 'happy birth' involves a safe and healthy mother *and* baby.

There may be other options:

Nikki:..."I think it got to the point where although it was elective, I really had no choice...so yeah, I elected to have it but felt that(.) I won't say I felt pressured to have it, but I felt as though all the medical people were saying that this baby wasn't going to come out of his own accord and so there really was no choice."

What You and Your partner/Family Can Do:

- * During your pregnancy talk with more than one care provider. Ask questions until you feel confident with the provider and the type of delivery you are planning.

- * If your baby is BREECH, you can ask your care provider about exercises to turn the baby, seek a second opinion if you want to.

- * If you have had a CS with your other child(ren), think about VBAC, this may be possible for you. Support is available for women wanting to have a VBAC - refer below.

Resources

For further information you can contact:
VBAC and CS support group - contact Jo Bainbridge Ph. 8365 7059

Women's & Children's Hospital Birthing Centre -
Ph. 8204 7000

MAKING INFORMED DECISIONS ABOUT CAESAREAN SECTION

INFORMATION FOR ALL PREGNANT WOMEN, THEIR PARTNERS AND FAMILY

*To accompany pamphlet entitled:
Caesarean Section - What Are Your
Options?*

The aim of this pamphlet is to encourage you, along with your partner/family, to explore your options regarding pregnancy and delivery - particularly regarding caesarean section (CS).

During pregnancy, or delivery, you may find that things don't go according to plan, in which case a CS may be suggested. It is important that you realise you have options and choices.

The feedback in this pamphlet was collected from a group of women who had recently given birth by CS, at Women's and Children's Hospital. Generally, this is the way they talked about their experience of having a CS.

Your role in the decision-making:

Erica:..."Yeah, he [her obstetrician] said that he would let me go for a trial of labour, but it wouldn't be wise because of all the risks."

* Although a CS may not be demanded, some women say they were influenced in their decision for a CS.

What You and Your Partner/Family Can Do:

* Read, Read, Read. During your pregnancy read about the situations where a CS may be necessary and where a CS may be avoided (refer accompanying CS pamphlet).

* You can find out about CS (and birth in general) by:

- talking to women who have had a CS
- talking to your care provider
- reading books and magazines

- watching videos
- going to childbirth classes

* Try to choose a care provider who you (all) feel comfortable with. If you are not happy with your care provider or the services they are prepared to provide, you can change to another at any time.

* If you can, look around at more than one birth facility. Note their views on vaginal birth after caesarean (VBAC), induction, their rates of CS etc.

Issues about control:

Fiona:..."they were looking at each other, talking their doctor lingo, and that's when I lost that hour and a half. I don't know what happened, it's just like, sign this, drink that, the next minute theatre."

* Some women feel that when a CS was decided upon, the control of their delivery went out of their hands.

What You and Your Partner/Family Can Do During Pregnancy:

* Talk Talk Talk. Talk with your partner/family early on in your pregnancy about what you would like to happen during delivery.

* Ask Your Midwife/Obstetrician Questions.

- Ask about tests/procedures you don't understand.

- Always ask for the results of any test done and what the results mean.

* Plan to have a support person (partner/family/friend) with you during labour.

* Write a birth plan (a sort of 'game plan' for how you want things to happen during delivery). Talk about it with your care provider and partner/family. There is a birthing plan form at the back of the booklet, 'Having Your Baby at the Women's and Children's Hospital' which you can collect from the antenatal clinic.

What You and Your Partner/Family Can Do During Delivery:

* When you are admitted, ensure a copy of your birth plan is given to labour attendants.

* Although you may be 'groggy' at times during your delivery, ensure your partner/family know what is in your birth plan, what you want/don't want to happen, so they can 'represent' you if necessary.

* Encourage your partner/family to ask questions, especially if you are unable to.

* Make sure your partner/family keep you informed of what is happening during the delivery.

Appendix 6

CARES SA consumer group information

Contacts:

Jo Bainbridge - 8365 7059

dinojo@smartchat.net.au

Emma Murphy - 8346 7197

adderash@camtech.net.au

Carolyn Harris - 8293 8333

cdonaghey@picknowl.com.au

Please note: we do not give out
any medical or legal advice. We
are purely a support and resource

CAESAREAN

AWARENESS

RECOVERY

EDUCATION

SUPPORT



CARES SA is a consumer based support group working to promote caesarean awareness; educate and inform about the safety of vaginal birth after caesarean; to provide support for women and families dealing with the issues surrounding caesarean birth and provide a source of up to date information to allow women to make informed choices in regards to the birth of their children.

We offer a safe and supportive environment for women to come and openly discuss their experiences by means of informal coffee mornings (the second Wednesday of every month). **CARES SA** aim to have professional health carers or relevant professionals attend meetings in order for women to ask questions and discuss areas of concern. **CARES SA** also offer telephone and e-mail contacts.

CARES SA has a vast amount of current information that address areas such as policies designed to lower section rates and encourage woman to feel confident in their desires for a vaginal birth after caesarean.

CARES is a non profit organization who provide understanding and compassion for women recovering from caesarean birth, planning cesarean birth or aiming for a vaginal birth after caesarean (VBAC).

Awareness of the individual's rights to make informed choice is a main focus of the group. We encourage women and their families to become actively involved in the decision making that will effect the birth of their child. Aiming to increase community awareness and understanding of the issues surrounding surgical birth is also a main focus.

Recovery is a crucial element for maintaining good health. It is very important that a woman is fully informed of the physical recovery, but more importantly we focus on the vital need for emotional healing. Through a safe, caring and understanding environment, women and their partners are encouraged to follow their path to emotional healing.

Education is important when making decisions and it is our goal to be up-to-date on current trends and philosophies. By providing relevant information to women and the community, we hope that a greater understanding of the effects of caesarean birth will reduce the amount of traumatic experiences.

Support for birth choices is vital element, especially for those seeking VBAC.

By providing women with the options available to them and then respecting that choice, we hope to encourage women and their families to achieve the desired positive birth for both mother and child.

CARES SA RESOURCES

CARES SA can provided women and their families with up to date, relevant information. We have a vast list of contacts that include:

- * supportive health professionals
- * child birth classes, including those specializing in VBAC.
- * details of other support groups and programs that are women focused
- * opportunities to meet with health professionals to ask general questions and clarify medical terms and procedures.

CARES SA also have an extensive reading list which contains positive, insightful and encouraging stories written by women.

For membership details please contact Carolyn or Jo.

CARES SA

*...because birth should be
beautiful...*

Appendix 7

List generated by obstetrician for peer supporter recruitment

Candidates for peer support group

Table 1 - ECV – successful vaginal deliveries following successful version

UR number	Name	Telephone no	Notes checked	Phone consent
186857			1997 ECV at 38 weeks - SVD 4.2 kg LMI (BC)	13/03 Willing to participate
211223			1997 ECV at 37/40 – SVD 3.0 kg LFI	13/03 Happy to be involved
224227				
229000			1997 – ECV prior to ARM for TV lie	13/03 Happy to be involved
218480			1997 - ECV at 37 weeks – SVD 3.4 kg LMI	13/03 Happy to be involved (Has had 2 ECV's)
140470			1997 – ECV at 38 weeks – SVD 3.4 kg LFI	13/03 Answering machine
141349			1996 - ECV successful 1997 ECV successful SVD 3.4 kg LMI	13/03 Mum answered – Sarah will ring back tomorrow
107477				
232283		(Mum)	Gest diabetic – ECV at 38 weeks – SVD 4.1 kg LFI	13/03 Answering machine
230802			ECV at 38 weeks 1998 SVD 3.0 kg LMI	13/13 Answering machine

Candidates for peer support group

Table 2 - VBAC – successful vaginal deliveries following previous CS

UR number	Name	Telephone no	Notes checked	
132058			Prev CS brow pres. 1998 SVD 4050g LFI	13/03 "Won't say no" – must be before 2 pm.
135925			Prev NND from GBS	13/03 Has moved
169937				
176003			3.5kg LFI 2 hour labour	13/03 Happy to participate
184133			Prev LUSCS Abruptio NND – 1998 SVD 3.6 kg LMI	13/03 No answer
190474			1997 Prev CS for breech (unsuccessful ECV, failed trial of breech vaginal delivery) – 1998 SVD LMI	13/03 "That's terrific" Happy to participate"
191142			4.1 kg LFI 4 hour labour 1998	13/03 no answer
191169			Previous brow presentation. 1998- SVD 4.2 kg LFI	13/03 no answer
199883			Prev CS fetal distress early chorioamnionitis – 1998 4.0 kg SVD LFI	13/03 no answer
220059			Prev CS for undiagnosed breech 1998 SVD LFI	13/03 "Works part time – if not in, call again" Happy to participate

Appendix 8

Peer supporter guidelines

Guidelines for Peer Supporters:

Firstly, Thankyou for agreeing to act as a 'peer supporter'. We hope that you find this experience rewarding and we offer our thanks on behalf of the women who will be involved in this network.

Your protection and support is of the utmost importance, if at any time you have any concerns please do not hesitate to contact the project co-ordinator, Ruth Walker on 8303 6274. We will do everything to ensure your experience is a positive one.

Our aims and objectives

- Our aim is to develop a 'network' for pregnant women which is informal and supportive in nature and that provides an avenue for them to telephone another woman (a 'peer supporter') and have a chat if, and when, they like.
- The primary objective of the Peer Support Network is to offer women the chance to ask another woman questions regarding caesarean section (CS), external cephalic version (ECV - an exercise to turn a breech baby) or vaginal birth after previous caesarean section (VBAC), in an out-of-hospital setting. To this end, we hope to improve women's knowledge of CS/ECV/VBAC and provide them with the 'tools' to be assertive in their decision-making regarding delivery.
- Although the women who call you may not be planning to have a CS or VBAC, you may be able to simply discuss any concerns they may have in the event that they do need a CS.

Some questions you may have

What sorts of things will I be asked?

- You will probably be asked questions about your experience of birth; what sorts of things you would suggest; what worked for you; what things you would avoid etc. You can be fairly flexible with the advice you give, the types of questions you answer etc, but remember that you can set the boundaries. The woman calling you will have no predetermined expectations about your peer support relationship and will simply enjoy the chance to talk to you.
- You are not expected to act as a counsellor, your role is merely to talk about your experience of birth, answer questions if you can, in an informal manner. If you feel that the woman calling you needs help or advice outside of your abilities, you should contact the project co-ordinator.
- If you feel that you can't answer certain questions, for whatever reason, just let the caller know this. The idea of the network is for it to be as informal as possible so do not feel obligated to answer everything.

What if I get called at an inconvenient time?

- Although women will be notified of the day and times you would prefer her to call you, you may find that you get called at an inconvenient time. You are not obligated to take any calls at this time, simply tell the caller to telephone you at a later time.

When will I start being contacted?

- This may vary for different 'peer supporters', but will probably be in approximately 3-4 weeks.

- Women will be given your phone number at about their 26-28th week of pregnancy. There will thus be a time period of approximately 10-12 weeks where they may be in contact with you.

When will I stop receiving calls?

- Women will be notified that they should only contact you up until the 38th week of their pregnancy, and that they shouldn't contact you after this time, *unless other arrangements are made between you and the caller*. If you do get called outside of the time period you wish to be involved you should notify the project co-ordinator who will ensure you are not called again.

What happens if I wish to stop being a 'peer supporter'?

- If at any time during this 10-12 week period you do not wish to be a 'peer supporter', you can contact the project co-ordinator and your name will be removed from the confidential list.

-
- At agreed intervals, for example every week, you will be contacted by the project co-ordinator to ascertain any problems or queries.

- At the conclusion of the time period we will give you the opportunity to 'debrief' regarding the network. This will allow us to gather feedback on how the network worked from your perspective.

Appendix 9

Peer supporter information letter

Ruth Walker
Department of Public Health
University of Adelaide
ADELAIDE 5005

Angela Dwyer

21 March 2000

Dear Angela

Thank you for your interest in taking part in our Peer Support Network. As promised in our telephone conversation today, please find enclosed a copy of an information sheet regarding the Peer Support Network.

I have also enclosed a copy of a consent form and a reply paid envelope. Could you please sign this and post it back to me in the accompanying envelope. The consent form is just an 'official' part of the research process, which aims to protect both your interests and ours. It is basically just stating that you understand the nature of the Network and you officially agree to be involved.

I will be ringing you in a few days to discuss the Network with you, in light of the information I have sent. If you have any problems or queries in the meantime please do not hesitate to contact me on 8303 6274.

Thanks again and I look forward to talking with you soon,

Kind regards,

Ruth Walker.
PhD Student - Department of Public Health

Appendix 10

Peer supporter consent form

Consent Form

Caesarean Section Study - Peer Supporters

Name of responsible investigator or supervisor: Dr Deborah Turnbull, Dr Chris Wilkinson

Name of person who issues the form: Ms Ruth Walker

I (PLEASE PRINT NAME) hereby consent
to my involvement in the research project entitled: Caesarean Section Health
Promotion Study

1. I consent to participate in the above project. I acknowledge that the nature of the project, including procedures, have been explained to me in a letter that I have been given.
2. I understand that while the study may not benefit me directly, the information I provide will assist in educating pregnant women.
3. I understand that my confidentiality will be safeguarded at all times and that the project coordinator will be responsible for the list which contains my name.
4. I understand that I am under no pressure whatsoever to join the study and I can drop out at any time.
5. I have had the opportunity to discuss the project with a family member or friend.
6. I understand that the project has the approval of the Women's and Children's Hospital Ethics Committee.
7. I understand that there will be no payment for taking part in the network.

Signed: Date:
(Participant)

Appendix 11

Details for management of peer supporters

Management of Peer Support Network:

Peer supporter*	Phone No.	Experience	Contact Times	Program participants given details*
Carole	8365 7059	CS, VBAC	Weds, Fri after 8 pm	Theresa Adamson Mary Bell Cindy Evans Emma Faber Jenny Olinsky Louise Morton Kylie Austin Rosie Berkowitz Cherie Darcy Kate Knox Jane Verhagen Carol Watson
Mary	8297 8541	CS, VBAC	Weds between 8-9 pm	Bridget Tucker Lee Wu Iris Weiss Hannah Liley Sally Lancaster Katie Mitchell Paula Owens Shirani Neil Penny Muller
Katherine	8373 4413	VBD	Tues, Weds, Thurs evening	Marie-Therese Westcott Diana Feller Li Yang Chin Susan Downe Anna Daley Gabriella Edmonds Fiona Davis Oksana Seki Margaret Peake Maria Quinn Emma Schwass
Angela	8260 7059	CS, VBAC	Mon, Tue, Thur, Fri Sun after 6 pm	Bernadette Rundell Rekha Shibata Rachel Nelson Lesley Oakes Natalie Worley Elizabeth Laing Monica Weller Bronwyn Ryan Katrina Chaney
Dianne	8265 3332	CS, VBAC	Not after 2 pm weekdays Not after 6 pm weekends	Leanne Duffy Kate Hawthorne Rachel Nicholas Samantha Lane Debra Butcher Sharon Greig Tricia Pritchard Sheng Syan Wang Marcia Williams Tracey Symonds Irena Medlin Amanda Monrow
Janine	8281 6529	CS, VBAC	Not between 3 -8 pm	Rebecca Cross Michelle Hewitt Michelle Moyan Kym McKay Fiona English

				Kerry Allen Rachel Miller Yvonne Ross Angela Kunac Vanessa Lewis Belinda Malee Cherie Kruzins
Jane	8297 0746	CS, VBAC	If not in, call again	Linda Dingley Anna Lymberopoulous Alisa North Suzy Kyros Machi Everard Theresa Nunn Roslyn Howard Abigail Strobl Samantha Tripodi Jo Ann Andrews Magdelina Mason Renee Johnson Geraldine Wood Danielle Gore
Juliet	(08) 8531 2031	ECV	Call after 7 pm	Gabriella Manning Selina Mocatta
Deanna	8295 1673	VBAC, CS	Between 8 am - 8 pm	Alison Spencer Jo Stamp Maria Sullivan Vikki Wilkinson Alison Grant Stephanie Low Joanne Sweet Jenny Vincent Janine Richardson Karen Bower
Ann	8264 9821	ECV	Not on Mon and Thurs during day	Litsa Yelland Samantha Collins Jane Street Leah Dudley Michelle Gibson Tamsin Lowam Sheryl Fraser Belinda Gafford Kellie Crossman Marianne Cartwright
Tea	8364 3689	ECV	Anytime	Melissa Brice Jay Gheri Jodie Clarke Lois Walker Vicki Carpenter April French Elizabeth Husone Sylvia Currie Raewyn Kerr Stephanie Fenwick Patricia Ford Vivien Gill Michelle Cass

* All names have been changed

Appendix 12

Peer supporter debriefing letter

Mary McDonalds

18 September 2000

Dear Mary

Vaginal birth after caesarean and ECV peer support network

All of the women who were given your telephone number have now delivered their babies so on behalf of the Department of Public Health, University of Adelaide, I would like to thank you for agreeing to act as a contact person for the peer support network. Your participation in this network has enabled my PhD research to be carried out and for this I am very grateful.

As you may be aware, and to the best of my knowledge, none of the women in my study (150 pregnant women at the Women's and Children's Hospital) made use of the network. This is an extremely interesting finding and we are now evaluating the reasons why women chose not to use it and so on. All 150 women have delivered their babies now and I am currently evaluating their responses through a questionnaire sent to their home. We are asking women whether having the telephone number of another woman was a comforting resource, whether or not they actually rang it, and the overwhelming response is that women agree with this notion.

If you have any comments about the peer support network, or your role in it, particularly if you did hear from someone, I would love to hear from you. You can either phone me directly on 8303 6274, or email ruth.walker@adelaide.edu.au.

Thank you again for your help with this network and I wish you all the very best.

Kind regards,



Appendix 13

Program participant information sheet

Study Information Sheet:
Caesarean Section Study

This is an invitation to you to take part in a study which aims to encourage all pregnant women, such as yourself, to explore your options regarding pregnancy and delivery, particularly regarding caesarean section.

The study is being run by the Department of Public Health at the University of Adelaide. Ethics approval for this study has been obtained from the Women's and Children's Ethics Committee.

If you are interested in taking part in the study, we would like to **give you two pamphlets** now, and when you come in to the hospital at about 26/28 weeks, **give you the contact details of a peer support network**. This network, which you would be under no obligation to use, would put you in touch (via telephone) with a woman who has had a caesarean section or who has had a vaginal birth after caesarean, should you wish to ask any questions over the course of your pregnancy.

We would then like to **send a questionnaire** to your home about 7 weeks after you have had your baby asking you your thoughts on the pamphlets and the peer support network. The questionnaire can be returned in a reply paid envelope.

The researcher who will be giving you the resources is Ms Ruth Walker. Ms Walker is currently completing a Doctor of Philosophy in Public Health at the University of Adelaide.

Please be assured that your confidentiality will be maintained at all times. If you agree to be involved in the study, your name and details will be kept strictly confidential and will not be published in any way.

While the study will not benefit you or your baby directly, the information you provide will be of real help in educating pregnant women and their families.

Your answers will not affect your care in any way.

You are under no pressure whatsoever to join the study and you can drop out at any time.

If you would like to participate in the study, all you need to do is read all of the information contained in this letter and complete the associated consent form.

You are free to speak with a family member or friend about this information.

If you have any further questions you can contact the Project Coordinator, Ms Ruth Walker on 8303 6274, or alternatively Dr Deborah Turnbull on 8303 6280 at the Department of General Practice.

Appendix 14

Program participant consent form

Consent Form
Caesarean Section Study

Name of responsible investigator or supervisor: Dr Deborah Turnbull, Dr Chris Wilkinson

Name of person who issues the form: Ms Ruth Walker

I (PLEASE PRINT NAME) hereby consent
to my involvement in the research project entitled: **Caesarean Section Health
Promotion Study**

1. I consent to participate in the above project. I acknowledge that the nature of the project, including procedures, have been explained to me in a letter that I have been given.
2. I understand that while the study may not benefit me or my baby directly, the information I provide will assist in educating pregnant women.
3. I understand that the confidentiality of the information I provide will be safeguarded.
4. I understand that my answers in the questionnaire will not affect my care in any way.
5. I understand that I am under no pressure whatsoever to join the study and I can drop out at any time.
6. I have had the opportunity to discuss the project with a family member or friend.
7. I understand that the project has the approval of the hospital's Ethics Committee.

Signed: **Date:**
(Participant)

Appendix 15

Peer Support Network information sheet

Peer Support Network

What is it?

- The Peer Support Network is an informal, home-based, avenue for pregnant women such as yourself to telephone another woman (a 'peer supporter') and have a chat if, and when, you like. It is part of the study being conducted by the University of Adelaide that you agreed to participate in when you had your 18 week ultrasound.

Who are the 'Peer Supporters'?

- These are women who have had a caesarean section (CS), Vaginal Birth After Caesarean (VBAC) or a Vaginal Breech Delivery (VBD) and who have agreed to act, voluntarily, as a means of contact for pregnant women.
- Each pregnant woman who is involved in the 'network' will be allocated to one 'peer supporter'.
- The 'peer supporters' are women who have no professional training but who may be able to offer valuable advice or answer questions you may have regarding CS, VBAC, VBD or delivery in general.

How will it benefit me?

- Research has found that providing women with peer support during their pregnancy (i.e. contact with other women who can offer information and support) can result in positive outcomes for the mother.
- There may be questions you do not wish to ask staff at the hospital regarding CS/VBAC/VBD, or you may find that you do not have time to ask staff all the questions you would like answered. With the PSN you will be able to telephone your 'peer supporter' and discuss issues on your own terms, from your own home.

What if I am not planning on having a caesarean section?

- Even if you are not considering a CS, and you are planning to have a vaginal delivery, you may simply want to talk with another woman about her birth experience. Then, if for any reason you do have a CS, you may feel more confident with what is happening.
- You may want to ask your peer supporter about ways to avoid a CS.

How does it work?

- You will be given a card with the name and telephone number of another woman who you will be able to contact. This card will also specify certain times that your peer supporter wishes to be contacted, for example, only during evenings etc.
- You may like to telephone your peer supporter sometime before your due date to discuss their birth experience, or to ask any questions you may have about CS/VBAC/VBD, or any suggestions they may have with regard to avoiding an unnecessary CS.
- The aim of the Network is to give you a means to ask questions of women who are outside the hospital setting. Therefore it is a one-to-one, informal and home-based means of communication.

Some important points

- It is important to remember that the idea of the 'network' is friendly chat, if you have any 'serious' concerns regarding medical complications you will need to contact your midwife/obstetrician or hospital staff.
- It is important that you respect the privacy of your 'peer supporter' at all times and do not hold any unrealistic expectations of her. Your

'peer supporter' will set the boundaries of the relationship and you should respect this.

If you have any concerns or queries regarding the Network please do not hesitate to contact the Project Coordinator, Ruth Walker ph: 8303 6274

Appendix 16

University of Adelaide Birth Resources Project - Questionnaire

University of Adelaide Birth Resources Project



QUESTIONNAIRE

Section 1:

This section refers to one of the pamphlets that you were given by the researcher. It is called *'Making Informed Decisions About Caesarean Section - information for all pregnant women, their partners and family'*. This pamphlet had some sections with quotes from women who had given birth by caesarean section, and had some ideas about what you and your partner/family could do to become more informed about your childbirth options.

Please place tick ✓ in the appropriate box.

1. Did you get around to reading this pamphlet?

No

-

Go to Question 2

Yes, part of it

]

Go to Question 3

Yes, all of it

]

Go to Question 3

I can't remember

-

Go to Question 12
2. If No, was there a reason you didn't get around to reading it?

I lost it

]

Go to Q 12

It didn't interest me

]

Go to Q 12

I didn't have time

]

Go to Q 12

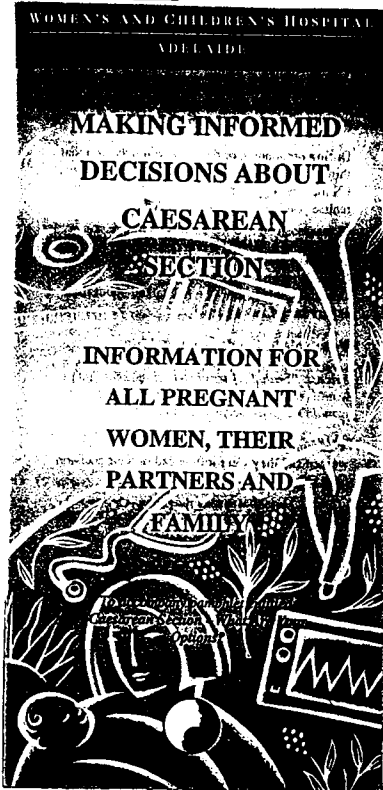
I thought it was irrelevant to my situation

]

Go to Q 12

Other (please specify)

.....



If you **did** read part, or all, of this pamphlet please answer the following questions, if you **didn't** please go to section 2 ➡

3. Which of the following statements **best** describes what you did with the pamphlet after you read it?

I threw it away

]

Go to Q4

I kept it but didn't look at it again

]

Go to Q4

I kept it and referred to it a few times

]

Go to Q4

I kept it and discussed it with my partner/family

]

Go to Q4

I kept it and discussed it with my care provider

]

Go to Q4

Other (please specify)

.....
- 1

Please complete this section if you read the pamphlet. Circle one number for each question.

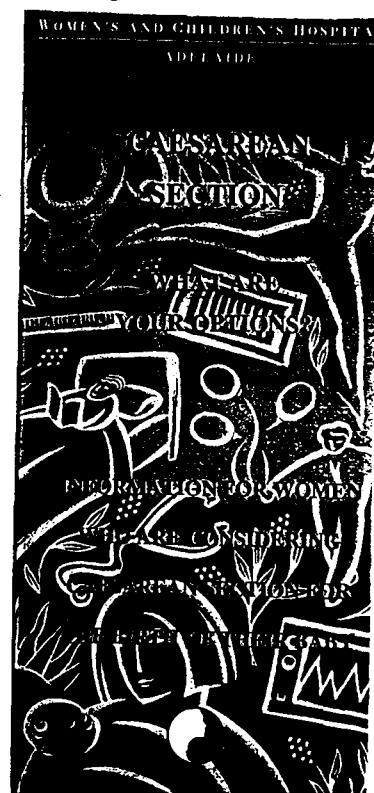
	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
4. The pamphlet told me things I hadn't considered	1	2	3	4	5
5. The pamphlet didn't provide enough information for me	1	2	3	4	5
6. Some of the quotes in the pamphlet distressed me	1	2	3	4	5
7. The pamphlet prompted me (or my partner) to ask questions I wouldn't have thought of asking during my pregnancy	1	2	3	4	5
8. The pamphlet prompted me (or my partner) to ask questions I wouldn't have thought of asking during labour	1	2	3	4	5
9. There were too many ideas presented in the pamphlet	1	2	3	4	5
10. The information in the pamphlet made me anxious	1	2	3	4	5
11. I think this pamphlet should be given to all pregnant women	1	2	3	4	5

Section 2:

This section refers to the **other** pamphlet you were given by the researcher. It is called '*Caesarean Section, What Are Your Options? - information for women who are considering caesarean section for the birth of their baby*'. This pamphlet was more 'information-based' and gave information on the risks and benefits of caesarean section and the risks and benefits of a vaginal delivery.

Please place tick ✓ in the appropriate box.

12. Did you get around to reading this pamphlet?
- | | | | |
|------------------|---|--------------------------|--------------------------|
| No | - | Go to Question 13 | ☐ |
| Yes, part of it |] | Go to Question 14 | ☐ |
| Yes, all of it | | ☐ | |
| I can't remember | - | Go to Question 25 | ☐ |



13. If **No**, was there a reason you didn't get around to reading it?

I lost it	] Go to Question 25	☐
It didn't interest me		☐
I didn't have time		☐
I thought it was irrelevant to my situation		☐
(please specify).....		
Other (please specify).....		☐

If you **did** read part, or all, of this pamphlet, please answer the following questions, if you **didn't** please go to section 3 →

14. When you were given this pamphlet were you considering a caesarean section for the birth of your baby?

Yes	] Go to Question 15	☐
No		☐

15. Tell us about your views on having a caesarean section now that you have read the pamphlet (please answer this even if you did not have a caesarean for your last baby).

.....

.....

.....

.....

16. Which of the following statements **best** describes what you did with the pamphlet after you read it?

I threw it away	] Go to Q 17	☐
I kept it but didn't look at it again		☐
I kept it and referred to it a few times		☐
I kept it and discussed it with my partner/family		☐
I kept it and discussed it with my care provider		☐
Other (please specify).....		☐

Please complete this section if you read the pamphlet. Circle one number for each question.

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
17. I learnt new things about caesarean sections	1	2	3	4	5
18. The information in the pamphlet made me scared about birth in general	1	2	3	4	5

Please circle one number for each question.

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
19. The information in the pamphlet made me scared about vaginal delivery	1	2	3	4	5
20. The information in the pamphlet made me scared about caesarean section	1	2	3	4	5
21. I would recommend this pamphlet to friends	1	2	3	4	5
22. I think vaginal birth is safer than caesarean section	1	2	3	4	5
23. I didn't know about the alternatives to caesarean section	1	2	3	4	5
24. I think fear of labour is the reason a lot of women have a caesarean section	1	2	3	4	5

Section 3:

This section refers to the information on the **Peer Support Network** that you were given by the researcher, at around your 28 week visit.

Please place tick ✓ in the appropriate box.

25. Did you receive the information on the Peer Support Network?

I can't remember

- Go to Question 39

☐

Yes

- Go to Question 26

☐

No (please indicate the reason) ↓

☐

➡ I went to my GP for my 28 week visit

☐

➡ I did not attend my 28 week appointment

☐

➡ The researcher was not there

☐

➡ I am not sure

☐

Go to
Q 39

If you **didn't** receive the information on the Peer Support Network please go to **Section 4 →**

If you **did** receive the information on the Peer Support Network **please answer the following questions.**

26. Which statement best describes how you were allocated to your 'peer supporter' (the person whose name and telephone number you were given on a card).

- I chose her because I was interested in hearing about her particular experience ☐
- I chose her because her experience was relevant to mine (either with this pregnancy or an earlier one) ☐
- I didn't really know so the researcher helped me choose one ☐
- I can't remember ☐
- Other (please specify)..... ☐

27. Did you get around to contacting your 'Peer Supporter'?

I can't remember - Go to Question 28 ☐

Yes - Go to Question 29 ☐

No (please indicate the reason) ↓ ☐

➡ I didn't understand how the Peer Support Network worked ☐

➡ I didn't feel comfortable telephoning a stranger ☐

➡ I didn't have time ☐

➡ I didn't need to ☐

➡ I lost the card with my peer supporters phone number ☐

➡ I felt it was irrelevant to my situation ☐

If so, in what way?.....

.....

.....

➡ Other ☐

Please specify.....

.....

.....

Go to
Question 28

28. Please tell us how much you agree with the statement below by circling a number from 1 (strongly agree) to 5 (strongly disagree). Then please comment in the space provided below.

Even though I didn't contact my peer supporter it reassured me to know she was there if I needed or wanted to talk to her.

**Strongly
agree**

Agree

**Not
sure**

Disagree

**Strongly
disagree**

1

2

3

4

5

Please comment.....

.....

.....

.....

If you **didn't** contact your 'Peer Supporter' please go to **Section 4 →**. If you **did** contact your 'Peer Supporter' please answer the following questions.

29. Which statement best describes the amount of contact you had with your 'Peer Supporter'?

- I only contacted her once ☐
- I contacted her 2 or 3 times ☐
- I contacted her 4 times or more ☐
- I can't remember ☐

30. What were the **main** reasons you contacted your 'Peer Supporter'? (You may tick more than one box)

- I was just interested in hearing her experience ☐
- I was considering a caesarean section and wanted to talk to someone who had had one ☐
- I was considering a vaginal birth after caesarean (VBAC) ☐
- I was told I would need a caesarean section so wanted to talk to someone ☐
- My baby was breech ☐
- I wanted to hear someone's experience of a vaginal breech delivery ☐
- I wanted to hear someone's experience of an ECV (exercise to turn breech baby) ☐
- Other ☐

Please specify.....

Please complete this section if you contacted your 'Peer Supporter'. Circle one number for each question.

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
31. The peer support network was a very good resource	1	2	3	4	5
32. I found my peer supporter's experiences useful to hear	1	2	3	4	5
33. Talking to my peer supporter made me anxious about my delivery	1	2	3	4	5
34. I never had any problems trying to get in touch with my peer supporter	1	2	3	4	5
35. Talking with my peer supporter encouraged me to try to have the sort of delivery I wanted	1	2	3	4	5

Please circle one number for each question.

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
36. Talking to my peer supporter was good in that it made me think about things I probably wouldn't have thought about.	1	2	3	4	5
37. I would have liked a different peer supporter	1	2	3	4	5
38. This sort of 'peer support network' should be available for all pregnant women	1	2	3	4	5

Section 4: Please Complete This Section

The questions in this part of Section 4 relate to some **statements on possible attitudes held within our society**. How much do you agree or disagree with the following statements?

Please complete this section by circling one number for each question.

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
39. People tend to think of caesarean section as a more convenient way of birthing	1	2	3	4	5
40. Caesarean section is now seen as a routine way of having a baby	1	2	3	4	5
41. Caesarean section is still seen as major surgery	1	2	3	4	5
42. It is common for people to think that generally a caesarean section is safer than a vaginal delivery	1	2	3	4	5
43. It is common for people to think that caesarean section offers an easier way of giving birth	1	2	3	4	5
44. The media seems to portray caesarean section as a "better option" than vaginal delivery	1	2	3	4	5

The following section is for **everyone to complete**, regardless of whether you got the resources or used them. It refers to some **demographic details** about you (age, education etc), some questions about your delivery and some questions about the study generally. You do not have to answer any questions about your delivery that you do not want to.

45. What is your age? Years

Please place a tick ✓ in the appropriate box .

46. What was the highest level of education you completed?

No schooling	☐
Some schooling	☐
Finished primary	☐
1-4 years secondary	☐
5-6 years secondary (includes matric)	☐
Some tertiary	☐
Certificate/diploma	☐
Higher degree (e.g. Bachelors degree, PhD)	☐

47. Do you speak a language other than English at home?

Yes (please specify).....	☐
No	☐

48. Which sort of area would you say you live in?

rural	☐
urban	☐
Other (please specify).....	☐

49. What was the **main** kind of care you received with this most recent pregnancy?

Shared Care	☐
Midwives Clinic	☐
Standard Antenatal Clinic	☐
Birth Centre	☐
Other (please specify).....	☐

50. What kind of delivery did you have with this baby?

Vaginal delivery

☐ ➤ Go to Question 59

Vaginal delivery, after having had a caesarean section with my last baby (VBAC)

☐ ➤ Go to Question 59

Vaginal Breech delivery

☐ ➤ Go to Question 59

Planned caesarean section (elective)

☐ Please answer Questions 51-58↓

The caesarean section was originally planned but I had it as an emergency

☐ Please answer Questions 51-58↓

Emergency caesarean section

☐ Please answer Questions 51-58↓

Forceps delivery

☐ ➤ Go to Question 59

Ventouse (vacuum extraction)

☐ ➤ Go to Question 59

Other (please specify).....

☐ ➤ Go to Question 59

If you had a caesarean section with this baby please answer Questions 51-58. Please complete this section by circling one number for each question.

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
51. I'm satisfied with the decision to have a caesarean section	1	2	3	4	5
52. I needed more information on other options	1	2	3	4	5
53. I was given good information why a caesarean section was necessary	1	2	3	4	5
54. I insisted on a caesarean section	1	2	3	4	5
55. Now I feel a bit cheated	1	2	3	4	5
56. I was unhappy about the amount of say I had in the decision to have a caesarean section	1	2	3	4	5
57. I was given good information to prepare me for the possibility of having a caesarean section	1	2	3	4	5
58. I felt pressured by the staff to have a caesarean	1	2	3	4	5

59. Were there any other resources regarding pregnancy and delivery or caesarean section/vaginal delivery that you would have liked or preferred?

.....

.....

.....

.....

.....

.....

.....

60. Do you have any comments you want to make about any part of the study, or any of the resources you were given? If so, please comment below.

.....

.....

.....

.....

.....

.....

.....

.....

Thankyou for completing this questionnaire. Please return the questionnaire in the reply paid envelope provided.

Appendix 17

Publications

H. Statham, Weaver, J., and Richards, M., (2001) Why choose caesarean section?
The Lancet, v. 357 (9256), pp. 635-636.

NOTE:

This publication is included in the print copy
of the thesis held in the University of Adelaide Library.

It is also available online to authorised users at:

[http://dx.doi.org/10.1016/S0140-6736\(05\)71425-2](http://dx.doi.org/10.1016/S0140-6736(05)71425-2)

Tumbull, S., Wilkinson, C., and Walker, R., (2001) Letters – Women's Request for Cesarean.

Birth, v. 28 (2), pp. 146-147.

NOTE:

This publication is included in the print copy
of the thesis held in the University of Adelaide Library.

Walker, R., Turnbull, D., Wilkinson, C., (2002) Strategies to address global cesarean section rates: a review of the evidence.
Birth, v. 29 (1), pp. 28-39.

NOTE:

This publication is included in the print copy
of the thesis held in the University of Adelaide Library.

It is also available online to authorised users at:

<http://dx.doi.org/10.1046/j.1523-536X.2002.00153.x>

Appendix 18

Conference Abstracts

EXPLORING THE NOTION THAT A ‘CULTURE’ OF CAESAREAN SECTION EXISTS IN AUSTRALIA

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Aim: The aim was twofold; 1) to determine women's opinion of community views of caesarean section, and 2) to explore the motivation for women's consideration of caesarean section.

Methods: This research was carried out as part of a larger study evaluating a program for pregnant women aimed towards encouraging informed decision-making for childbirth. Women (n = 148) were sent questionnaires following the birth of their baby. 62% (n = 92) responded. In part of this questionnaire, women were asked to indicate their level of agreement with statements regarding community views of caesarean section. Women were also asked if, at the time they were invited to join the program (18 weeks gestation), they were considering caesarean section. An obstetrician on the research team who was 'blind' as to the aim of the exercise then carried out analyses of these responses. Of all responses to this question, the obstetrician indicated where caesarean section might be clinically justified.

Results:

Statement	Strongly agree (%)	Agree (%)	Not sure (%)	Disagree (%)	Strongly agree (%)
People tend to think of CS as a more convenient way of birthing	12.0	40.6	25.2	19.7	2.1
CS is now seen as a routine way of having a baby	10.9	37.3	15.3	32.9	3.2
CS is still seen as major surgery	21.9	38.4	14.2	25.2	-
It is common for people to think that generally CS is safer than vaginal delivery	8.7	21.9	29.6	36.2	3.2
It is common for people to think that CS offers an easier way of giving birth	19.7	51.6	14.2	12.0	2.1
The media seems to portray CS as a better option than vaginal delivery	8.7	14.2	41.7	28.5	6.5

N = 91 women

Over half of women agreed that caesarean section is seen as more convenient than vaginal delivery. One quarter of the respondents indicated that caesarean section is no longer seen as major surgery. The majority of women (71.3%) agreed that caesarean section is seen as an easier way of giving birth. 10 (14.5%) of 69 women reported that they were considering caesarean section. The obstetrician is currently carrying out analysis of all responses and the presentation will include findings from these analyses.

Conclusion: The findings from this exploratory study in one setting do suggest a ‘culture’ of caesarean section. This issue needs to be explored utilising different samples and multiple methodologies.

STRATEGIES TO ADDRESS GLOBAL CAESAREAN SECTION RATES – A SYSTEMATIC REVIEW OF THE EVIDENCE

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Aim: Steadily increasing global rates of caesarean section have become one of the most debated topics in maternity care. We carried out a systematic review to report on the success of strategies developed in response to this continuing challenge.

Methods: A literature search identified studies conducted between 1985 and 2001 in the Cochrane Database of Systematic Reviews, Medline, Sociofile, Current Contents, Psyclit, Cinahl, and EconLit databases. A search of electronic databases for Level 1 evidence (systematic reviews), Level 2 (randomised controlled trials), Level 3 (quasi-experimental studies), or Level 4 (observational studies) was carried out. In selecting studies for review, selection criteria included types of study participant, intervention, outcome measure, and study.

Results: This review identified 20 studies. The interventions utilised in an attempt to reduce caesarean section rates in these studies were categorized as psychosocial, clinical, and structural strategies. Two clinical interventions, (external cephalic version, vaginal birth after a previous caesarean) and one psychosocial intervention (one-to-one trained support during labour) demonstrated Level 1 evidence for reducing caesarean section rates.

Conclusions: Although the evidence for one-to-one care and external cephalic version came from both developed and underdeveloped settings, the systematic review for vaginal birth after a caesarean was restricted to studies conducted in the United States. The effective implementation of the preceding strategies to reduce caesarean rates may depend on social and cultural milieu and on associated beliefs and practices. Furthermore, factors that influence caesarean section rates in any setting are complex. When antiquated ideas persist or where practice patterns ignore evidence, caesarean section rates are likely to remain high or rise further. New caesarean reduction strategies and evidence to support them need to be brought to the attention of maternity health professionals and more effective ways found to persuade practitioners to adopt them.

A PROCESS EVALUATION OF RESOURCES AIMED AT PROMOTING INFORMED DECISION-MAKING FOR CAESAREAN SECTION

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Aim: To carry out a pilot evaluation of an antenatal prevention-based intervention for promoting informed decision-making for caesarean section.

Methods: All pregnant women attending the Women's and Children's Hospital for their 18 week morphology scan during the recruitment period, and who met the eligibility criteria, were invited to join the study. Of an eligible 165 women who were approached, 150 (90.9%) consented to join the study. These women received two pamphlets at recruitment and then information on a community-based peer support network when they attended for their standard 28-week antenatal visit. The two pamphlets were based on providing women with information about the risks and benefits of CS and vaginal delivery, and the alternatives (VBAC, ECV). The peer support network consisted of providing each woman with the telephone number of a woman who had had either a CS, VBAC, ECV or vaginal breech delivery, and whom they could contact if they wanted to discuss anything related to these experiences during the course of their pregnancy. A questionnaire was then posted to all participants at 7 weeks postnatal asking about use of, and satisfaction with, the resources. The questionnaire also included items relating to whether women believe there is a 'culture' of CS.

Results: Of the 148 women who were sent questionnaires (two participants who had adverse outcomes were not sent questionnaires), 90 were returned (60.8% response rate). Whilst over half of the sample reported that they read all of both pamphlets, about 40% reported that they didn't read them or only read part of them. Of the sample that did read all or part of the pamphlets, it appears that they did not use the pamphlets in an active manner, with over 40% stating that they kept the pamphlets but did not look at them again. Further, only 1 woman reported that she discussed the pamphlet with her care provider. Approximately one in six women did, however, keep the pamphlets and discuss them with their partner or family. Overall, women were satisfied with the content of the pamphlets, however, it is important to note that approximately one in five reported feeling scared of CS or birth in general after reading the pamphlets or that the pamphlets made them feel distressed or anxious. It was somewhat surprising that of the 114 women who received the information on the peer support network (36 did not receive the information due to either being 'missed' by the researcher, or not attending their 28 week visit) only one woman tried to contact their 'peer supporter'. Reasons given for not contacting were predominantly that they did not need to (49%), they thought it was irrelevant to their situation (18.1%) or they specified that they had friends or family they would have called on if necessary (14.5%). Regarding women's attitudes to questions pertaining to a 'culture' of CS, 70.7% agreed or strongly agreed with the statement – It is common for people to think that CS offers an easier way of giving birth. Similarly, over half of the sample agreed or strongly agreed with the statement - People tend to think of CS as a more convenient way of birthing. Opinion was varied when asked whether CS is still seen as major surgery, with over one-third of women disagreeing with or being unsure about this statement, and 61.5% agreeing or strongly agreeing with the statement.

Conclusions: Women who are expecting a normal pregnancy do not appear to want to know about preventing CS, particularly in the light of the current focus on the normality of pregnancy. This evaluation adds weight to the evidence that women need to be informed of the current evidence for CS, however the means in which this is done needs to be further explored.