

TRIAL OF LABOR VERSUS REPEAT CESAREAN SECTION:
INFLUENCES ON WOMEN'S DECISION MAKING

by

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A Thesis

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DOCTOR OF PHILOSOPHY

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Faculty of Medicine

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DEDICATION

To the scholars who might find interest in and take time to read this thesis:

We shall not cease from exploration

And the end of all our exploring

Will be to arrive where we started

And know the place for the first time

T. S. Eliot

ABSTRACT

In the past, the dictum "Once a cesarean, always a cesarean" has been followed in North America. Practice is now changing and women are being asked to consider trial of labor with the possibility of vaginal birth after cesarean as an alternative to routine repeat cesarean section (C/S). This exploratory descriptive study investigated how and why women made decisions between alternatives.

There are relatively few studies which have investigated influences over decision making in this area. However, theoretical literature on decision making and a small number of studies served as the basis for selecting the following study variables: past experiences, future expectations, perceived physician advice and desire for control over decision making.

A mixed methodology was selected for the study. Qualitative and quantitative data were collected through the use of interviews and self-report questionnaires. Participants were recruited from a Winnipeg tertiary care setting. They included 115 women in the last trimester of pregnancy who had experienced previous cesarean birth. The sample was predominantly well educated, caucasian, married and pregnant for the second time.

Quantitative results showed that choices were significantly related to perceived physician advice. In addition, those choosing C/S did so because they assessed a low probability of vaginal birth for themselves. It was also found that women with more than one past cesarean were more likely to chose a repeat C/S.

Qualitative results provided further understanding of the influences over decision

making. Themes of interpretation of pain, self concept, need for control and relationship to others were generated from interview data. These interrelated concepts act as influences over decision making and are formed within a context of socially generated childbirth ideologies.

Study results provide a more detailed understanding of a model of decision making for choice between C/S and TOL. The model has implications for maternal child health services and may be tested by further investigations for applicability to other childbirth decisions. This investigation of the influences on decision making may improve understanding of the aspects of decision making which are important to women. If health care providers understand the rational basis of women's decision making, they may provide further opportunities for autonomous choice. Positive choices may lead to lowered morbidity and mortality rates as well as decreased economic and psychologic costs associated with cesarean birth.

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CHAPTER I: INTRODUCTION

There is widespread concern about rising cesarean rates throughout the developed world. Although cesarean section (C/S) can be a life saving measure, it is associated with increased costs and higher morbidity and mortality for women and their infants. Canada's most recently recorded C/S rate is 19.5 (1988/1989) which represents an increase of 400 percent in the last 25 years. This rate is almost double that of the United Kingdom (10 per 100 deliveries), and is the second highest only to the United States (24.7 per 100 deliveries) (Nair, 1991). The most frequent reason for C/S is previous cesarean birth. In the United States one in four cesarean deliveries was a repeat cesarean in 1970. By 1987 this had increased to one in three. Ninety percent of those with previous C/S deliver by C/S for subsequent pregnancies (Nair, 1991; Taffel, 1989).

Two national consensus conferences, one in the United States and one in Canada, have recommended trial of labor (TOL) with subsequent vaginal birth after cesarean (VBAC), as a partial solution to rising rates (Hannah, 1986; Shearer, 1981). In this approach, the woman usually awaits spontaneous labor, then comes to hospital, is closely monitored, and delivers vaginally or by repeat cesarean depending on clinical progress and evidence of maternal/fetal well-being.

In locations where a concerted effort has been made to reduce C/S rates and increase TOL/VBAC through physician education and policy change, slight reductions (0.4 to 0.8 percent) in repeat C/S have been observed (Myers & Gleicher, 1988; Porreco, 1990). In 1982, the Chicago Lying-in Hospital attempted to change physician

management of women with previous C/S by instituting policies encouraging TOL/VBAC. A review of their records revealed a 5 percent repeat cesarean rate in 1982, a rise to 6.9 percent in 1985 and then a decrease to 5.3 percent in 1988. The authors stated VBAC helped to stabilize rather than reduce the overall C/S rate in their institution (Pridjian, Hibbard & Moawad, 1991). During the last 10 years, the number of VBACs in Canada has increased significantly from 3 per 100 previous C/S in 1979/80 to 15.6 per 100 previous C/S in 1988/89 (Nair, 1991).

Medical literature has emphasized enlightened physicians as the key to increased VBAC use (Anderson & Lomas, 1985, 1989; Gleicher, 1984). However, McClain (1990) suggests it is women who have been informed of their choices that are the force which will lead to abandonment of routine repeat C/S. Yet, few studies have examined women's decision making in choosing between alternatives. Women are deciding which mode of delivery is best for them, but there is very little in the literature which analyzes their decision making process. Ability to predict and influence decisions has been inhibited by lack of understanding of the relationship between the woman's choice and variables which might influence it. Such parameters as the role of previous experience, childbirth expectations, and decision making preferences have not been examined extensively. The effect that a woman's perception of her physician's preference for delivery approach has on her ultimate decision remains relatively unexplored.

Selection of possible influences on decision making has been based on previous research and the investigator's past clinical experience in caring for childbearing women (Beaton & Gupton, 1990). It has been found that women review and use past experiences

to form expectations for the future. Women relate their past experiences in a thoughtful manner and recall details of past childbirth events, even after several years. The interaction between past experiences and future expectations serves as a basis for decision making. Plans are made for an impending birth that will avoid the pitfalls of the past and insure a positive future experience.

When discussing birth plans women also described the influence of their physicians on decision making and the degree to which they might control or influence decision making in the interactive process between themselves and their physicians. Physicians are a major influence on decision making, but how women use physician advice in decision making is not well understood. This study investigated these variables and their influence on decision making in women who had experienced previous cesarean birth. The specific decision explored was the choice between TOL with a possible subsequent vaginal delivery, or an elective repeat C/S. Study objectives were:

- 1) to explore the relationship between past childbirth experiences and a woman's choice between trial of labor and repeat cesarean;
- 2) to describe the relationship between her expectations of childbirth and her choice of delivery approach;
- 3) to investigate how preference for control over decision making influences the choice between trial of labor and repeat cesarean; and
- 4) to determine how the woman's perception of her physician's attitude toward delivery approaches affects her choice between the two alternatives.

A study of the social context of choice of birth method and variables which

influence such decisions could enhance understanding of the complexities of decision making. McClain (1990) claims the majority of literature which examines TOL/VBAC has over simplified these processes. The implication is that women discuss the alternatives with their physician and make choices based on medical information alone. However, women's past childbirth experiences, their expectations for the future, and the meanings they ascribe to these important life events are factors to consider. The ultimate goal of research in this area is the enlightenment and empowerment of women in making childbirth choices.

Understanding how women decide to choose TOL/VBAC versus repeat C/S may be important in attempts to influence and decrease repeat C/S rates. The costs associated with unnecessary C/S may be avoided through advanced knowledge of women's decision making. Psychological and physiological consequences of operative delivery and the potential cost savings of TOL/VBAC make this area of investigation particularly relevant.

Authors have described the psychological costs of C/S. Feelings of disappointment, failure and guilt have been associated with cesarean birth (Erb, Hill & Houston, 1983; Lipson, 1984; Lipson & Tilden, 1980; Marut, 1978; Marut & Mercer, 1979; Reichert, Baron & Fawcett, 1993). Feelings of dissatisfaction, anger and depression were encountered commonly in interview data from a study of women with history of C/S (n=105) by Affonso and Stichler (1980). Jacoby (1987) found that the majority of pregnant women participating in her study (n=1508) hoped C/S would not be necessary (87%). She also found women who had C/S were less likely to feel their labors had been managed as they desired. In a study conducted in France comparing 103 C/S and 103

vaginal births, it was found that self reported rates of depression were significantly higher in the C/S group (Garel, Lelong & Kaminski, 1987).

Several desired and positive aspects of vaginal birth are denied to women giving birth by C/S. Early exposure to the newborn by nursing on the delivery table as well as an opportunity to share the experience with their husbands/partners are often unavailable options for those having cesareans (Stichler & Affonso, 1980). Although some hospitals now allow fathers to attend C/S deliveries, in many cases they are still excluded. May and Sollid (1984) reported 48 percent of the fathers in their study were not allowed to attend the delivery. Yet, Reichert et al. (1993) found one of the strongest expressed needs of women having C/S was to be with their partners and infants. The most frequently reported negative consequence of C/S for women was an inability to witness and participate in the birth (Garel, Lelong & Kaminski, 1987). A survey of Manitoba women who had given birth by cesarean reported that women would have preferred more prolonged contact with their infants and a more family-centered approach (Erb, Hill & Houston, 1983).

Women having C/S perceive their experiences of giving birth as significantly different from those of women who deliver vaginally. Most women feel that C/S is a "harder" experience than vaginal birth, involving more pain, longer recovery and more emotional trauma (Affonso & Stichler, 1978; Garel, Lelong & Kaminski, 1987). They are less satisfied with their experiences and with themselves. In a comparison of levels of self-esteem between women who delivered vaginally (n=78) and those having C/S (n=76), significantly lower self-esteem was found in the C/S group (Cox & Smith, 1982).

Israeli women who had C/S rated their birth experiences as negative significantly more often than those having vaginal births (78.9% versus 30.2%) (Lunenfeld, Rosenthal, Larholt & Insler, 1984).

Even women who considered their cesarean birth experiences to be positive were found to be angry or upset if they felt the procedure was not justified (Lipson, 1981). Anger is a common response with negative feelings often directed toward physicians and nurses. In a qualitative study by Fawcett (1981) cesarean mothers (n=24) reported insensitivity to their special needs, on the part of doctors and nurses. Physicians were targets for resentment especially when cephalopelvic disproportion necessitated C/S. Mothers felt that the diagnosis should have been made earlier to forestall prolonged labor. Cohen (1977) pointed out that some women wonder for years if their C/S was necessary.

Psychological attitudes toward childbirth generated by unexpected and often unwanted C/S have been associated with difficulties in the maternal child relationship (Cranley, Hedahl, Pegg, 1983). Garel, Lelong and Kaminski (1988) found that women delivering by C/S felt less confident about their abilities to care for their infants. Cesarean mothers are more hesitant to name their infants and view their deliveries as abnormal and stigmatizing (Marut & Mercer, 1979). In a survey of 143 women by Hart (1980), positive attitudes toward pregnancy and the baby were found more often in mothers who had delivered vaginally before having a C/S than in those who had never experienced a vaginal birth. The author suggests that positive attitudes may be a result of increased confidence and feelings of self-worth engendered by having a "successful" vaginal delivery. In a British study, women who had emergency C/S took longer to feel

close to their infants than those who delivered vaginally (Hillan, 1992a & b). These differences persisted for several months after birth. Cohen (1977) described the anger some women felt toward their babies as a result of C/S. The baby was perceived as somehow causing the C/S and mothers then felt guilty for being angry. Cranley, Hedahl and Pegg (1983) found C/S mothers less likely to breastfeed and concluded, the more positive attitude toward the birth experience, the more positive the attitude toward the newborn.

Consumer groups are making a determined effort to instruct women in methods to avoid "unnecessary cesarean section" and encouraging TOL after previous C/S (Danforth, 1985). To prepare women for the growing probability of C/S, childbirth educators began teaching and showing films about operative delivery in their classes in the 1970's and developed specific classes for those anticipating such intervention.

It was suggested that this preparation might ease the trauma of unexpected C/S by decreasing fears of the procedure and encouraging a more positive birth experience (Conner, 1977; Donovan & Allen, 1977; Greene, Zeichner, Roberts, Callahan & Granados, 1989). A 1978 survey found a wide variety of cesarean birth classes sponsored by hospitals, consumer groups and childbirth educators (Hayes, 1978). Participants who subsequently experienced unexpected C/S were satisfied with the classes and grateful for the preparation. Similar positive reactions were identified among class attenders in a descriptive study by Fawcett and Burritt (1985).

Concern about the psychological consequences of unexpected C/S led to development of cesarean birth classes in the 1970's. However, it was not until the 1980's

that childbirth classes for couples desiring VBAC began to be described in the literature. Stated goals of the classes included an opportunity to resolve the previous C/S experience and to impart confidence through knowledge (Austin, 1986; Shearer, 1982). Further encouragement for VBAC has been provided by the popular press. The International Childbirth Educators Association published its consumer-oriented document "Unnecessary Caesareans: Ways to Avoid Them" by Young and Mahan (1980) and Cohen and Estner published their book, Silent Knife: Cesarean Prevention and Vaginal Birth After Cesarean.

Physiological as well as psychological effects of C/S support the advantages of VBAC. Maternal death rates following C/S remain higher than those due to vaginal birth (Evrard & Gold, 1977; Petitti, Cefalo, Shapiro, & Whalley, 1982; Rubin, Peterson, Rochat, McCarthy, & Terry, 1981; Sachs, Yeh, Acker, Driscoll, Brown & Jewett, 1988). Maternal mortality has been reported to be two to four times greater with C/S than vaginal delivery (Petitti, et al., 1982; Sachs, et al., 1988).

Several reviews of the literature have reported greater postpartum and intrapartum morbidity in women undergoing elective repeat C/S than in those having a TOL (Afriat, 1990; Miller, 1988; Sufrin Disler, 1990). Higher rates of intrapartum complications, blood transfusions, febrile morbidity, antibiotic use and longer hospital stays have been recorded for those having C/S. Yet uterine rupture, a long standing concern regarding VBAC, occurs in less than one percent of labors after previous C/S and there have been no reported instances of maternal or infant mortalities due to rupture in births to women with previous lower segment transverse incisions in the recent literature (Sufrin Disler,

1990).

In addition to concerns about the psychological and physiological effects, authors have discussed increased costs associated with rising C/S rates. A potential for saving health care dollars exists if TOL and VBAC can be increased. Costs and consequences of TOL/VBAC versus repeat C/S have been compared, and in most cases cost savings with increased TOL/VBAC utilization have been predicted or reported (Gleicher, 1984; Lavin, 1983; O'Sullivan et al., 1981; Shearer, 1981; Shy, LoGerfo, & Karp, 1981). Savings related to increased rates of TOL/VBAC could lower health care costs significantly.

Economic evaluation of TOL/VBAC has not been extensive, however studies which have compared costs have consistently reported lower expenditures with this alternative (Gleicher, 1984; Lavin, 1983; O'Sullivan, Fumia, Holsinger, & McLeod, 1981; Shearer, 1981; Shy, et al., 1981). Cost savings have been attributed to decreased physician fees, shorter hospital stays and lower morbidity associated with vaginal birth. Tanio, Manley and Wolfe (1989) estimated that unnecessary cesarean sections cost the American health care system an extra \$728 million in 1986.

Combining the cost of longer hospital stay and American physician's fee differential, Gleicher (1984) estimated that each one percent increment in the cesarean rate would cost the American health care system and public \$63 million (U.S.). Lavin (1983) projected annual hospital savings to be \$165 to \$358 million, if women with previous C/S were delivered vaginally. O'Sullivan et al. (1981) determined actual savings for 76 women having VBAC at Jackson Memorial Hospital in Miami. Hospital stays were

reduced by an average of three days for both mother and baby resulting in savings of \$1,433.46 per family, or \$108,942.96 for all 76 mothers.

The per case cost of C/S was \$5,101 compared to \$2,087 for VBAC in California from 1979 to 1982 (Flamm, Dunnett, Fischermann & Guilligan, 1984). In a more recent report, average costs for C/S deliveries were \$7,826 and \$4,720 for vaginal (MMWR, 1993). Based on these figures and assuming the United States reduced the C/S rate to 15 percent, \$1 billion in physician fees and hospital charges might be saved.

Shy et al. (1981) applied decision analysis to examine costs more thoroughly. Using a hypothetical cohort of 10,000 pregnant women with previous low-segment cesarean incisions, probabilities of repeat cesarean, TOL and mortality rates for each category were estimated. Estimates of direct dollar charges were based on costs of hospital, physician, anesthesia and neonatal intensive care unit services. Direct costs for elective repeat C/S exceeded costs of TOL by \$5 million. Amniocentesis and determination of lecithin/sphingomyelin ratios for lung maturity have been suggested as appropriate antecedents to C/S. If costs of these procedures were included in the cost of each repeat C/S, an additional \$1.2 million would be added to the total savings. Savings for TOL averaged \$500 per patient. Shy concluded TOL was a cost saving alternative with no more risk of maternal mortality than that of repeat C/S.

The major benefit of a study on decision making is increased understanding of the phenomenon from women's unique perspectives. Facilitation of autonomous decision making and positive birth experiences is the ultimate goal. The psychological, physical and economic costs associated with C/S augment the importance of the study focus.

Enhanced understanding of the maternal decision making process involved in TOL/VBAC might facilitate decisions which benefit the health care system as well as mother, child and family. Understanding the dynamics of that process might serve as a basis for education of childbearing women, and lead to increased TOL/VBAC rates. Increased vaginal deliveries would produce lower morbidity rates, decrease psychological complications from operative birth, and result in economic benefits. A study designed to examine women's perspectives and decision making influences may increase understanding and produce more powerful and appropriate models to consider when assessing childbirth decisions.

Following the introduction, this thesis begins with a review of the relevant literature in Chapter II. Studies have been reviewed to provide an overview of the present status of C/S and TOL/VBAC and serve as a basis for understanding the epidemiological context of the problem. The first section of the literature review describes C/S, current rates, influences on increasing rates and concerns regarding the rising rates. The next section discusses repeat C/S as an increasingly common procedure and the implications of this increase. Approaches to increase the number of TOL/VBAC are discussed including, consensus conferences and enlarging eligibility criteria. Finally, a comprehensive number of studies was reviewed which attests to the safety and effectiveness of TOL/VBAC.

The second major focus of the literature review is on decision making. Theories of decision making are summarized. Decision making during pregnancy is examined and

the literature describing choice between TOL/VBAC and repeat C/S is reviewed. Chapter II concludes with a description of the concepts and related variables used in the present study.

Chapter III describes the methodology. The design, which used quantitative and qualitative approaches, is discussed as well as the setting, sample and sample recruitment approach. The methodological procedure and instruments also are reviewed.

Quantitative results are shown in Chapter IV. Demographic characteristics of the total sample are described and compared between those who chose TOL and those who chose repeat C/S. Research questions are answered through analysis of between group differences on scales measuring past experiences and future expectations. Results of a card sort procedure to determine preference for control over decision making are presented as well as women's perceptions of their physicians' attitudes. In an effort to select the best predictors of choice of childbirth approach, regression analysis results are presented.

Chapter V presents the first step in qualitative analysis. This Chapter consists of an overview of the interview data. It provides the reader with a summary of what women said about their past experiences, future expectations and decision making processes. Differences between C/S and TOL groups in qualitative responses are described. Qualitative and quantitative data are compared and questions generated by the quantitative results are discussed. Influences over decision making are described. The purpose is to reveal the major content areas which provided the basis for further thematic analysis and comparisons between quantitative and qualitative data in the subsequent chapter.

Chapter VI utilizes interview and questionnaire data to describe influences over decision making in more depth. Combining both quantitative and qualitative approaches has been advocated as a method of strengthening a study (Polit & Hungler, 1987). In this investigation, it allowed the researcher to identify perspectives and attitudes in ways which would not be possible with strict adherence to one approach. Quantitative findings were explained and understanding of the complexities of decision making enlarged through analysis of interview material. Goodwin and Goodwin (1984) suggest that a combination of qualitative and quantitative measurement increases depth of understanding and strengthens the external validity of the results. Through this combination, a model of decision making is generated.

Chapter VII compares theoretical findings of the present study with previous theories on decision making. The implications of the study for health care providers and suggested changes to health care policy are discussed. Limitations of the study are shown and implications for further research described.

The ways in which women with histories of previous C/S make decisions for TOL or repeat C/S has not been examined extensively. There have been no studies combining quantitative and qualitative methodologies. This study enlarges understanding of the decision making process through this multiple approach. The quantitative measurements indicated influences which played a major role in decision making. Through the analysis of interview data, these influences were enlarged and placed within a context of women's lives. Through the discussion of past experiences, future expectations, physician roles and decision making preferences, the process of decision making was revealed. Quantitative

data indicated which influences were important and qualitative data described the complex nature and interaction of these influences within a social context. Quantitative results were interpreted, rationalized and enriched through analysis of qualitative data.

This study explains how and why women make the TOL versus C/S decision. Through the examination of women's narratives an understanding of their experiences is gained. There is a potential for lowering repeat C/S through an enhanced knowledge of factors influencing decision making. Health care providers who are involved in the care of pregnant women may use this information to assist women in decision making. Findings clarify the process of childbirth choices and lend support to a theory of decision making which incorporates beliefs, emotions and social values as a central part of that process.

CHAPTER II: LITERATURE REVIEW

Introduction

A broad variety of literature has been reviewed to provide background and a theoretical framework for the study. There are two major sections of the literature review. The first includes an overview of epidemiological studies which serves as a background for understanding the status of C/S and TOL/VBAC in present obstetrical care. The second section reviews literature related to decision making. It begins with a review of decision making theory and continues with a discussion of decision making during pregnancy. It concludes with a more focused discussion of decision making in the choice between TOL/VBAC and repeat C/S and a description of the study's conceptual framework.

Epidemiological Background

Cesarean Section

Cesarean Section Rates

The steady increase in C/S, observed internationally as well as in all of North America, indicates fundamental and widespread change in obstetrical practice. There

have been uniform increases in all regions, for women of all ages and marital statuses, and within hospitals of all sizes (Placek, 1986; Taffel, & Placek, 1985).

In 1965 approximately 4.5 percent of births were by C/S in the United States (Placek, Taffel, & Moien, 1983). By 1987, after a period of only 22 years, this rate had risen to 24.4 percent, representing over 900,000 operative deliveries per year in that country (Taffel, 1989). A stabilization or slight reduction of C/S rates has been reported recently, with U.S. rates for 1991 recorded as 23.5 per 100 (MMWR, 1993). Canadian rates for 1988/89 were 19.5 per 100 births (Nair, 1991). Rates as high as 28 to 30 percent were reported in individual practices and in some areas of the United States and Canada several years ago and continue to be observed (Mevs, 1977; Nair, 1991). By the year 2000, it has been predicted that the United States could have a rate of 40 percent, if the present rate of increase continues (Placek, Taffel & Liss, 1987). However, Quilligan (1985) suggests that America could achieve a rate as low as 7.8 percent with the institution of strict guidelines for C/S.

International differences in C/S rates were compared for 29 countries in Europe, North and South America and the Pacific (Notzon, 1990). Cesarean births were found to have increased in almost every nation. Rates varied from a high of 32 per 100 deliveries in Brazil to a low of 7 in Czechoslovakia. Bergsjø, Schmidt and Pusch (1983) found C/S rates to vary between 6 to 24 per 100 deliveries in their survey of European countries during the late 1970's. Notzon found no association between birth outcomes and C/S rates. It was concluded that a nation may achieve both low infant mortality and low C/S rate. For example, the Netherlands had a C/S rate of 7.6 and a perinatal

mortality rate of 9.9 during 1981-1985. Annual rates of increase in C/S were reported to be converging with comparable rates in developed and developing countries (Notzon, Placek, & Taffel, 1987). The World Health Organization has been quoted as stating no region in the world is justified in having rates higher than 10 to 15 percent (ICEA, 1991). Francome and Savage (1993) suggest a rate of 6 to 8 percent would be appropriate. They based their estimate on the rates of known and agreed upon obstetric indications for C/S. Achieving consensus on an acceptable rate is difficult due to variation in health care systems, cultural factors and differing obstetric populations. There is, however, widespread agreement in the literature that present rates are too high.

There are many cases in which C/S is unquestionably necessary and can be life saving for both mother and child. The majority of the time, however, the decision to perform a C/S is based on indefinite medical indications and largely depends on discretionary judgement (Enkin, 1977). Goyert, Bottoms, Treadwell and Nehra (1989) found individual practice styles to be a significant predictor of C/S rates. Multiple regression analysis indicated that nulliparity and identity of the physician were the two strongest influences on rates. Discretionary judgment and practice style vary depending on the type of care provider. For instance, nurse-midwives have been shown to demonstrate lower primary C/S rates than physicians (Baruffi, Strobino & Paine, 1990; Sakala, 1993) and high rates of successful VBAC (Hangsleben et al., 1989).

Stewart, Dulberg, Arnill, Elmslie and Hall (1990) found decisions to proceed to operative delivery often involved judgements based on indefinite variables or even unrecognized factors. In response to hypothetical cases, 18 percent of participating

Canadian physicians chose C/S for a woman with a history of previous C/S and 2 percent chose C/S for breech delivery. However, when asked about their actual practices, they reported performing C/S on 71 percent of their patients with history of C/S and on 57 percent of those with breech presentations. The discrepancy between hypothetical choices and actual practice is attributed to individual judgements subject to patient and peer pressure and social desirability factors (Barnsley et al., 1990). Individual practice styles and clinical judgments are dependent upon setting and type of care provider and would appear to be a strong influence on the interpretation of clinical indicators for C/S and hence C/S rates.

Epidemiological literature continues to document the high rate of C/S. Unless one is willing to accept the seemingly unlikely conclusion that women are becoming increasingly incapable of delivering children without surgical intervention, then a more likely explanation may be found in changing patterns of obstetrical practice and trends within the health care system.

Influences on the Rising Cesarean Section Rate

Several factors have been discussed in the literature as possible influences on rising rates. Clinical policy and management style, increased use of electronic fetal monitoring, changing definitions and management of prolonged labor, increased use of C/S for breech delivery and preterm infants, regionalization, legal issues and altered demographic patterns have been associated with increasing C/S rates.

Determinants of cesarean intervention, which might be specified in clinical policy, actually vary widely between physicians and institutions (Stewart et al., 1990). Up to seventy five percent of all C/S can be attributed to four primary indications, mainly: dystocia, malpresentation (breech), fetal distress and repeat cesarean section (Anderson & Lomas, 1984, 1985; Bottoms, Rosen, & Sokol, 1980; Gleicher, 1984; Minkoff & Schwarz, 1980; Monheit & Resnik, 1981; Muller, Heiser, & Graham, 1961; Taffel, Placek, & Liss, 1987). Between 1970-1978, studies by Gleicher (1984) and Haddad and Lundy (1978) found that dystocia was the leading contributor to increased C/S rates in the United States. Bottoms et al. (1980) found dystocia to account for 33.4% of the increase in rates in the United States, between 1976 and 1979. These authors attributed 23.1 percent of the increase to repeat C/S births.

Subsequently, the proportional contribution of the four primary indicators has changed. Data from Ontario between 1979-1982 indicate that during that period, previous cesarean births accounted for 68 percent of the increase, breech presentation for 14 percent, fetal distress for 14 percent and dystocia for only 4 percent of the increase in cesarean births in that province (Anderson & Lomas, 1984). A "previous cesarean" indication increased in Ontario from 5.8 to 7.8 percent of all deliveries during 1979 to 1982. In Canada (1988-1989) 38.2 percent of all cesarean deliveries were done because of a previous C/S. Dystocia accounted for 15.3 percent, breech for 8.8 percent, 8.6 percent were for fetal distress and 29.2 percent were due to other conditions (Nair, 1991). The literature demonstrates not only the increasing overall rate, but also a marked shift from dystocia to repeat C/S as the primary indicator or clinical justification for the

increase.

Anderson and Lomas (1985) examined specific factors associated with increased Canadian C/S rates. They found that institutional clinical policies which determine the medical indications for C/S are the most important influences. Institutional C/S rates are affected by factors including, but not limited to, the size of the hospital, the hospital's geographic location and the amount of complicated obstetrics. Mevs (1977) found that large, urban, high risk hospitals have the highest rates. The therapeutic plan chosen, ostensibly based on clinical trials and current knowledge, actually differs from physician to physician and hospital to hospital. Clinical policy may be similar in groups of physicians with similar experience, background and physical locations, and is reflected in their use of specific interventions. Emphases on high technology and surgical deliveries with a concomitant lack of exposure to TOL/VBAC in physicians' education have been suggested as additional factors encouraging higher C/S rates (Joseph, Stedman & Robichaux, 1991; Marieskind, 1983).

Marieskind (1983) describes a widely accepted belief that increased use of electronic fetal monitoring and C/S are related to obtaining improved outcomes for mothers and babies. Improved perinatal mortality and morbidity statistics have been presumed to be the result of electronic fetal monitoring and increased operative intervention, in spite of evidence that shows the same improvements when C/S rates remain stable (Quilligan, 1985). Widespread and increased non-selective use of continuous electronic fetal monitoring has resulted in more frequent diagnosis of "fetal distress" and consequent surgical intervention (Banta & Thacker, 1979; Taffel, 1989,

Thacker, 1987). Paradoxically, this has occurred during a period in which the specificity and sensitivity of monitoring patterns has been recognized to be limited with respect to true fetal state or long term outcome.

Baskett (1978) and Bottoms et al. (1980) describe a change in attitude which has taken place regarding acceptable lengths of labor. It is generally felt that it is undesirable to allow a woman to labor for extended periods, and there is some evidence documenting a relationship between prolonged labor and risks for both the mother and fetus (Roemer, Rowland & Nuamah, 1991). Consequently, surgical intervention has become common practice when labor is perceived to be "prolonged". Definitions of slow progress, dystocia, or failure to progress, differ between institutions and practitioners (Stewart et al. 1990). It has been recommended that deviation from arbitrary definitions should be an indication for further clinical assessment, but not necessarily a call for surgical intervention (Crowther, Enkin, Keirse & Brown, 1989). Stewart et al. (1990) found that a perception or diagnosis of dystocia in its own right is a causative factor in a decision to carry out cesarean delivery. The authors concluded that rates could be reduced by 50 percent if changes in practice occurred, such as defining appropriate parameters of C/S intervention for dystocia in the absence of fetal distress, avoiding making that diagnosis in the latent phase of labor and offering TOL more frequently.

There has been a steady increase in cesarean delivery for breech presentation despite evidence that this does not improve outcome in many such circumstances. In the United States in 1970, 15 percent of breech presentations were delivered by cesarean, in 1984 this had risen to 75 percent (Placek et al., 1987). Cesareans for breech presentation

increased 66 percent between 1979/80 and 1988/89 in Canada (Nair, 1991). Increases have been observed in spite of evidence which calls into question the benefits of C/S for this indication. Green, McLean, Smith and Usher (1982) found an increase in C/S for breech presentation from 22 to 94 percent in Quebec from 1963 to 1979. However, unfavourable outcomes, including asphyxia and fetal and maternal trauma, were unchanged in this same interval.

Developments in neonatal care have pushed back the limits of viability with a concurrent improved prognosis for low birth weight babies. Cesarean delivery is often chosen for preterm and low birth weight infants (Baskett, 1978). Infants who were once considered non viable and delivered vaginally are now being delivered surgically (Bottoms, et al., 1980). In a study comparing two groups of very low birth weight babies, one considered to have high prospects for viability and another group considered to have poor prospects, C/S rates were higher in the group judged to have better likelihood of survival (Paul, Koh, & Monfared, 1979).

Cesarean delivery of very low birth weight infants occurs in spite of data which shows no increased benefit of C/S over vaginal birth. Malloy, Rhoads, Schramm and Land (1989) reported an increase in C/S for very low birth weight infants from 24 percent to 44 percent during the period from 1980-1984 in Missouri. Although death became less frequent on the first day following birth in cesarean "micronates," all differences between C/S and vaginal births disappeared when examination of death rates was extended to the first six days after birth.

Incidence of intraventricular hemorrhage as well as death rates were compared in

a group of 1,765 very low birth weight infants (Malloy, Onstad, Wright & The National Institute of Child Health and Human Development Neonatal Research Network, 1991). When gestational age, preeclampsia, breech presentation, presence or absence of labor, and place of birth were controlled, C/S was not associated with lower mortality or incidence of intraventricular hemorrhage.

A variety of regionalization systems has been established in North America. The stated objectives of regionalization include, coordination of care and elimination of duplication of services, while focusing expensive resources according to population needs. One result of regionalization has been proliferation of Level III centers and closing of small obstetric hospitals. Transporting "low risk" women to "high risk" centers has become more common (Romalis, 1985). Critics of regionalization claim that increased use of technology, intervention and specialty staffing associated with "high risk" attitudes and centers are inappropriate for normal uncomplicated childbirth. Conducting normal deliveries in a high risk setting may be unnecessarily expensive and might lead to inappropriate application of technology, resulting in increased numbers of surgical births (Shearer, 1977).

Medicolegal issues have also influenced the increase. The practice of defensive medicine in the face of increased litigation awards is a causative factor in increasing C/S rates in the United States and to a lesser degree in Canada (Anderson & Lomas, 1984; Lavin, 1983; Marieskind, 1983). Dr. Jonas, president of the American College of Obstetricians and Gynecologists in 1987, has stated, "Rarely will you get sued for performing a cesarean, but you often will be sued for not performing a cesarean coupled

with a bad outcome" (ACOG, 1987).

Increased rates also have been attributed to changing demographics of the childbearing population. Increased age, decreased parity and fertility rates have been associated with more frequent C/S rates. Although the number of deliveries in Canada has only increased one percent in the last nine years, the proportion of babies born to older women has increased significantly, while the proportion born to women under age 24 declined (Nair, 1991). Cesarean section rates for women 35 and over were 27.3 per 100 compared to a low of 13.9 for women 20 or less. Gordon, Milberg, Daling and Hickok (1991) concluded that advanced maternal age may place these women at unnecessary risk of C/S. Primiparous women 35 years and older, with no recorded complications were more than twice as likely to have cesareans (relative risk = 2.5). In the United States eight percent of the increase in the cesarean rate (1980-1988) has been attributed to increasing maternal age (Taffel et al., 1987). Primiparous and particularly "elderly" primiparous women are believed (without sound evidence) to have more frequent and severe complications, and increased C/S rates in that cohort are one result.

Thus the factors producing rising C/S rates are multiple and overlapping. In addition to the aforementioned variables, others such as increased prevalence of genital herpes, physician economic incentives (particularly in the United States), avoidance of use of forceps, and convenience associated with scheduled deliveries, also have been linked to increased C/S rates (Marieskind, 1983; Quilligan, 1985; Taffel & Placek, 1983). Literature examining the influences on rising rates has implicated a broad variety of related factors. The aim of studies in this area has been to find causes of rising rates and

facilitate a reduction. The consensus is that present rates are too high and must be reduced.

Concerns Regarding Rising C/S Rates

Although The World Health Organization has stated no country should have C/S rates above 10-15 percent, determining an "appropriate" rate in countries with diverse demographics and health care systems is difficult. Most North American authorities have not established such a goal, but are concerned that present rates are too high.

One important argument in favour of lowering the C/S rate is based on comparisons of morbidity and mortality between cesarean and vaginal births. Establishing maternal mortality rates associated with C/S has been fraught with difficulty. In developed countries, the number of deaths is small and it is difficult to separate procedure related deaths from underlying disease processes (Miller, 1988). One study in Georgia found a 10-fold increase in maternal mortality for C/S (59.3/100,000) compared to vaginal births (Rubin, et al., 1981). This is by far the highest maternal mortality rate reported for C/S. Many unanswered questions about the study population remain. Other studies have determined the rate to vary between 5.8 and 40.3 (Frigoletto, Ryan & Phillippe, 1980; Petitti, et al., 1982; Sachs, et al., 1988). Rubin et al. attributed their high rate to a "more thorough" approach to data collection and concluded that other reports were underestimated. Sachs estimated the absolute risk from C/S alone to be 6 per 100,000 procedures. Maternal mortality rates are more recently thought to be two to four times greater than for vaginal delivery (Petitti, et al.) although one early study (Evrard & Gold,

1977) reported the risk of maternal death to be 26 times greater for C/S.

Higher perinatal mortality rates have been associated with C/S, but again these are biased by the circumstances in which the C/S was done. In a one year retrospective study in Rhode Island, perinatal mortality was 21.2 per 1,000 C/S and 14.1 per 1000 vaginal births (Evrard, Gold, Cahill, 1980). Similar difficulties arise in generating perinatal rates as in maternal mortality rates. Although perinatal deaths occur more frequently than maternal deaths, separating the consequences of preexisting conditions and diseases from consequences of the surgical procedure is problematic, if not impossible.

During the last 25 years, C/S has increased dramatically. Lower perinatal mortality during this same time period led some to postulate a causal link. In a comparison between a center in which C/S rates remained constant and one in which rates increased, O'Driscoll and Foley (1983) and O'Driscoll, Foley, McDonald and Stronge (1988) noted the same decline in perinatal mortality in both settings and concluded that there is no support for the idea that C/S rates have contributed to improved perinatal mortality.

Maternal morbidity associated with C/S may include: infection; paralytic ileus; pulmonary embolus; deep venous thrombosis; injury to ureters, bladder or bowels; hemorrhage and complications from anesthesia (Miller, 1988; Rogers, 1988). The risk of such complications overall was quoted as 11.6 percent by Rogers. However, the rate for emergency operations was 18.9 percent compared to 4.2 percent for elective procedures. Vaginal birth in general, is safer than C/S with respect to morbidity (Nielsen & Hökegard, 1984; Sufrin Disler, 1990). Hibbard (1976) discussed cesarean morbidity

in these terms:

Although cesarean section is considered to be one of the safest of all major operations, and conceding the fact that morbidity should be greater in the particular population under study, almost half [n=4,003] of the patients in each time period had one or more operative complications, including a respectable number of severe complications which compromise future childbearing or are potentially lethal (pp. 801-802).

A more recent review of the literature found morbidity risks associated with C/S to be two to four times greater than with vaginal deliveries (Miller, 1988).

Infection rates are higher for C/S than vaginal deliveries. Hawrylyshyn, Bernstein and Papsin (1981) found a rate of 3.6 percent in vaginal births, 6 percent in elective repeat C/S, 22 percent in non-urgent primary C/S, and 38.4 percent in emergency C/S. There has been an hypothesized relationship between rates of infection and infertility. LaSala and Berkeley (1987) found four times as many C/S women with infertility problems in a comparison between those with and without previous C/S (n=570). Hemminki and colleagues found a similar relationship in surveys conducted in Sweden and the United States (Hemminki, 1986, 1987; Hemminki, Graubard, Hoffman Mosher & Fetterly, 1985). Hurry, Larsen and Charles (1984) found development of pelvic abscess to be associated with infertility. Additional hypothesized relationships include an association between C/S and placenta previa and abruptio (Hemminki, Glebatis,

Therriault & Janerich, 1987). Although a causal relationship between C/S and subsequent reproductive problems is postulated, results are tentative due to the small number of studies in this area.

Perinatal morbidity is higher with C/S. Although two studies found a relationship between low Apgar scores and repeat C/S (Benson, Berendes & Weiss, 1969; Burt, Vaughan & Daling, 1988), the majority of studies have investigated respiratory distress and complications in newborns. Errors in calculation of maturity of the fetus have led to iatrogenic prematurity in C/S infants with associated increases in morbidity and mortality (Bowers, MacDonald & Shapiro, 1982; Chervenak, Herslinger, Freedman & Lamastra, 1986; Frigoletto, Phillippe, Davies & Ryan, 1980). Studies have found that even when improper timing of elective procedures is controlled, respiratory complications are higher in infants delivered by C/S (Heritage & Cunningham, 1985; Schreiner et al., 1982; White, Shy & Daling, 1985). Studies also have indicated a relationship between respiratory complications and the presence of labor. Significantly fewer respiratory problems were found in the infants of women who had labored before C/S and the lowest rates were found in infants delivered vaginally (Callen et al. 1979; Cohen & Carson, 1985; White et al., 1985). Boon, Milner and Hopkin (1981) found crying vital capacity reduced in C/S infants and this persisted for approximately 48 hours. The authors suggest passage through the birth canal constricts the baby's rib cage and assists in the mechanics of removing lung fluid.

Psychological morbidity poses an additional concern. In a recent review of the literature, psychosocial morbidity was associated with C/S and shown to adversely effect

capacity reduced in C/S infants and this persisted for approximately 48 hours. The authors suggest passage through the birth canal constricts the baby's rib cage and assists in the mechanics of removing lung fluid.

Psychological morbidity poses an additional concern. In a recent review of the literature, psychosocial morbidity was associated with C/S and shown to adversely effect family relationships for periods up to seven years after the birth. When compared to vaginal births, C/S parents had more problems in the postpartum period with demonstrated effects on the mother's and father's feelings toward the child and the relationship between the couple (Mutryn, 1993).

C/S rates have risen dramatically and there are multiple factors influencing the increase. Risks associated with C/S have led to widespread concern about C/S rates as the benefits of vaginal birth over C/S have been well documented. As the number of primary C/S has increased the number of repeat procedures has also risen. A high proportion of women with history of previous C/S will delivery their subsequent children by C/S.

Repeat Cesarean Section

In 1916, Cragin, a New York physician, published the unsubstantiated dictum "once a cesarean section, always a cesarean section" in a letter to the Editor of the New York Medical Journal (Cragin, 1916, p.3). Dr. Cragin based his concern on fear of uterine rupture and other physicians must have shared his concern because despite a lack

of evidence in its favour, this position became widely accepted and practised in North America. There were early dissenters, however. J. Whitridge Williams, a leading authority and first author of a "classic" obstetrical text (now in its 19th edition), wrote in 1917 that this was an exaggeration and the actual dangers of vaginal birth after cesarean did not warrant strict adherence to the dictum (Hadley, Mennuti & Gabbe 1986). Charles McLane (1930), another early dissenter, expressed concern about the raising rate of cesarean births. He investigated the problem from 1925-1930 and also recommended a less stringent approach to Cragin's dictum, advocating TOL for selected women who had experienced previous cesarean births. Unfortunately, these early dissenters were ignored largely. In 1978, 98.9 percent of all women in the U.S. with a previous cesarean birth were delivered by repeat cesarean. By 1983, the rate showed only a slight decrease to 95.4 percent (Miller & Sutter, 1985, Taffel & Placek 1985) and by 1987 it decreased to 90.2 percent (Taffel, 1989). This change has been attributed to a lower primary C/S rate as well as increased use of VBAC. In Canada, approximately one third (38.2%) of all cesarean births are repeat cesareans (Nair, 1991) and 84.4 percent of women with previous C/S deliver by repeat C/S. VBAC rates per 100 previous C/S during 1988-1989 varied from a low in Newfoundland of 3 to a high in Manitoba of 26.9. Manitoba also has the lowest cesarean rate of the ten provinces (15.54). Regional variations may be due to differences in institutional clinical policies, individual practice styles, and medical peer pressure.

One factor perpetuating the "Once a cesarean, always a cesarean" tenet was concern that the previous C/S scar might rupture, threatening the life of both mother and

baby. Some of this concern originated from observation of the occasional rupture, including rupture prior to labor, of the classical uterine incision. Use of classical incisions, although frequent in the first part of this century, is now a rarity. Investigations of the relationship between type of scar and rupture with VBAC began as early as the 1920's. Case, Corcoran, Jeffcoate and Randle (1971) credit British Drs. Holland (1922a & b) and Kerr with this pioneering work. Subsequent studies continue to find higher rates of rupture in those with classical scars versus lower segment incisions (Dewhurst, 1957; Halperin, Moore and Hannah, 1988; Palerme & Friedman, 1966).

Donnelly and Franzoni (1964) calculated the incidence of uterine rupture over a 30 year period in their hospital to be 1:2679 concluding that the event was so rare that women with one previous C/S should be allowed to labor. In a more recent study by Tahilramaney, Boucher, Eglinton, Beall, and Phelan (1984) the identified dehiscence rate in patients who had TOL was 1.9 percent. No relationship was found between number of previous uterine incisions, oxytocin administration, birth weight, type of previous uterine incision, previous vaginal delivery, or previous diagnosis of cephalopelvic disproportion and dehiscence rates. Tahilramaney and colleagues concluded that TOL was safe for women with previous C/S in virtually all circumstances. In a Swedish study of 1,008 women having TOL, a similar low rate of dehiscence was reported (0.6%) (Nielsen, Ljungblad, & Hagberg, 1989). No relationship was found between use of oxytocin or epidural anesthesia and dehiscence. Dehiscence was diagnosed in 4 percent of those having repeat C/S. Schneider, Gallego and Benito studied women with two vaginal births after a previous C/S and found no incidence of rupture or dehiscence. In

a review of the literature, scar separation after lower segment incision ranged between 1-2 percent in those studies reviewed (Clark, 1988).

Based on these findings, the safest alternative was felt to be TOL. However, because the complications of rupture can include neonatal death, maternal death, neonatal asphyxia, maternal bladder lacerations and hysterectomy, the investigators recommend using selection criteria and careful monitoring (Scott, 1991). Jones, Nagashima, Hartnett-Goodman and Goodlin (1991) state, "All women attempting vaginal birth after cesarean delivery are at risk for this complication [dehiscence/rupture], a discussion of which should be included in the counselling of all candidates for trial of labor" (p. 817).

The growing number of repeat procedures has contributed to the rise in overall C/S rates and unless a solution is found, repeat C/S will continue to be a major problem. TOL has been suggested as an appropriate alternative to repeat C/S, however, achieving increased TOL rates may be difficult due to the complexities of generating changes in patterns of practice.

Trial of Labor: A Change in Practice

There have been three main forces encouraging increased use of TOL/VBAC. The first was the initiation of national consensus conferences and institution of the resulting recommendations. The second trend has been liberalized clinical criteria for eligibility for TOL. The third occurrence has been the generation and publication of clinical studies attesting to the benefits of TOL/VBAC.

in Canada in February, 1986. Both recommended TOL/VBAC as a safe, relatively low risk alternative following previous low segment transverse uterine incision. TOL/VBAC is felt to hold the greatest potential for reducing the C/S rate (Shearer 1981, Hannah, 1986, Consensus Conference Report 1986).

Several attempts have been made to measure the effects of the two consensus conferences. The impact of several conference documents, including the one on C/S, were evaluated by Kosecoff et al. (1987). It was concluded that in the state of Washington, conferences mostly failed to stimulate change in practice and additional follow-up programs were recommended. Jacoby and Clark (1986) found only a small increase of awareness resulted from mailing the American consensus statement to physicians. They questioned the value of this approach in light of the costs.

The Canadian consensus attempted to improve on the American approach with the goal of evoking a research based change in practice (Lomas, 1986). According to a survey conducted in Ontario, increased awareness of the established guidelines was achieved and most of the participating physicians agreed with the recommendations (Lomas et al., 1989). However, knowledge of the content of the recommendations was poor. The authors concluded that guidelines were not sufficient and further efforts should be expended to develop new incentives and remove disincentives. In another Canadian study, difficulties in implementing new procedures, conservative interpretation of guidelines, need for convenience, financial concerns, fear of litigation and patient preferences were suggested as possible reasons for lack of adherence to consensus recommendations (Domnick Pierre et al., 1991). The authors conclude by stating, "The

Canadian study, difficulties in implementing new procedures, conservative interpretation of guidelines, need for convenience, financial concerns, fear of litigation and patient preferences were suggested as possible reasons for lack of adherence to consensus recommendations (Domnick Pierre et al., 1991). The authors conclude by stating, "The attitudes of women have not been adequately studied...Women also need to understand the recommendations of the Consensus Statement, if they are to make informed choices" (p.1288).

Because of lack of a response to the Canadian consensus document and continued rising C/S rates, the Ontario Ministry of Health formed the Cesarean Birth Planning Committee. In 1991, the Ministry released a report from the Committee entitled, "Appropriate Use of Cesarean Section: Recommendations for a Quality Assurance Program." According to this document, TOL/VBAC is no longer considered an alternative, but should be considered the standard of care (Cesarean Birth Planning Committee, 1991; Sufrin Disler, 1992).

Broadening the Eligibility Criteria for TOL

In addition to the development and dissemination of conference recommendations discussed above, enlarging the eligibility criteria for TOL and VBAC may increase the number of women who are offered a TOL and thus decrease the rate of C/S. Several studies have examined the use of TOL in instances where the woman does not meet criteria set out by the two consensus conferences. The Ontario Committee has recently

reviewed the criteria in light of this more recent literature. Its report acknowledges positive outcomes found in recent studies and advocates more liberal guidelines. For example, for labor after more than one previous cesarean and labor with a multiple gestation or breech presentation, it is recommended that the decision about the method of birth be made by the woman and her physician on an individual basis. As the criteria become more liberal and strategies are developed to change physician management, the number of women who must decide between TOL or an elective repeat C/S will increase.

Criteria originally developed by both consensus conferences include: (a) low transverse cesarean uterine scar; (b) singleton vertex presentation; and (c) absence of any absolute indication for cesarean section, such as placenta previa. Since these criteria were formulated, several investigations have taken place to test and expand them.

Women with unknown types of uterine scars were initially excluded from having TOL. Because the incision on the skin may be different than the incision on the uterus and women are not always informed about the type of uterine incision, there was a concern that these women may have had a classical incision, thus increased likelihood of uterine rupture or dehiscence. However, Beall, Eglinton, Clark and Phelan (1984) found no significant differences between women with unknown uterine scars and those with lower segment incisions in labor outcome, maternal complications, fetal complications, and scar rupture rates. Rosen, Dickinson, and Westhoff (1991), in a meta-analysis of over 11,000 trials of labor, supported these findings and concluded that women with unknown incision types are at low risk for dehiscence.

The criterion for single vertex presentation also has been tested. Strong, Phelan,

Ock Ahn, and Sarno (1989) examined pregnancy outcomes of 56 women having TOL with twin gestations and previous cesarean births. There were no significant differences in maternal or neonatal morbidity or mortality in those having TOL compared to those delivered by C/S. Although their study was small and they recommended the application of safeguards for attempted vaginal delivery in women with twin gestations after previous C/S, the authors concluded that a TOL is a reasonable alternative for twin gestations. In a study by Gilbert, Saunders and Sharp (1988) C/S in twin gestation rose from 20 to 70 percent over an 11 year period (1975-1985). During this time there was no change in fetal outcomes, but there was an increase in maternal morbidity. These authors and others (Brady & Read, 1988) concluded that twin gestation should not in itself be considered an indication for C/S.

Contrary to consensus criteria, women with breech presentations have been allowed TOL. Two recent studies found no increase in fetal or maternal morbidity in those delivering vaginally after C/S (Ophir et al., 1989; Sarno, Phelan, Ock Ahn, & Strong, 1989). Investigators in Israel were able to reduce their C/S rate from 12 percent to 9.7 percent partly as a result of external cephalic versions resulting in VBAC for breech presentations (Jakobi, Weissman & Paldi, 1987). No effects were observed on the intrapartum fetal mortality rate. Flamm, Fried, Lonky and Saurenman (1991) found that version attempts were successful in 82 percent of 56 women with a history of previous C/S and 65 percent of these had VBAC. Both studies concluded that in some cases TOL with or without external cephalic version may be a desired alternative for breech presentations following previous C/S.

study, 46 percent had TOL and 69 percent of them delivered vaginally. Contrary to expectations, the rate of uterine dehiscence in the vaginal delivery group was lower (1.8%) than in the repeat cesarean group (4.6%). This may have resulted from greater ease detecting dehiscence visually at C/S than manually at vaginal deliveries.

Several additional studies and a comprehensive review of the literature have supported the safety of TOL/VBAC for women with more than two previous C/S (Farmakides, Duvivier, Schulman, Schneider & Biordi, 1987; Hansell, McMurray & Huey, 1990; Lawson, 1987; Novas, Myers & Gleicher, 1989; Ophir, Yagoda, Rojansky & Oettinger, 1988; Porreco & Meier, 1983; Pruett, Kirshon, Cotton & Poindexter, 1988). In most studies, vaginal delivery rates and complications were no different than those of patients with only one previous C/S. All of these authors concluded that TOL is a safe alternative for those with more than one lower segment transverse C/S.

As the medical community is becoming more familiar and comfortable with the appropriateness and safety of TOL/VBAC, the criteria for eligibility have become more liberal. In addition to consensus conferences and efforts to broaden eligibility criteria, a large number of clinically based research studies has been published supporting the safety of this approach and recommending increased opportunities for women to have TOL.

Clinical Evaluation Studies of TOL/VBAC

A large number of studies as well as reviews of the literature and a meta-analysis of 31 studies have unanimously recommended TOL for women with a history of previous

C/S. Studies that involve retrospective review of TOL/VBAC have been published as early as the 1930's. These early evaluations took place in a period when C/S rates were about 5 percent, most incisions were classical and the focus for evaluation was on uterine rupture. Schmitz and Gajewski (1951) reviewed records at their hospital between 1931 and 1950. There were 190 women with a history of C/S, of whom 62 delivered vaginally. Six cases of rupture were reported, but none in those who had TOL. For those with rupture, there were no maternal deaths and 67 percent of infants were live births in such circumstances. Lawrence (1953) reported a relatively low VBAC rate (22%) but supported trial of labor based on low complication rates produced by a review of records from 1926-1948. More than 40 years ago, researchers began investigations supporting TOL as an acceptable alternative to repeat C/S.

Similar support was found in other early studies by Baker (1955), Browne (1951), Cosgrove (1951), Harris (1953) and Lawler, Bulfin, Lawler and Lawler (1956). VBAC rates varied between 35.8 and 89 percent. Rates of morbidity and mortality were reported to be acceptable. All of these early studies supported safety of delivering vaginally after previous C/S. Since these early reports, there have been numerous other investigations of TOL/VBAC.

In the 1960's five studies were carried out (Allahbadia, 1963; Browne & McGrath, 1965; Douglas, Birnbaum & MacDonald, 1963; Pauerstein, Karp & Muher, 1969; Riva & Teich, 1961). Riva and Teich reported an overall C/S rate of 1.54 to 2.93 percent; and even at this low rate 50 percent were repeat procedures. They included 214 women with a history of C/S in their study and VBAC was achieved in 73.8 percent. Thirty seven

percent (780) of 2,094 women with a history of one or more C/S delivered vaginally in a retrospective review of records from 1932-1960 (Douglas et al., 1963). Rates of uterine rupture, maternal mortality, and perinatal mortality were low enough to support a policy of TOL. Uterine rupture was found to occur most often following previous classical incisions. By the end of this study (1961) 94 percent of cesarean incisions were lower segment. Browne and McGrath (1965) found support for VBAC in their study which followed 566 women with previous C/S over time (1947-1963) and reported on 800 VBAC. A small study (n=30) by Pauerstein, Karp and Muher (1969) reported a 53 percent VBAC rate. Allahbadia included those with more than one previous C/S as well as those with classical or unknown scars. Yet, he reported the highest VBAC success rates (97%). Such results may be due in part to the high proportion of forceps use (21.4%), particularly mid forceps and Kjelland rotations (8%).

In the 1970's, two reports were published which examined outcomes in women with previous lower segment transverse incisions (Morewood, O'Sullivan & McConney, 1973; Saldana, Schulman & Reuss, 1979). For women undergoing TOL, Saldana et al. reported a 38.5 percent VBAC rate and Morewood et al. a 70.4 percent rate. Based on low perinatal and maternal mortality as well as no instances of uterine rupture, both studies recommended TOL/VBAC.

The majority of studies investigating TOL/VBAC have been published in the 1980's (Benedetti, Platt, & Druzin, 1982; Boucher, Tahilramaney, Eglinton, & Phelan, 1984; Chattopadhyay, Sengupta, Edress & Lambourne, 1988; Clark, Eglinton, Beall & Phelan, 1984; De Jong, 1987; Demianczuk, Hunter, & Taylor, 1982; De Muylder, 1988;

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The majority of studies investigating TOL/VBAC have been published in the 1980's (Benedetti, Platt, & Druzin, 1982; Boucher, Tahilramaney, Eglinton, & Phelan, 1984; Chattopadhyay, Sengupta, Edress & Lambourne, 1988; Clark, Eglinton, Beall & Phelan, 1984; De Jong, 1987; Demianczuk, Hunter, & Taylor, 1982; De Muylder, 1988; Dhall, Mittal, Grover & Dhall, 1987; Eglinton et al., 1984; Finley & Gibbs, 1986; Flamm et al., 1988; Gellman, Goldstein, Kaplan & Shapiro, 1983; Gibbs, 1980; Graham, 1984; Hangsleben, Taylor & Lynn, 1989; Jarrell, Ashmead, & Mann, 1985; Martin et al., 1983; Meehan, Burke & Kehoe, 1989; Molloy, Sheil & Duignan, 1987; Mootabar, Dwyer, Surur & Dillon, 1984; Ngu & Quinn, 1985; Pauerstein, 1981; Paul, Phelan & Sze-ya, 1985; Phelan, Clark, Diaz & Paul, 1987; Pridjian, Hibbard & Moawad, 1991; Schneider, Gallego, Benito, 1988; Singh, Barman & Gupta, 1986; Stovall, Shaver, Solomon, & Anderson, 1987; van Amerongen, 1989; Wadhawan & Narone, 1984; Wilf & Franklin, 1984; Yetman & Nolan, 1989). These studies varied in terms of sample size, inclusion/exclusion of more than one previous C/S, unknown scars, multiple gestation and breech presentation. They took place in several different countries and settings varied between community hospitals, private practices, teaching hospitals and multi-site studies. In spite of this variation, outcomes were consistently positive and reported VBAC rates for those having TOL ranged from 38 to 97 percent. Based on low mortality and morbidity, all studies reviewed recommended VBAC as a safe alternative.

Rates of uterine rupture for women with TOL were not significantly different from rates for those having repeat C/S and in the majority of studies no cases of rupture were

recorded. Additional positive findings were reported. For instance, Paul et al. (1985) found that febrile morbidity was significantly lower for the cohort having TOL, including those who had TOL with repeat C/S. Phelan and associates (1987), in a study of 2,708 women with a history of C/S, found the TOL group to have shorter hospital stays and significantly less febrile morbidity. Boucher et al. (1984) also reported lower febrile morbidity, shorter periods of pyrexia, less use of therapeutic antibiotics, and fewer intrapartum complications for those having TOL.

Studies published in the 1990's continue to recommend TOL as a safe and desirable alternative for women with a history of previous C/S (Coltart, Davies & Katesmark, 1990; Heddleston & Watson, 1991; Miller & Leader, 1992; Paterson & Saunders, 1991; Pridjian et al. 1991). Recent VBAC rates varied between 64 and 79 percent. Pridjian, found that relative risk of repeat C/S was reduced from 10.2 in 1982 to 5.2 in 1988. Studies continue to confirm earlier findings that TOL should be encouraged (See Table 1 for a summary of the literature).

Table 1

Summary of Literature on VBAC, 1960-1992.

First Author & year pub.	Site	Years of Study	Type of Study	History of C/S	No. of TOL	VBAC (%)
Miller '92	Australia	1989-1990	R	318	125	80 (64%)
Heddleston '91	Germany	1986-1988	P	--	51	39 (76.4%)
Paterson '91	England	1988	R	1,059	664	471 (71%)
Pridjian '91	U.S.A.	1982-1988	R	1,521	697	379 (55%)
Coltart '90	England	1980-1987	R	353	195	154 (79%)
Flamm '90	U.S.A.	1984-1989	P	15,098	5,733	4,291 (75%)
Hangsleben '89	U.S.A.	1982-1987	P	--	53	44 (83%)
Yetman '89	U.S.A.	1985-1987	R	535	224	137 (61.2%)
Meehan '89	Ireland	1972-1987	R	2,434	1,350	1,097 (81%)
van Amerongen '89	U.S.A.	1984-1987	P	729 ^A	162	101 (62%)

Table 1 (Cont.)

First Author & year pub.	Site	Years of Study	Type of Study	History of C/S	No. of TOL	VBAC (%)
Flamm '88	U.S.A.	1984-1985	P	4,929	1,776	1,314 (74%)
Schneider '88	Spain	1980-1984	P	--	339	202 (59.6%)
De Muylder '88	Zimbabwe	1984-1986	P	401	288	235 (82%)
Chattopadhyay '88	Saudi Arabia	1983-1984	R	1,847	1,446	736 (51%)
De Jong '87	S. Africa	1984	P	212	106	55 (52%)
Dhall '87	India	1979-1983	P	1,184	594	452 (76.6%)
Phelan '87	U.S.A.	1982-1984	P	2,708	1,796	1,465 (81%)
Molloy '87	Ireland	1979-1984	R	2,176	1,781	1,618 (90.8%)
Stovall '87	U.S.A.	1985-1986	P	396	272	216 (76.5%)
Singh '86	India	1980-1984	R	1,315	685	473 (69%)
Finley '86	U.S.A.	1978-1982	R	1,156 ^B	1,156	745 (62%)

Table 1 (Cont.)

First Author & year pub.	Site	Years of Study	Type of Study	History of C/S	No. of TOL	VBAC (%)
Jarrell '85	U.S.A.	1978-1982	R	799	216	143 (66%)
Ngu '85	Australia	1978-1981	P	1,022	456	269 (59.6%)
Paul '85	U.S.A.	1982-1983	P	1,209	751	614 (82%)
Mootabar '84	U.S.A.	1973-1982	P	778	296	161 (54.4%)
Graham '84	U.S.A.	1978-82	P	1,551	242	166 (69%)
Wilf '84	U.S.A.	1976-1981	R	188	84	66 (78.6%)
Boucher '84	U.S.A.	1980	R	871	308	240 (78%)
Clark '84	U.S.A.	1980	R	871	308	240 (78%)
Martin '83	U.S.A.	1981-1982	P	717 ^A	162	101 (62%)
Gellman '83	U.S.A.	1971-1981	R	220	85	76 (89%)
Wadhawan '83	Zambia	1979-1980	P	451	319	201 (63%)

Table 1 (Cont.)

First Author & year pub.	Site	Years of Study	Type of Study	History of C/S	No. of TOL	VBAC (%)
Demianczuk '82	Canada	1978-1981	R	92 ^B	92	50 (54.3%)
Benedetti '82	U.S.A.	1977	P	89	89	71 (82%)
Pauerstein '81	U.S.A.	1966-1968	P	43	43	26 (60.5%)
Gibbs '80	U.S.A.	1970-1978	P	1,558	1,192	746 (48%)
Saldana '79	U.S.A.	1974-1977	R & P	226	145	56 (38.6%)
Morewood '73	Jamaica	1960-1969	R	423 Pregnancies	243	171 (70.4%)
Pauerstein '69	U.S.A.	1966-1968	P	--	43	26 (60.5%)
Douglas '63	U.S.A.	1932-1960	R	2,094	--	780
Allahbadia '63	Ireland	1952-1957	R	365	310	301 (97%)
Riva '61	U.S.A.	1953-1960	P	214	194	158 (73.8%)

Note: P = Prospective, R = Retrospective, A = no. of all deliveries, B = no. of TOL

The largest study on the effects of TOL/VBAC was carried out by Flamm, Newman, Thomas, Fallon and Yoshida (1990). This five year multicenter study included 5,733 TOL. Of these women, 4,291 (75%) delivered vaginally. There were no maternal deaths and perinatal mortality was not significantly different from the general obstetric population. The incidence of symptomatic uterine rupture varied between 1.7 and 1.8 during the five year study period. One perinatal death occurred which was related to uterine rupture. The perinatal mortality rate was 6 per 1,000 which was slightly less than the overall perinatal mortality rate of 10 per 1,000 at the participating hospitals.

There have been several reviews of the literature on VBAC (Afriat, 1990; Enkin, 1989; Lavin, Stephens, Miodovnik & Barden, 1982; Martin, Morrison & Wiser, 1988; Sufrin Disler, 1990). Without exception, these authors recommended TOL/VBAC as a safe alternative to repeat C/S.

To investigate safety of VBAC, Rosen and colleagues (1991) conducted a meta-analysis of maternal and infant morbidity and mortality associated with route of birth after cesarean. The analysis included 31 studies with a total of 11,417 trials of labor. Maternal and perinatal mortality were found to be low in both elective repeat cesarean and TOL. The TOL perinatal mortality rate was 2.1 times greater than C/S. However, when antenatal deaths and infants below 750 g were eliminated from the analysis, there was no significant difference between groups. Women undergoing TOL had significantly less febrile morbidity. Several studies included in the analysis did not differentiate between dehiscence and rupture and there was a lack of clear definition of these terms, however, the investigators found the risk of dehiscence to be very low, even among

women having TOL with an unknown type of incision.

The demonstrated ability of women to deliver vaginally without complications, as well as morbidity and mortality statistics overwhelmingly show TOL/VBAC to be an effective and desirable strategy in C/S rate reduction. Consensus recommendations, liberal TOL eligibility criteria and clinical studies may be increasing the acceptance of TOL/VBAC within the medical community. However, to evoke change in practice, women must also accept TOL/VBAC as an appropriate alternative to repeat C/S.

Based on the review of the literature it is apparent that there is a growing recognition of the benefits of TOL as opposed to repeat C/S. Women in the past who desired a TOL/VBAC may have found it difficult to convince their physicians that this was an appropriate alternative. Although changes in practice evolve slowly, women who presently want TOL may not encounter the same resistance. Conversely, women wanting a repeat C/S may have trouble convincing the physician that a TOL is not the best choice. Examining how and why the decision for TOL or repeat C/S is made is particularly relevant and timely in a period of changing practice.

Decision Making

The process of deciding between the alternatives is the focus of the next section of the literature review. The following discussion examines decision making from a broad theoretical perspective to a more focused review of studies examining how women make the choice between TOL and repeat C/S.

Decision Making Theory

Three major theoretical perspectives on decision making are currently in use. The rational choice model, cognitive theories and Etzioni's (1992) normative-affective model of decision making will be explored.

The Rational Choice Model

One of the most widely accepted theories of decision making is the rational choice model. Two major tenets of this theory are that decision making is rational and it is done in temporal stages. The theory assumes that as human beings the decision process is rational, logical and empirical, in the sense that individuals weigh alternatives and make reasoned choices. The model proposes that a decision is made with a clear goal in mind, that information gathering, processing and interpretation about the alternatives takes place and the most efficient means to the desired goal is chosen.

The model assumes that individuals make decisions alone without the influence of others. There is a means-ends relationship in decision making which individuals use to meet their self interests. Decisions are influenced by the individual's preferences, desires and wants. The process is described as a series of stages with specific dimensions. Rational choice models include seven discrete and separate stages. The process begins with recognition of the need for a decision to be made and continues with formulation of objectives, generation of alternatives, search for information, choice, action

and feedback (See Table 2).

Table 2

Seven Stages of Rational Decision Making Model

1. Recognition	Acceptance that there is a decision which must be made
2. Formulation	Examine the range of objectives to be met and values placed on various outcomes
3. Alternative Generation	Exploration of possible choices and weighing costs and benefits
4. Information Search	New information is sought to evaluate alternatives and opinion of others sought
5. Judgment/Choice	In judgment, alternatives are labelled and characterized. Choice involves comparisons of alternatives and the selection of the one considered "best". Everyone is thought to possess a set of their own personal decision making rules which are used to make choices.
6. Action	Once the choice is made it needs to be acted upon.
7. Feedback	Through explaining and justifying decisions to others decision rules and substantive knowledge are changed.

*Note: This table is adapted from Carroll and Johnson, 1990, p.16.

Rational choice models have been used widely in economics to explain purchasing or business decisions. In spite of the economic metaphor inherent in the model, it has also been used widely in the social sciences to describe the complex decisions of day to day life. The major criticism is that it does not recognize the contextual nature or substantive content of the decision and many of the underlying assumptions in the rational choice theory have been characterized as overly simplistic (Brennan, 1992; Etzioni, 1992; Zey, 1992).

Cognitive Theories

Abelson (1976) criticizes the rational model as being too elementary, static and uncharacteristic of actual decision making. He suggests that decision making relies on knowledge and past experience. It is a process in which what is known about a situation is used to predict consequences or outcomes of each alternative. Alternatives are selected by matching potential outcomes to achievement of desired goals.

Abelson (1976) introduced the concept of "script," an imagined sequence of events which is formulated based on past learning and previous experience. The author refers to scripts as metaphorical cartoon strips, or static memory structures used in decision making. They are stereotypical situations which allow the individual to predict future events. In describing decision making, Abelson delineates two processes: the development of a particular script which represents the anticipated event and the taking of a participant role within that script.

Attitudes are included as important influences on decision making. Through experience an individual forms attitudes toward alternative scripts and their possible outcomes. Assessment of outcome or risk is based more on direct experience than abstract information. Familiarity with a certain event tends to lessen the perceived risk. The first experience is crucial in determining future decisions as attitudes are formed and influence the scripts or visions of alternatives. In this theory previous learning through life's experiences is the basis for all decision making.

Nardi (1983) expanded the concept of scripts to include a more complex process of decision making. Rather than being bound by script stereotypes, goals, plans and expectations are combined and recombined to reach decisions unique to each individual's life situation. Goals are not static as in Abelson's theory and the rational choice model, but subject to change and social influence.

Nardi describes a scenario as an imagined series of events placed in the future. Decision formation includes cognitive development of a variety of scenarios which are unique to the individual. In the development of scenarios, an individual paints a mental portrait of alternative future events, which are then compared and contrasted with each other. They are a way of organizing social knowledge to solve personal dilemmas with particular reference to life goals and plans. Neither personal costs and benefits, nor numerical contingencies are singled out and weighed. Rather, they serve as contributors.

Both the rational choice model and Abelson describe decision making as being influenced by internal assessments. Nardi stresses the importance of external forces and environmental constraints to alternatives. Abelson depicts a linear progression from goals

to plans. Nardi describes a more fluid approach in which alternative goals and plans form multiple scenarios which are mentally tried out and compared. An individual has several goals not just one and these goals are subject to change. Major decisions involve a number of goals organized into a "life sketch" and each decision must be consistent with this life sketch.

Normative-Affective Model

Etzioni (1992) has developed a normative-affective model for decision making which departs from the rational choice model as well as cognitive theories describing script and scenario formulation. However, like Nardi, he describes internal and external forces as of primary importance in decision making. The major influences over decision making include emotions, social norms and values.

The author describes the major focus of the model as:

...normative-affective factors shape to a significant extent decision making, to the extent it takes place, the information gathered, the ways it is processed, the inferences that are drawn, the options that are being considered, and those that are finally chosen...actors who make them [decisions] draw on value-commitments and emotional involvements not information or reason (p.91.)

The model does not exclude the rational elements of decision making. The process of gathering information and weighing the alternatives and possible outcomes is part of the model. However, it proposes that normative-affective factors determine how information is gathered, who the decision maker seeks information from, how they interpret advice and what they believe should be inferred from what they have learned about the decision alternatives.

Although relevant, the rational choice model, cognitive theories and the normative-affective model do not deal specifically with women and childbirth decisions. With the exception of Nardi (1983), who examined reproductive choices among Samoan women, decision making theory involving pregnant women and childbirth alternatives is limited. However, studies in this area provide additional conceptual background to the present study.

Decision Making in Pregnancy

Past Experiences and Future Expectations

Studies examining childbirth decisions give support to the theoretical relationship between past experience and future expectations (Beaton & Gupton, 1990; Levy & McGee, 1975; Rubin, 1975). As in general theories of decision making, a process of reviewing the past as a basis for expectations is revealed in these studies. McClain (1985) found women who had previous C/S were able to reconstruct their experiences

vividly. Verbal reports of expectations and experiences have been described as concrete, vibrant, and immediate (Nisbett, Borgida, Crandall & Reed, 1976). Decisions are made by choosing the alternative which holds the greatest promise for achievement of goals, a safe outcome for mother and baby.

Pregnancy has been described as a stressful event in the life of a woman, a psychological and physiological crisis and a period of emotional disequilibrium (Benedek, 1959; Bibring, Dwyer, Valenstien & Huntington, 1961; Cohen, 1979; Leifer, 1977). Pregnancy as a developmental crisis, represents a major life change. Coping abilities are utilized to make major adjustments as a woman assumes the new role of mother (Sherwen, 1987). Impending birth constitutes a potential threat to personal well-being. This threat includes the possibility of experiencing pain as well as adjustment to an altered body image. Even the possibility of death due to childbirth may be of concern to pregnant women (Loesch & Greenberg, 1962). Sinclair (1991) characterizes death as a real but remote possibility and states, "The American culture dismisses as irrational the fear of death during childbirth. However, many women fear death, and, rarely, some die from complications of childbirth" (p.417).

Thirty-five years ago, Janis (1958), in his pioneering work with surgical patients, described similar, if not identical, concerns of individuals contemplating major surgery. He postulated that the anticipatory thought processes preceding a stressful event are major determinants of how an individual will cope with the event and how they evaluate the experience. Successful coping requires formation of realistic expectations regarding the seriousness of the potential threat, one's abilities to cope with the situation, and the

chances of receiving help from others. Contemplating possible gains or gratifications to be derived from the threatening experience is another part of the anticipatory process.

The "work of worry" described by Janis (1958) was found to have a parallel in the expectations developed by pregnant women for their childbirth (Levy & McGee, 1975). Threat of pain and suffering during childbirth influences decision making about aspects of the impending delivery. For the woman with a previous C/S, the work of worry is affected by that previous experience. Most first time C/S are not planned, wanted or expected. They are precipitated by medical emergencies, labors that "go wrong" and fear for the health of the fetus. Women with previous C/S would be anticipated to have very different and more negative expectations than those who had undergone successful vaginal birth under less traumatic circumstances. By reviewing past experiences, a woman forms expectations about her impending birth which are an integral part of decision making.

Facing childbirth decisions, women construct expectations based on goals for a "safe passage" for themselves and their infants (Rubin, 1975). McClain (1987) has depicted the cognitive structure of pregnant women's decisions and pointed out that:

First, social goals are as central to women's decisions as are medical risks.

Second, women reinforce their decisions by defining multiple benefits for the preferred alternative and multiple hazards for the rejected alternative.

Third, women do not attempt to assess the probabilities of particular outcomes, but instead construct mental images of anticipated events based upon past childbirth experience and expected consequences of the preferred

course of action. (p. 210)

Control over Decision Making During Pregnancy

Decision making during pregnancy has been a growing concern of consumers. Women are calling for a less technological approach to childbirth. The consumer movement arose, in part, as a protest against dehumanizing and depersonalized health care. The treatment of pregnant women and decision making in pregnancy has been criticized in this way by one author, "Pregnancy takes on the markings of a status, not unlike infancy, that allows others to determine what is best, and to impose those views upon her" (Rodgers, 1989, p. 175). Conflicts have arisen when it has been suggested that recipients of care should play a role in determining the types of services provided (Oakley, 1984). Those who support women's rights have advocated for a more active role for childbearing women through informed choice and empowerment (O'Brien, 1981).

The conflicts between consumers and their health care providers has its basis in divergent socially derived childbirth ideologies. Graham and Oakley (1979) have described two opposing ideologies of childbirth, one held by mothers and the other by obstetricians. According to Graham and Oakley, obstetricians view the nature of childbearing and each pregnancy as medical events, subject to pathological conditions necessitating medical intervention. Each pregnancy is viewed as an isolated occurrence in which success is judged by morbidity and mortality statistics. Control over the events of childbirth are delegated to those who are considered experts by virtue of their training.

Alternatively, mothers perceive bearing children as a natural biological process. The context of childbearing is seen by mothers as integrated with the rest of their life experiences. Success for women is more complex than morbidity and mortality measurements. Although a healthy child is desired, women also want a satisfactory personal experience. The integration of the infant into the family and close interpersonal relationships between mother, father and baby are the desired ends. Based on their life experiences and intuitive knowledge base, mothers view themselves as knowledgeable, and therefore, desire control over pregnancy and birth. These two opposing ideologies serve as a basis for decision making. Decisions are based upon the inherent conflict of differing ideologies.

In the traditional medical model the patient who is regarded as "sick" simply seeks and follows the advice of a physician. The physician's attitude regarding the appropriateness of a TOL and successful VBAC would be 100 percent predictive of outcome, if this model were applied to the TOL/VBAC issue. However, public attitudes and behaviors have begun to challenge this traditional decision making paradigm. Haug and Lavin (1981) found that doctor-patient power relationships are dependent upon the health/illness situation and expressed beliefs of both physician and patient. They propose a more interactive decision making process. A model of shared decision making has become more common in the literature. In this system, decisions are developed through exploring options and recommendations as well as beliefs and attitudes of both physician and patient (Strull, Lo, & Charles, 1984).

Smith, Wallston, Wallston, Forsberg and King (1984) describe the complexity of

decision making and point out differences between what a person wants to do and what they do in reality. Patients who want to gain social approval of physicians and nurses may fail to express their desire for control over decision making. Humenick and Bugen (1981) found a negative correlation between need for social approval and pregnant women's desire for control of health care decisions. Individuals who desire control but do not experience it, are less satisfied with childbirth experiences than those who do not desire control. Individuals' expectations of their contribution to decision making, and whether those expectations are met, are predictors of how they evaluate the experiences (Willmuth, 1975).

Desire for control is an influence on decision making. The choice a woman makes and the role she plays may be dependent upon her level of need to take an active part in decision making and her perception of her caregiver's attitude toward the alternatives.

Perceived Physician Attitude and Decision Making During Pregnancy

Physician advice is an additional influence described by previous authors (McClain, 1990; Meier & Porreco, 1983). The relationship between physician advice for the use of technology and why women accept advice has been explored by Quéniart (1990). She describes a change in ideology commonly referred to as the "medicalization" of childbirth. This change in philosophy has been manifested in a shift in birth sites from home to hospital and in birth attendants from midwives to physicians. Concurrently, pregnancy began to be perceived as a medical condition or illness necessitating medical

intervention. This change occurred in a period of rapidly expanding technology and public reliance on science as a means to desired ends. Pregnancy was no longer considered a normal process but an illness in which each pregnancy is considered to be at risk. An emphasis was placed on the mother to produce a perfect child free from disability. Technology was seen as the means to lowering risk, ensuring a healthy child and providing a successful and rewarding birth. Quéniart states, "In presenting obstetrical techniques as a means to remedy or correct risks, doctors are almost guaranteed the woman's favourable response" (p.167). Viewed from this perspective, the strength of physician advice is understandable. The physician who controls technology by virtue of his/her expertise can protect the mother from a sense of failure engendered by a less than perfect child or birthing process.

Studies on decision making during pregnancy affirm the importance of past childbirth experiences, expectations, perceived attitudes of physicians and preference for control over decision making. Each of these influences contributes to the development of imagined alternatives and subsequently influences the decision for delivery approach. These influences as well as others have been examined more thoroughly in literature specifically examining the TOL/VBAC decision.

Decision Making and TOL/VBAC

Nine studies have examined decision making related to TOL/VBAC in the United States (Joseph et al., 1991; Kirk, Doyle, Leigh & Garrard, 1990; Lipson, 1984; McClain,

1983, 1985, 1987, 1990; Meier & Porreco, 1982; Murphy & Harvey, 1989). Lipson, based on her discussions with women attending VBAC classes, characterizes their decisions as fraught with confusion and anxiety. Women were found to have individual decision making styles, some preferring an active role, seeking information and advice, while others preferred to remain passive and let the physician make the decisions. Others were unable to decide and waited until events such as the beginning of labor forced a decision. The author enumerates a broad array of factors impinging upon the decision. A woman's past childbirth experience, her physician's attitudes as well as the opinions of role models and reference groups played a role in the decision.

Meier and Porreco (1982) found women who elect to have a repeat C/S most often do so out of fear of pain and/or failure. Many have gone through prolonged, painful labors during previous pregnancies. They choose repeat C/S because they fear that if they choose TOL, they may have to go through a similar painful experience, fail to deliver vaginally, and inevitably have a repeat C/S. Convenience and predictability were the second justification women gave for choosing repeat C/S. Scheduled elective repeat C/S provided assurance of the woman's physician being present, convenience of a known delivery date and ability to plan ahead and make necessary arrangements surrounding the birth. Alternatively, women who opted for TOL did so based on such factors as ease of recovery, ability to participate in the birth, greater safety for mother and baby and increased opportunity for husband participation. Meier and Porreco found that while many people assisted the woman in decision making, the attending obstetrician had the strongest influence.

McClain (1987) expanded the concept of decision making and identified social motives, exigencies and constraints, including relationships with spouse, child care concerns, employment outside the home and future childbearing plans as important influences. Negotiation was described in which the woman "bargains" with her physician to enhance control of uncertainty. An example might be to agree to have TOL only if the woman could decide when to end it. That a unidimensional patient-controlled model of decision making applies (in which physicians provide information and patients weigh the benefits versus the risks and make decisions) is not substantiated by McClain's research. Rather, decision making is influenced in a complex fashion by social factors, past experiences, expectations and relationships to physicians.

In a recent report of McClain's original study (1990), the description of factors impinging upon decision making included interpretation of past cesarean experience, interaction with the physician and cultural norms, values and expectations. Women based their decisions on reconstructed meanings of their previous C/S. They used information from physicians to justify their decisions, whether for repeat C/S or TOL. "They selected pieces of communications from their current caretakers...that reinforced their pre-existing preferences" (McClain, 1990, p. 205). The focus was not on direct communication between doctor and patient, but on the woman's perception and use of medical opinion and advice. The actual dialogue between physician and patient was not as revealing as the perceived relevance and meaning ascribed to information. Expectations played a role in decision making and were based on previous experience, personal perceptions or ideologies of childbirth and interactions with health care professionals.

Joseph et al. (1991) examined the choices of 167 women regarding TOL/VBAC. Fifty percent of their sample chose to have repeat elective cesarean in spite of encouragement from their physicians for TOL/VBAC. Similar to the findings of Meier and Porreco (1982), their reasons included fear of labor, convenience of scheduled delivery and fear of a recurrent C/S. Low rates of TOL/VBAC were attributed to patients' reluctance to follow medical advice. The authors concluded that women choosing repeat C/S view the option as advantageous due to elimination of uncertainties associated with TOL/VBAC and state, "Medical concerns pertaining to costs and safety seem to be overlooked by such patients" (Joseph et al., 1991, p. 1444).

Murphy and Harvey (1989) utilized a retrospective telephone interview to examine women's decision-making about choice of childbirth approach after cesarean. Ninety percent of their sample of 50 women perceived that they were the primary decision makers for delivery approach. Although family and friends' advice was considered important, women indicated that the physician or health care provider was most influential. Women in this study chose TOL/VBAC primarily because they wanted to experience vaginal delivery and avoid the pain associated with C/S. By choosing TOL/VBAC they hoped to avoid risks associated with cesarean birth and to shorten recovery time. Those choosing elective repeat C/S did so to avoid unsuccessful labor and because they felt that repeat C/S was safer. Regardless of their choice, most respondents believed that vaginal birth was safer for the mother. However, only 18 percent of those choosing repeat C/S believed that vaginal birth would be safer for the infant. The previous cesarean experience was indicated as important in decision making. The

retrospective nature of this study with inherent recall bias limits its findings.

Safety factors also played a dominant role in the decision for repeat cesarean in a study by Kirk et al. (1990). Twenty five percent of women choosing repeat C/S (n=48) felt there was danger imposed by vaginal birth for the mother; twenty-nine percent felt there was danger for the infant. The most common reason given for choice of repeat C/S in this study was perception of low probability of vaginal delivery. Most women (61%) deciding to have TOL considered their chances of having successful VBAC as good to excellent. In contrast only 20 percent of women choosing repeat C/S felt chances of VBAC were good to excellent. Two additional influencing factors on decision making include avoidance of pain of labor (40%) and knowing what to expect (38%). Convenience of knowing the date and time of delivery was a determinant for 27 percent of respondents. These reasons for choice played a more important role in decision making than assessment of medical risk. Contrary to McClain's findings, this study as well as Murphy and Harvey (1989) failed to find a significant relationship between education and choice of delivery approach.

Retrospective review of 43 case records in Sweden was carried out by Ryding (1991) to examine reasons why women desired cesarean rather than vaginal births. All 43 study participants had no medical indications for cesarean but demanded them. Impact of the previous birth and fear of childbirth were primary factors. Many women were convinced that vaginal birth was unsafe for their infant. Some felt that previous complications would be repeated while others were convinced that a previous condition still existed necessitating C/S, in spite of reassurances from their physicians that

circumstances had changed and vaginal delivery would be a safe alternative.

Decision making theory, studies on decision making during pregnancy and studies on the specific decision between TOL and repeat C/S serve as a basis for the development of a conceptual framework for the study.

Conceptual Framework

Previous works have begun to enlarge understanding of decision making involving TOL. However, with the exception of the research by McClain (1983, 1985, 1987, 1990), the majority of relevant literature has been atheoretical and written from a limited medical perspective. Relatively little is known about specific factors which influence women's preferences for either a TOL or repeat C/S. Some influences have been described, yet the relative strength of each is unknown. This study uses these preliminary findings as a basis for continued exploration of both the process and strength of influences on decision making.

In reviewing the theoretical literature, regardless of the model, previous experience is an integral part of decision making. In the rational choice model a process of reviewing what one knows about the alternatives is described. Cognitive theories include past learning and past experiences as forces governing the formation of scripts and scenarios. Etzioni (1992) discusses the affective associations of the alternatives formed by past experience. In studies which have examined TOL versus C/S decisions, the past cesarean experience has been shown as a major determinant of future choice. In

exploring how and why women make decisions, the past is central to the investigation. For the purposes of this study it is viewed as the basis from which expectations are derived and decisions made.

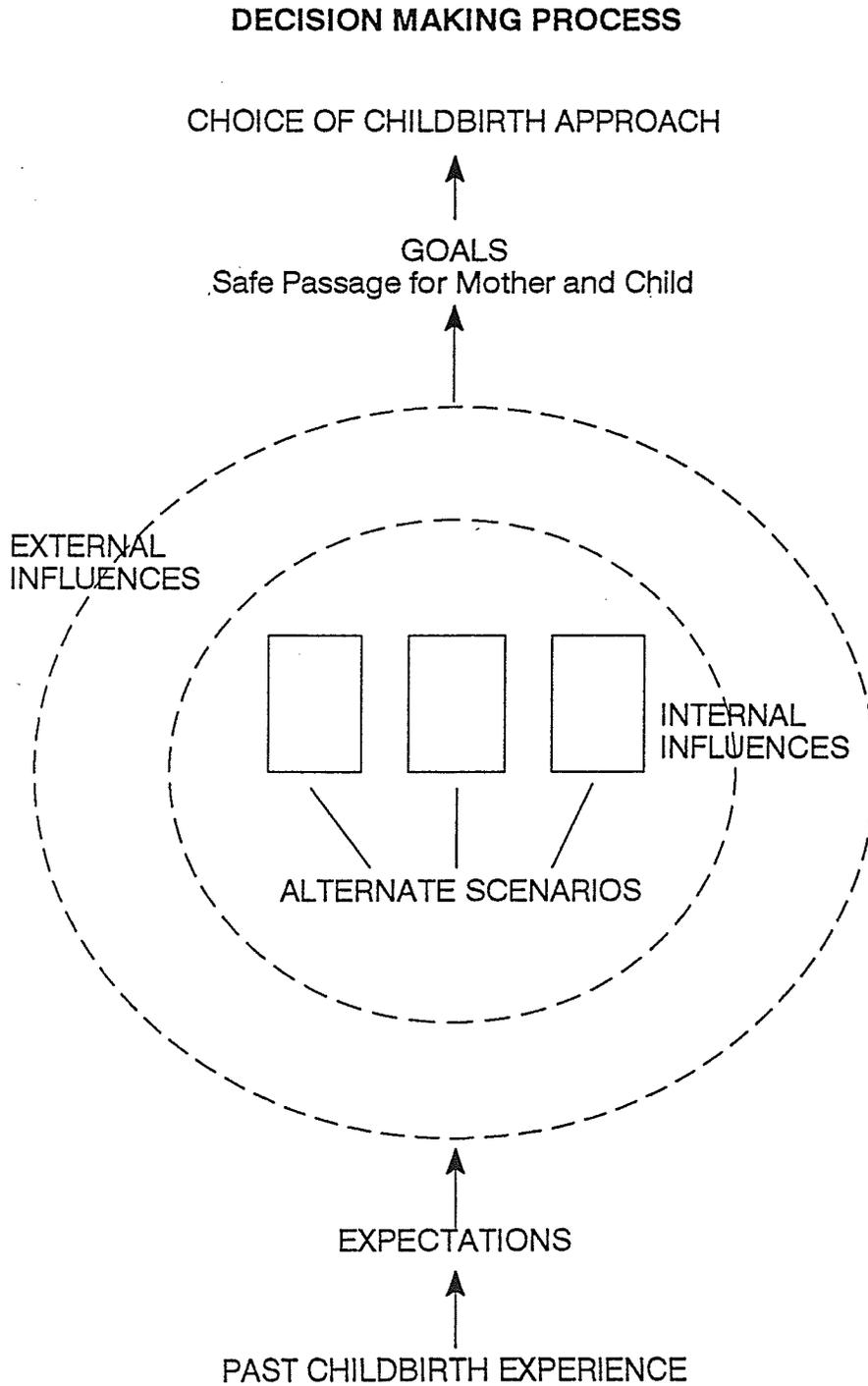
Those who have studied this area describe the importance of past experience in forming expectations. Choices are examined and expectations or value judgments are placed upon each alternative. Alternatives are chosen based on their likelihood of providing a positive experience, one in which individual goals are met.

Internal and external forces influencing decision making have been described. A woman's values and emotions are internal forces which are central to decision making according to the normative-affective model. External forces include social norms, role models and reference groups. Literature on TOL decision making has described additional and more specific influences, for example: physicians' attitudes, family concerns, avoidance of pain, convenience of a planned C/S, individual assessments of risk and fear of failure. The woman's physician plays a central role and issues of control are also influences over decision making. The need a woman has to control decision making is a relevant variable as it reveals an additional perspective in the process (See Figure 1 for a schematic depiction of the conceptual framework).

In summary, the present study builds on previous findings through a qualitative and quantitative investigation of decision making. The childbirth experiences and expectations of Manitoban women were sought through the use of in depth interviews and quantitative questionnaires. Additionally, the dimension of preference for control over decision making and perceived physician preference was explored. Determination of the

construction of decision making scenarios and factors which influence them will provide a broader perspective. The following chapter describes the use of mixed methodologies, leading to the expansion of the conceptual basis underlying TOL/VBAC decision making.

Figure 1
Conceptual Framework



CHAPTER III: METHODOLOGY

The following chapter describes the study design and combined methodologies used to explore influences over decision making. Quantitative approaches and instruments are delineated and the qualitative approach is discussed including the interview schedule. Four variables have been measured quantitatively to examine their relationship to each other and their relative strength in predicting childbirth choice. The same four variables were examined through the use of a semi-structured interview to add depth of understanding not possible through analysis of quantitative data alone and to provide a basis for rationalizing the quantitative results.

Design

The design of the study is both qualitative and quantitative. Relationships between variables are explored and decision making processes are described. Quantitative instruments are used with a semi-structured interview. The objective of this approach is, "to provide an accurate description or picture of a particular situation or phenomenon" (Christensen, 1988, p. 39). It does not attempt to establish cause and effect relationships, but describes the variables and their relationship to each other. This approach is particularly relevant to this study as the aims are to describe the influences over decision making and examine the decision making process. The focus is on women's perspectives and the decision rather than on the actual childbirth events.

The combination of qualitative and quantitative methods provides an alternative approach to exploration that has not been used in the past to examine this problem. Qualitative data will provide a description of the process of decision making. In addition, the qualitative data will provide a larger contextual basis for interpreting and understanding quantitative results. Mullen and Iverson (1982) suggest that qualitative methods serve as a "power booster" for quantitative results (p. 17). Quantitative results may be validated, interpreted and clarified through the use of interview data (Jick, 1979). Mitchell (1986) describes the benefits of this approach as:

Multiple methods of data collection are required to tap the various dimensions and to generate a rich and comprehensive picture of the phenomenon under study...The combination of dissimilar methods also creates the potential for counterbalancing the flaws or weaknesses of one method with the strengths of another (p. 21).

When quantitative and qualitative results converge, conclusions may be strengthened. Conversely, when they diverge, alternative enriched and more complex explanations are produced (Jick, 1979). Using a combined approach provides a diverse data set from which implications for theory and practice may be generated.

Setting

St. Boniface General Hospital, Winnipeg, Manitoba, Canada was utilized for data

collection. Agency and ethical approval were obtained (See Appendix A for Letter of Agency Approval and Appendix B for Letter of Ethical Approval). The hospital is one of two high risk obstetrical centers in Winnipeg providing care to childbearing families in Manitoba. St. Boniface General Hospital is the site for 31 percent of the C/S done in Manitoba (MHSC, 1992).

In 1991, according to an internal audit, there were 4,330 deliveries with a C/S rate of 16.5 percent which is substantially lower than the rate for 1990 (19.4%). Primary reasons given for the 714 cesarean sections in 1991 included: failure to progress (30%); elective repeat (25%); fetal distress syndrome (19%); malpresentations (19%); and other reasons such as herpes and placenta previa (7%). There were 308 eligible candidates for TOL in 1991. Eligibility was determined by a review of records involving women delivered by elective repeat C/S in the audit interval. These were screened for clinical criteria (lower transverse uterine scar and absence of contra-indications for TOL such as placenta previa) which would prohibit them to be candidates for TOL. Of the number of eligible candidates 250 (81%) underwent TOL; from this group, 191 (76%) had VBACs. There were six women undergoing a TOL after having two previous C/S. Four of these women delivered vaginally (66%) (Helewa, 1992).

Sample

Participants in this study constitute a non-random convenience sample of 115 women with a history of previous C/S (C/S=50, TOL=65). Sample size was determined

based on the objectives and methodology of the study. Due to the use of mixed methodologies, the sample needed to be large enough to provide meaningful statistical analyses of quantitative data (see Appendix C for power analysis) and, at the same time, provide contextual data on influences on decision making. In a qualitative study the aim of sampling is to include as much information as possible. "The objective...is not to focus on the similarities that can be developed into generalizations, but to detail the many specifics that give the context its unique flavor" (Lincoln & Guba, 1985, p.201). Additionally, the purpose is to provide a basis for development of theoretical concepts.

All participants had undergone C/S for their most recent childbirth. Those who had more than one previous birth included women who also had given birth vaginally. The study is directed toward women with normal pregnancies. Therefore, those with complications of pregnancy such as pregnancy induced hypertension, chronic illness or diabetes were excluded. Sixty-five women who had chosen TOL and fifty who had chosen repeat C/S are included in the final sample. All participants met the inclusion criteria which were:

- (a) English speaking and literate;
- (b) Gestation from 34 to 40 weeks (term);
- (c) Cesarean section for most recent delivery;
- (d) Lived within 50 km of Winnipeg; and
- (e) Met study hospital eligibility requirements for TOL (lower transverse uterine scar and the absence of any absolute contra-indication for TOL such as placenta previa).

Using the internal audit for 1991 to extrapolate, it is estimated there were approximately 188 women who met TOL criteria during the data collection period. During this period 84 women were invited to participate in the study. Sixty five completed data collection for a response rate of 77 percent. Eight women, who agreed to participate, failed to do so because they delivered their infants after agreeing to participate but previous to the data collection appointment. There were an estimated 134 repeat C/S procedures during this same period, of this number 54 met criteria and were invited to participate. Fifty women completed data collection for a response rate of 93 percent. The total sample included 115 women.

Sample Recruitment

Women who experienced a previous C/S were recruited from three sources within the hospital (see Appendix D for Sampling Sources). The majority of women who have decided to have a TOL undergo an ultrasound assessment in the last trimester of pregnancy. These women were approached to volunteer for the study while waiting for their ultrasound appointments in the Fetal Assessment Department or were recruited by telephone.

Almost all women who plan to have a repeat cesarean birth participate in a newly established program, "Same Day Admission Program for Elective Cesarean Birth." The vast majority of women undergoing elective C/S in 1991 (170/180, 94%) participated in the Same Day Admission Program (Helewa, 1992). Women in this program come to

hospital before their scheduled cesarean to receive preoperative education and to have their laboratory work done. The nurses who provide this program requested permission to release telephone numbers to the investigator (See Appendix E). Those agreeing to give the investigator their telephone numbers were contacted by telephone and invited to participate (See Appendix F).

A third recruitment source, the Obstetrics and Gynecology Outpatient Clinic, was utilized. All women attending the clinic who met sample criteria were asked by the clinic nurses for permission to release their telephone numbers to the investigator. Those agreeing were contacted by phone and invited to participate.

Data collection included these three data sources to ensure that the majority of women who had a previous C/S and met sample criteria during the data collection period were invited to participate. Women were recruited until a final sample size of 115 was obtained. Initially, women completed self-report questionnaires and were interviewed. This process continued, beginning with the first participant, until there were 25 TOL and 25 C/S usable interviews. Interviews were ended at this point because it was felt that adequate data had been collected for qualitative analysis. Assumptions generated by the interviews had been explored and as the interviews progressed new thematic material failed to emerge and so the process was terminated. Fifty-six interviews were completed but six were lost due to poor quality of the tape recording. After the interviews were completed, women continued to be recruited to the study but completed only the self report questionnaires until both groups had at least 50 participants and the final sample size was obtained (n=115) (See Appendix G for details of sample recruitment).

Steps in the Methodological Procedure

All participants were asked by St. Boniface nursing staff for permission to release their telephone numbers to the investigator. They were approached individually by the investigator by telephone or in person and asked if they wished to participate. Upon consent to participate, an appointment convenient to the woman was arranged for data collection.

Data collection took place in the participant's home or at St. Boniface Hospital. After reading a written explanation of the study, informed consent was obtained (See Appendix H & I). The order of administration of study instruments was the same for all participants. The first part of each data collection period included self report questionnaires administered in the following order:

- (a) The Semantic Differential "My Past Childbirth Experience" (See Appendix J);
- (b) The Semantic Differential "My Future Childbirth Experience" (See Appendix K); and
- (c) Women's Perception of Physician Views (See Appendix L).

The questionnaires were completed in the presence of the investigator to provide an opportunity for questions to be answered.

After women filled out these questionnaires, the investigator administered the instrument to determine preference for control over decision making (See Appendix M). Preference order was determined and responses recorded.

The next step in the procedure was a semi-structured interview for the first 56 women recruited to the study. Each interview provided further information on how the decision was made and the factors influencing decision making (See Appendix N).

An interview guide was utilized, to serve as a basis for discussion. Interviews lasted from 20 minutes to 1 1/2 hours. Interview data were tape recorded and transcribed for later analysis. Women were encouraged to pursue each topic but were allowed to deviate from the guide and pursue avenues of thought less directly related to the study focus. Interviews took place over a four month period from September, 1991 to January 1992.

The majority of interviews were conducted in the respondents' homes (45/50). Five interviews were held in a conference room in the St. Boniface General Hospital Fetal Assessment Unit. With very few exceptions, the respondents' children were present at the time of the interview. The investigator provided colored markers and a coloring book to occupy the children's attention during the interview. However, interviews often involved interruptions so mothers could attend to the needs of their children and many times the child sat in the lap of the mother and/or investigator during the interview. Four interviews took place with partners in the home at time of interview. They did not, however, take part in the dialogue.

As a final step in the data collection procedure, demographic information and past obstetrical history were ascertained upon completion of all questionnaires or questionnaires and interviews. Data were collected on age, ethnicity, marital status, employment and education to describe the sample. At the termination of the data

collection procedure, appreciation was expressed and arrangements were made for distribution of results to participants.

Instruments

Semantic Differential Scales

Instruments and approaches which measure past childbirth experience were reviewed for use in this study. Few instruments were found as studies evaluating childbirth experience predominantly have used qualitative approaches (Affonso & Stichler, 1978; Butani & Hodnett, 1980; Lelong & Kaminski, 1987; Lipson & Tilden, 1980; Lunenfeld, Rosenthal, Larholt & Insler, 1984; Sandelowski & Bustamante, 1986; Tilden & Lipson, 1981).

Other studies have not utilized standardized instruments but have included a variety of unique questions developed by the investigators to ascertain childbirth evaluations. For example, Brewin and Bradley (1982) asked women to rate how much discomfort they experienced and their degree of satisfaction with the birth, on a 5-point scale. Higher ratings were used to indicate positive birth experiences. Bennett, Hewson, Booker and Holliday (1985) also used two questions: "What were your feelings immediately after delivery or on waking up?" and "How do you feel about the birth now?". Women responded by rating these questions on three 7-point scales (disappointed to satisfied, depressed to joyful, and downhearted to feeling terribly excited/high). The

questions have not been used beyond the reported studies. No reliability or validity information was given by authors and the questions were considered too limited for use in the present study.

Other investigations used measurements which focused on certain aspects of the childbirth experience. Crowe and von Baeyer (1989) used measurements of self-assessed pain and ability to control pain to evaluate childbirth. Chute (1985) developed a two part scale to measure satisfaction. It included Likert items and a section for respondents to rank various individuals present during birth as to their contribution to childbirth satisfaction. Hodnett and Osborn (1989) used measurements of control as an indicator of childbirth experience. These approaches to measurement were judged to be too focused for the purpose of this study.

More complex attempts to measure childbirth experience have been developed by Doering, Entwisle, and Quinlan (1980) and Erb, Hill and Huston (1983). However, neither of their instruments has been used beyond the study in which it was reported. The most widely used instrument has been developed by Marut and Mercer (1979). It has been used in studies to compare women's perceptions of vaginal and cesarean deliveries, in cross cultural comparisons of childbirth experiences and in investigations of the relationship between childbirth experience and mothering behaviors (Cranley, Hedahl & Pegg, 1983; Mercer, 1985; Mercer & Stainton, 1984). Cronbach alpha coefficient reliabilities have been reported to range from .76 to .87. However, this tool was also assessed as unsuitable for the study purpose because many of the items on the instrument refer to the experience of labor. Several of the women in this study would have had

planned C/S without going into labor. Omission of items or wording changes would have been necessary, threatening the established reliability and validity of the instrument. A more global approach to measuring childbirth experience was sought.

As no specific instrument was found suitable to measure past experiences, the semantic differential was assessed as an alternative approach. Semantic differentials have been used in three previous studies to evaluate childbirth experience and are suitable for measurement of C/S as well as vaginal births. Humenick and Bugen (1981) measured satisfaction with childbirth utilizing a seven point scale and 10 pairs of adjectives, for example, good/bad, ugly/beautiful and heavenly/hellish. An inter-item reliability of $\alpha=.91$ was reported for a pretest of the instrument. Bradley, Brewin and Duncan (1983) used a semantic differential with 12 pairs of adjectives to rate childbirth experience. Comparisons of ratings between women and their midwives showed midwives to rate experiences more positively. These authors did not report reliability data. The third study (Salmon & Drew, 1992) used a modified semantic differential. They used a combination of adjective pairs, for example, "painful/not painful" and short phrases, "time going quickly/time going slowly." As in the Bradley et al. study, no reliability and validity data were provided.

All of the scales consisted of different sets of adjective pairs and were used with dissimilar populations and objectives than the present study. It was decided, therefore, that a new set of adjective pairs to measure past experiences would be chosen for its relevance to this study's purpose.

As in measuring past experiences, efforts to measure childbirth expectations have

concentrated on qualitative approaches (Clark, 1975) or preliminary efforts toward measurement (Levy & McGee, 1975). Only one instrument has been developed to measure childbirth expectations (Gupton, Beaton, Sloan & Bramadat, 1990). This instrument, like those measuring past experience, was developed with a focus on vaginal delivery. Items are included which refer to what a woman might expect labor to be like. Anticipation of a planned repeat C/S, carried out before labor ensues, made the tool inappropriate for use in this study. For these reasons, the semantic differential was used to measure future expectations as well as past experiences.

Semantic differential scales were constructed to measure attitudes toward two concepts, past childbirth experiences and future expectations. "My Past Childbirth Experience" determined attitudes toward previous cesarean birth. "My Future Childbirth Experience" determined the degree to which expectations for impending birth were positive or negative.

The purpose of the semantic differential is to quantify the meaning of concepts to the individual, through use of bipolar adjective pairs (Snider & Osgood, 1969). The logical basis of the semantic differential incorporates the tenet that in spoken and written language, "meaning" is communicated through use of adjectives and therefore, adjectives may be used to measure aspects of meaning (Nunnally, 1978). Nunnally has discussed the advantages of the semantic differential. He describes it as easy to construct and administer. It takes a relatively small amount of time to complete yet provides a large amount of data. It is a flexible approach which allows the use of a number of graphic rating scales, and hence permits finer differentiations among participants. Heise (1970)

and Lemon (1973) describe the semantic differential as highly valid and reliable. They state it has been used extensively, and when it has been administered simultaneously with a more traditional attitude instrument, comparisons between the two produced highly correlated results (Heise, 1970; Lemon, 1973).

A pretest was conducted on the semantic differential developed for this study. Initially, twenty-five pairs of adjectives were selected from the original work by Osgood and Suci (1969) and placed on a seven point scale. Each pair of adjectives had a predetermined polarity, one adjective indicating positive experience or expectations and one indicating negative. For instance, in the pairs: nice/awful, healthy/sick, and relaxed/tense; "nice," "healthy," and "relaxed" would indicate the positive perspective, while "awful," "sick," and "tense," the negative. Ambiguous or inappropriate pairs were not selected. For example, the pair "active-passive" was omitted. An active experience may be considered positive for a woman who prefers an active role, but for a woman who wants a more relaxed delivery the term "active" may be interpreted negatively. Pairs were also selected for appropriateness for the childbirth concepts being measured. For example, "tall/short" would add nothing to understanding how a woman feels about her past or future childbirth. Identical adjectives were used to measure both attitude toward past childbirth experience and future childbirth expectations.

Fifty nursing colleagues participated in the pretest of the instrument. Participants were asked to take a prescribed orientation in responding to the task. Twenty-five were instructed to imagine that they had a "wonderful" past experience or had expectation of a "wonderful" upcoming childbirth. The other 25 were instructed to imagine that they

had a "horrible" past experience or had expectation of a "horrible" upcoming childbirth.

Fifteen of the original twenty-five adjective pairs were retained in the final instrument. The pairs were included only if they reflected a positive/negative orientation toward future childbirth expectations and past childbirth experience indicated by 80 percent or greater agreement. Cronbach's alpha was used as a measure of internal consistency. A correlation coefficient of .82 was derived for the set of 15 pairs.

Women in the study were asked to use a seven point graphic rating scale to rate each of the final instrument's 15 pairs. Each pair could be scored from 1 to 7, with 1 indicating a negative response and 7 a positive response. Neutral responses were given a score of 4. Total scores may range from 15 to 105, with higher scores indicating more positive past experiences and future expectations. Each instrument takes approximately 5 minutes to complete for a total of 10 minutes. The polarity of 60 percent of the pairs was reversed to prevent response set bias.

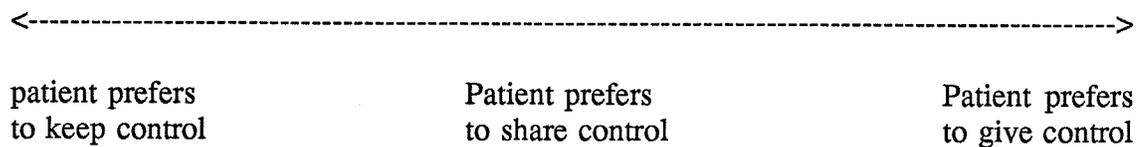
Preference for Control of Decision Making (PCDM)

Only one tool was found which measured desire for control over decision making, the Preference for Control of Decision Making (PCDM) (Degner & Russell, 1988). The instrument has been designed primarily for use with cancer patients to determine the role they would like to play in determining their treatment.

The instrument consists of five cards (patient/physician dimension) illustrating different roles which the patient and physician can assume in the control of decision

making. It is administered through a process of card sorting. Participants are asked to place the cards in order of preference.

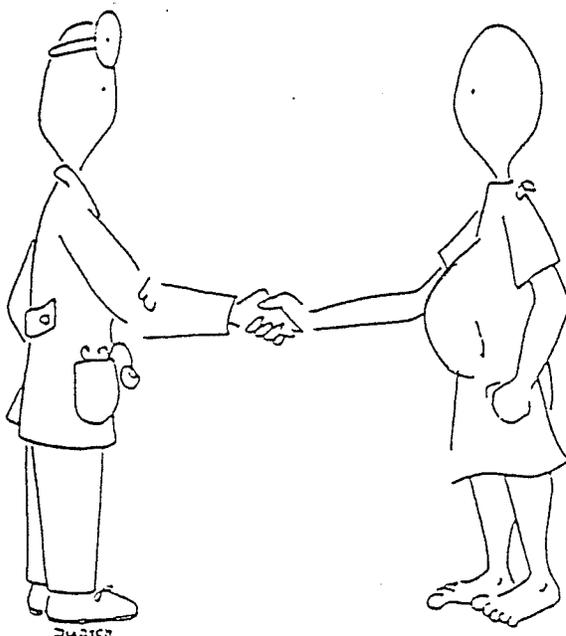
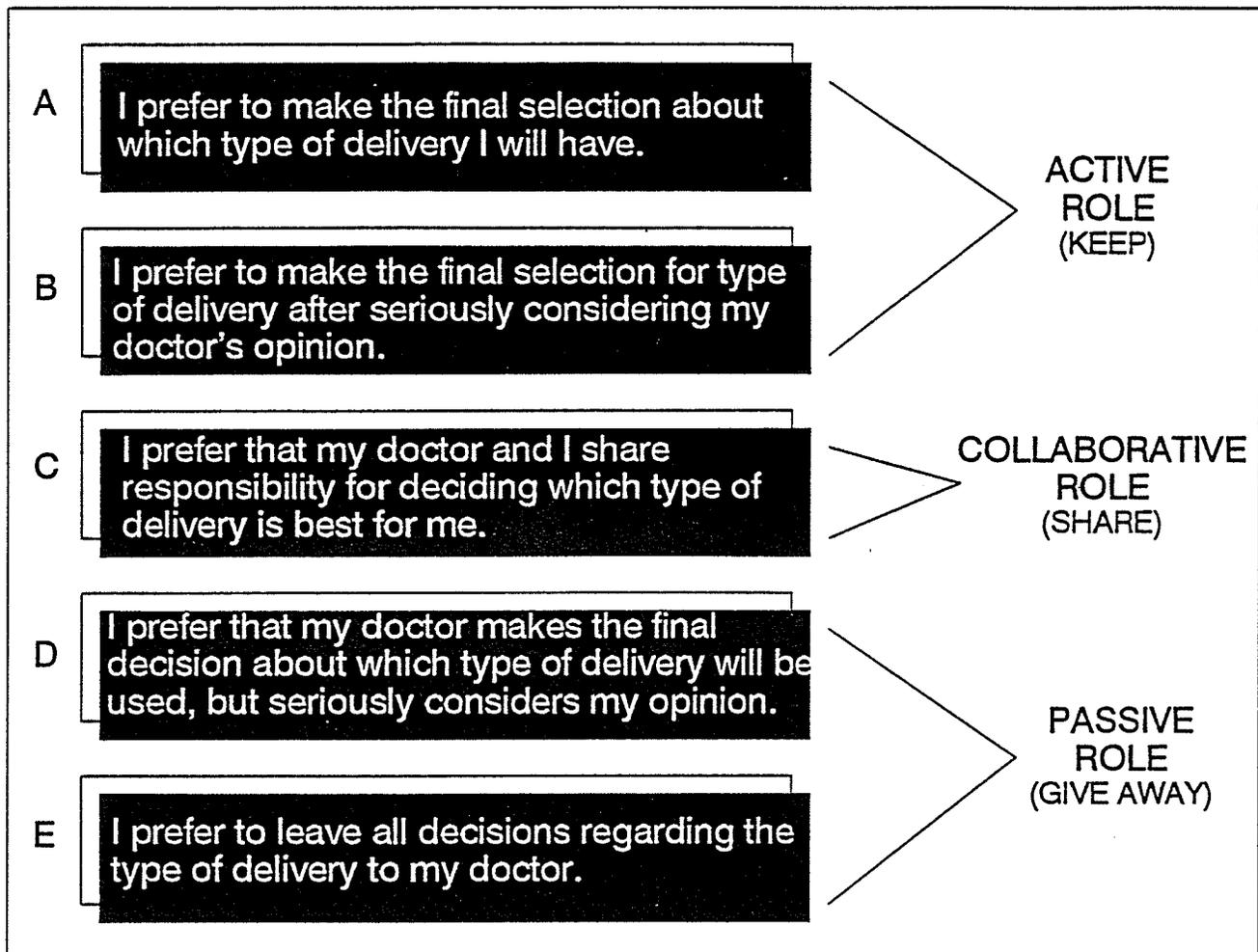
The PCDM has been designed to measure patient patterns of control. The control preference construct which is the basis for development of the tool assumes a single psychological dimension:



The tool had not been used on healthy pregnant women, however, it was decided in consultation with the author that the tool would be suitable for the study purpose with minor revisions (Degner, personal communication, May, 1990). A modified version of the tool consisting of a set of five written vignettes describing various degrees of control over treatment decisions was utilized (See Figure 2).

Two changes were made to the original instrument to make it more suitable for this application. The original tool used the word "treatment," for example, "I prefer that my doctor and I share responsibility for deciding which treatment is best for me." The term "type of delivery" has been substituted for "treatment" and the same statement now reads, "I prefer that my doctor and I share responsibility for deciding which type of delivery is best for me." The second change involved drawing pregnant abdomens on the cartoon characters. Due to these alterations it was field tested on a small sample of pregnant women (n=5). The revised instrument was found to be appropriate and relatively easy to complete.

Figure 2: Preference for Control of Decision Making Cards



I prefer that my doctor and I share responsibility for deciding which type of delivery is best for me.

The card sort procedure took approximately 10-15 minutes. The deck of five cards was placed in random order, presented two at a time and the participant was asked, "Which one of these do you like the best? Which would you prefer to have in your care?" Degner and Russell (1988) describe the procedure:

The preferred card was placed on top of the other card (e.g. B>D). The next card (e.g. A) was selected at random from the deck and placed in front of the patient who compared it with the previous first choice. If the new card was preferred, it was placed on top of B and D (i.e. A>B>D). If it was not, B was turned over, and the patients was asked to compare A with D. If D was preferred, it was placed on top of A (i.e. B>A>D). The process continued until the patient's total order on the first set of cards was unfolded...(p. 371).

The psychometric scaling method of the PCDM is based on a theory of preferential choice called unfolding theory (Coombs, 1976). Individual preference orders are "unfolded" to distinguish each woman's place on a psychological continuum from keeping control for decision making to giving control for decision making to the physician.

The first step in analyzing PCDM results is to assign a categorical value for each subject's preference by using their first choice. For example, if a participant's first choice was the response, A. I prefer to make the final decision about which delivery approach

I will have or B. I prefer to make the final decision about my delivery approach after seriously considering my doctor's opinion, it was categorized as keeping control. If the statement, E. I prefer to leave the decision about my delivery approach to my doctor or D. I prefer that my doctor makes the final decision about which treatment will be used, but seriously considers my opinion, was the participant's first choice, it was categorized as giving control. The remaining statement, C. I prefer that my doctor and I share responsibility for deciding which delivery approach is best for me, was categorized as sharing control.

As a second step in analysis, the preference order of five cards for each participant is used to construct a matrix of pairs for the total sample and the data are analyzed using Thurstone's Paired Comparison Procedure (Dunn-Rankin, 1983). In the procedure, each participant was presented with every possible pair of items and asked which of the pair was most preferred. For each pair of items, the number of times one statement was judged to be more favorable than the other was obtained. These frequencies were then converted to proportions. Observed proportions were then converted to scale values using normal deviates (z-scores). The final scale value for each item is the average of all entries (z-scores) for each combination. For example, the final score for item C was derived by averaging the z-scores for C over A, C over B, C over D, and C over E. Through this approach, a graphic hierarchical structure may be created depicting the group's placement of each preference pattern along a z-score distribution. The distance between items on the hierarchy represent the relative strength of preference for each alternative.

The Perceived Physician Preference Instrument (PPP)

No instruments were identified which measure the perceived attitude of physicians toward the two alternatives of C/S and TOL. The Perceived Physician Preference Instrument (PPP) instrument has been designed by the investigator to determine the woman's perception of her physician's attitude toward TOL/VBAC. The focus is on women's perceptions, therefore, no actual measurement of physician attitudes was made. It was field tested on the same small sample of pregnant women (n=5) and three experts in maternal child nursing. The rating derived from the instrument is on a five point scale and ranges from very favourable to very unfavourable attitude toward TOL/VBAC. This instrument produced ordinal data which described the woman's perception of her physician's attitude. It takes less than five minutes to complete. It indicated the degree to which the physician is perceived as encouraging or discouraging TOL.

Participants were asked to make a check mark by the statement which most accurately described their physician's attitude. The possible responses included:

- 1) My physician feels that a trial of labor is the best alternative, and has actively encouraged me to pursue this route;
- 2) My physician feels that a trial of labor is probably the best route to pursue, but has left the decision up to me;
- 3) My physician is non-committal. He didn't state an opinion and/or he didn't favour one choice or the other;

- 4) My physician felt that a trial of labor is not the best choice, but has left the decision up to me; and
- 5) My physician feels that a trial of labor is not the best route to follow, and has actively discouraged me from pursuing this route.

Semi-Structured Interview Guide

The semi-structured interview guide was developed by the investigator to examine influences on decision making in more depth. The guide was adapted from the Questionnaire Measuring Attitudes About Labor and Delivery Experience (Marut & Mercer, 1979) and the Childbirth Expectations Questionnaire (Beaton & Gupton, 1990; Gupton, Beaton, Sloan & Bramadat, 1990). It is divided into five sections. The first supplied information about the participant's obstetrical history. The second generated qualitative data regarding past childbirth experiences. The third evoked responses related to decision making, with questions and probes designed to determine how the decision was made, who participated in the process, and what role the physician played in the decision. The fourth section's purpose was to collect data related to childbirth expectations. Specific areas of expectations include, pain and coping with pain, support from nurses, intervention and support from the woman's significant other. The fifth section explored the contextual and social variables which might have influenced decision making. One final question was included to determine if there were any possible effects of participating in the study on the delivery approach decision.

Demographic Variables

To describe the women who participated in the study, a simple demographic form was developed by the investigator (See Appendix M, last page of interview guide). Information on marital status, employment status, occupation, source of income, education, ethnicity and age were collected. Questions regarding children in the home, plans regarding having more children, feelings about being a mother and child care arrangements were also asked.

For this study, socioeconomic status was determined by the woman's occupation. The male head of household's occupation has been used routinely to assess socioeconomic status, however, this approach has been questioned (Delphy, 1981; Llewellyn, 1981; Macfarlane & Mugford, 1984). Macfarlane and Mugford suggest that social class determined by the occupation of the male head of household will be different when class is determined by the female's occupation. The focus for this study is on women and decision making involving childbirth. It was considered more appropriate, in light of these criticisms, to use the occupation of the women themselves rather than their partners.

Data on occupation was collected and the Revised Socioeconomic Index for Occupations in Canada (RSIOC) was used to determine socioeconomic status of the participants (Blishen & McRoberts, 1976). Since its introduction, it has been used widely to determine occupationally based class distinctions in Canada. Income level and educational status were used to rank 480 occupation titles listed by Statistics Canada. A regression equation, $Y = B_1 (\text{Income}) (X_1) + B_2 (\text{Education}) (X_2) + C$, was utilized to

produce a socioeconomic index number for each occupation. To determine class intervals, Blishen and McRoberts divided the index values into groups of 10, producing the following six classes:

Class 1 = 70+

Class 2 = 60.00 - 69.99

Class 3 = 50.00 - 59.99

Class 4 = 40.00 - 49.99

Class 5 = 30.00 - 39.99

Class 6 = Below 30

A ranking of Class 1 indicates occupations in the highest end of the scale, while those in Class 6 occupy the lowest. In this study, information about the woman's occupation was obtained during the data collection interview. Socioeconomic index scores were determined and a class number assigned through the use of the suggested groupings.

Summary

In summary, an exploratory descriptive design was chosen because of the small number of studies in this area. The combined methodology was selected to provide a data base which would expand and enlarge present knowledge about the TOL/VBAC decision. Based on previous studies and the theoretical literature, four influences on decision making were examined, past experiences, future expectations, physician attitude and

preference for control over decision making. Quantitative approaches measure relationships between the variables and determine their predictive strength for choice of childbirth approach. Qualitative methods provide a depth of understanding not possible with quantitative data alone. The interview data provide a basis for comparison with previous studies and assist in interpretation of quantitative findings.

CHAPTER IV: QUANTITATIVE RESULTS

Introduction

Major study variables were selected based on a review of the theoretical and clinical literature. Past experience, future expectations, perceived physician preference and preference for control have been operationalized through the use of a variety of scaling techniques. The following chapter describes the influences over decision making through analysis of this interval and ordinal data.

This chapter describes demographic characteristics and childbirth histories of the sample comparing two groups, those who chose C/S and those who chose TOL, on these variables. Secondly, the research questions are addressed through analyses of "between group" differences on the two semantic differential instruments, the perceived physician preference scale, and the card sort procedure which determined preference for control over decision making. In order to select the best predictors of choice of childbirth approach, logistic regression analyses were carried out.

Description of the Sample

Demographic Characteristics

One hundred and fifteen women took part in the study during the last trimester of

their pregnancies. The sample may be characterized as predominantly middle to upper middle class, caucasian, married, and possessing high school or better education.

Ages ranged from 22 to 42 years, with a mean of 29.9 years and a mode of 32. The majority of the sample was married or living with a partner (n=112, 97.4%). Most of the women who participated were Caucasian. Only a small number (n=14, 12.2%) were from minorities including, Native/Metis, Asian, Black and Hispanic women. Due to the small number of women in minority groups data were collapsed into two categories, Caucasian and minorities for later analysis.

Most of the women were employed outside the home. At the time of interview, close to half of the women were working full or part time (45.7%) and a substantial proportion were on maternity leave (21%). One third of the participants described themselves as unemployed. Although some women were undecided about returning to work after the present pregnancy, the majority (54.9%) planned to return to full or part time employment. Approximately one-third (31%) of the women were planning to stay at home and not seek employment outside the home after the present pregnancy.

Women in the study were generally well educated, as the majority (n=98, 85.2%) had completed high school and a large proportion had educational preparation beyond the high school level (n=60, 52.2%). Twenty women had university degrees and twenty others received a variety of professional and/or technical preparation through institutions such as schools of nursing, business colleges, junior colleges, and trade schools. Only a small number of women had less than high school preparation (See Table 3 for educational levels).

Table 3

Education Levels of the Sample (n=115)

Educational Level	Frequency	Percent
Grade 1-8	1	.9
Grade 9-11	16	13.9
High School	38	33.0
Trade School	24	20.9
Some University	16	13.9
Baccalaureate	16	13.9
Graduate Level	4	3.5

A variety of child care services were used by the women. More than half the sample had a regular baby-sitter (full or part-time) or day care (n = 64). Thirty-four women had no regular child care and ten relied upon their husbands/partners to care for the child or children in their absence. Six women had children who were in school and did not need a baby-sitter during working hours.

Most of the participants came from two income families. Just over half of the women relied on combined salaries, theirs and their partners, as the main source of income for the family. Close to one-half of the sample (46%) relied on their partner's

earnings as the main source of income and a small proportion reported that they received social assistance. One woman received a student loan and two were self employed.

Socioeconomic status was derived using Blishen's scale based on occupation. Nine women were in the lowest class grouping and four women were in the highest, all of whom were in the TOL group. The total sample had a mean socioeconomic level of 3.68. The mode was 3 for both the entire sample and subgroups. Seventeen women listed their occupation as housewife.

Reproductive Histories

A reproductive history was taken as part of the interview. The number of pregnancies, live births, and abortions and/or miscarriages was ascertained. Most women were pregnant for the second time (n=78, 67.8%). The mean pregnancy rate was 2.4, and the number of pregnancies per woman ranged from two to six. Parity ranged from 1 to 3 with 79.1 percent having had one live birth. Fifteen of the women reported having had a reproductive loss. The number of miscarriages/abortions ranged from none to four. Gestations at time of interview ranged from 34 to 40 weeks, with a mean gestation of 37 weeks.

Children were present in the home in all instances except two. The two women with no children had delivered full term infants by C/S, however, one child died from complications shortly after birth and the other infant had been given up for adoption. The number of children in the home ranged from none to four with a mean of 1.22 (See Table

4 for a summary of reproductive status variables).

Table 4

Reproductive Status

	Range	Mean	S.D.
Gestation(wks.)	34-40	37	1.74
Gravida	2-6	2.42	.71
Parity	1-3	1.23	.46
Children in the Home	0-4	1.22	.53

Table 5

Previous Vaginal and C/S Birth Experiences (n=114)

	Frequency	Percent
One previous C/S	89	78.0
One vaginal birth followed by a C/S	9	8.0
Two vaginal births followed by a C/S	1	.9
Two previous C/S	13	11.4
One vaginal birth followed by two C/S	2	1.8

Previous birth experiences included both vaginal and C/S deliveries. The majority of the sample reported one previous C/S, however, a small group had experienced more than one C/S and some also had given birth vaginally (See Table 5 for number and type of previous birth experiences).

Comparison between C/S and TOL Groups

To analyze differences between groups on demographic characteristics and childbirth histories, data distributions were tested through the use of the Shapiro-Wilk test. Where the assumptions of parametric statistics were not met, nonparametric equivalents were used. Between group differences were examined primarily through the use of non-parametric approaches.

The age distribution was tested through the use of the Shapiro-Wilk Statistic and found to be normally distributed. The C/S group had a mean age of 29.7 years and the TOL mean was 30.1. Difference between means was tested through the use of the t Test for independent samples and no significant differences were found ($p=.58$).

Education was initially examined through the use of Chi Square and revealed no differences between groups. Because there is conflicting evidence of a relationship between education and delivery choice (Kirk et al. 1990; McClain, 1987), additional analysis was carried out. Participants were divided into two groups, those who had high school education or above, and those who had less than high school. Nine percent of those choosing TOL and twenty-two percent of the C/S group had less than high school education. Although the C/S group was comprised of a larger proportion of women with

less than high school preparation, the difference between groups failed to reach statistical significance (Fisher's Exact Test, $p=.067$). It is possible that with a larger and less homogeneous sample, differences in educational preparation might be discerned.

Employment status was examined through the use of Chi Square. There were no significant differences between the C/S group and the TOL group in rates of full-time or part-time employment, unemployment or maternity leave. Likewise, when plans for returning to work were explored, future employment plans did not differ between those choosing C/S and those choosing TOL.

The woman's main source of income and socioeconomic status were also examined through the use of Chi Square and no significant differences were found between groups on either variable.

The Wilcoxon 2-Sample Test showed no differences in gestation between groups. Those choosing C/S had a mean gestation of 37.3 weeks, while the TOL group had a mean of 36.7 weeks, a difference which represents approximately four days. This small amount of time failed to reach statistical significance ($p=.06$) and is not considered to be clinically significant.

No significant differences in reproductive loss between groups was found. Differences in the number of abortions/miscarriages was initially examined through the use of the Wilcoxon 2-Sample Test. Due to the small number of women experiencing more than one abortion/miscarriage, data were collapsed into two groups, those who had experienced reproductive loss and those who had not. The Fisher's Exact Test (2-tail) revealed no significant difference between groups ($p=.26$).

Significant differences were found, however, between women choosing C/S and TOL on five variables. Women from minorities were more likely to choose C/S. Twenty percent of those choosing C/S were from minorities while minorities constituted only 6.2 percent of the TOL group (Fisher's Exact Test, $p=.04$).

In addition, four highly interrelated variables were found to be significantly different between groups. The C/S group had more pregnancies, more live births, more children in the home, and more previous cesarean births. The relationship between these variables is evident. It is expected that if a woman has more pregnancies, she would also have more live births and more children in the home. The number of C/S also would be expected to rise in these participants as pregnancies, births and number of children increase. Due to this interrelationship, additional analyses were conducted and are discussed further in the section on logistic regression.

Women who chose elective repeat C/S were more likely to have had 2 previous C/S. However, all women with two previous C/S met sample criteria, had no contraindications for a TOL and had been offered a role in the decision making process.

In summary, there were no significant differences between the group choosing C/S ($n=50$) and those choosing TOL ($n=65$), on demographic variables including, age, marital status, education, employment status, plans to return to work, source of income, type of child care, or socioeconomic status. Analyses of childbirth histories also showed no difference between groups for variables including, gestation, and number of past abortions/miscarriages. Although there were no significant differences between groups for a majority of the demographic characteristics, a significant difference was found for

ethnicity. Significant differences were also shown for gravidity, parity, children in the home and number of previous cesarean births. Women in the C/S group had more pregnancies, more live births, more children in the home, more previous cesarean births and were more likely to be from minority groups (See Table 6 for a summary of between group differences).

Table 6

Significant Between Group Differences on Demographic Characteristics and Childbirth Histories (p = .05)

	Group	
	TOL	C/S
Gravida		
2	53 (81.5%)	25 (50%)
3+	12 (18.5%)	25 (50%)
Parity		
1	59 (90.8%)	32 (64%)
2+	6 (9.2%)	18 (36%)
Children		
1	55 (84.6%)	34 (68%)
2+	8 (12.2%)	16 (32%)
No. of C/S		
1	63 (95.3%)	37 (74%)
2	2 (3.2%)	13 (26%)
Ethnicity		
Caucasian	62 (93.9%)	40 (80%)
Minority	4 (6.2%)	10 (20%)

Quantitative Analysis of Research Questions

The next phase of data analysis addressed the research questions by examining differences in the major study variables between groups. Results exploring past experiences, future expectations, perceived physician preference and control over decision making are presented.

Past Childbirth Experience

The first research question was: Is there a relationship between past childbirth experiences and the decision to have a TOL or an elective repeat C/S? Women who chose C/S rated their past C/S experience significantly more positively than did women choosing TOL. The relationship between past childbirth experiences and the decision to have a TOL or an elective repeat C/S was analyzed through the use of descriptive and inferential statistics. Scores on the semantic differential measuring attitude toward past C/S ranged from 22 to 97. The mean score for the total sample was 63.04. The mean score for those choosing C/S was 67.28 and 59.79 for the TOL group. The distribution of scores was tested through the use of the Shapiro-Wilk statistic and did not meet the assumptions of parametric procedures. Therefore, the non-parametric Wilcoxon 2-Sample Test was used to compare groups. A significant difference between scores for women choosing C/S and those opting for a TOL was found ($p = .0215$). Women choosing C/S scored higher than their TOL counterparts.

Future Expectations

The second research question was: Is there a relationship between childbirth expectations and decision for delivery approach? Women who planned to have a C/S birth had significantly more positive childbirth expectations than those planning TOL. Scores ranged from 51 to 105 on the semantic differential measuring future childbirth expectations. The range of scores was skewed toward the positive end of the scale. Women in both groups generally were more optimistic about future childbirth and less positive about past experience (See Table 7 for a comparison of means).

Table 7

Comparison of Means on the Semantic Differential

Semantic Differential	Group			
	TOL (n=65)		C/S (n=50)	
	Mean	SD	Mean	SD
Past C/S Experience	59.79	17.72	67.28*	18.41
Future Expectations	71.85	11.76	81.86**	12.63

*p<.05 **p<.001

The mean expectation score for the total sample was 76.2. Data were examined through the use of the Shapiro-Wilk test and assumptions of normality were not met. Due to this finding and the ordinal nature of the data, the non-parametric Wilcoxon 2-Sample Test was used to analyze the data. There was a significant difference ($p = .0001$) between scores for women choosing C/S and those choosing TOL on future expectations. C/S women were significantly more optimistic about their impending childbirth experiences.

Preference for Control over Decision Making

The third question was: Is there a significant difference in observed patterns of preference for control over decision making between women who choose repeat C/S versus those who choose TOL/VBAC? To examine differences between groups Chi-square was used and no significant differences were found. Relatively the same proportion of women wanted to share, keep or give away control over decision making in both the TOL and C/S groups.

The first step in analyses was to assign a categorical value (Keep, Share, or Give Away) for each woman's preference by using her first choice, statement A, B, C, D, or E. The most preferred alternative was a shared process between physician and patient, statement C. (See Table 8).

Table 8

Preference for Control over Decision Making (n=114) (%)

Control Preference	Group	
	TOL (n=64)	C/S (n=50)
Keep (A & B)	13 (20.7)	16 (32)
Share (C)	32 (50.0)	26 (52)
Give Away (D & E)	19 (29.7)	8 (16)

Chi-Square, 3.75, df 2, p=.153, N.S.

A preference pattern for the total sample was determined and is depicted in Figure 3. The distances between the alternatives are graphically portrayed on a hierarchy to indicate the relative strength of each preference. Similar hierarchies were constructed for TOL and C/S groups (See Figures 4 & 5 for group hierarchies). The total sample and both the TOL and C/S groups preferred a collaborative form of decision making in which control over decision making is shared. There were no significant differences between groups when analyzed through the use of the test for equality of proportions adjusted by Bonferroni's technique. No significant differences were found between groups on any of the measures. The average preferred proportion for each item is relatively the same for both groups.

Figure 3

DECISION CONTROL PREFERENCES FOR TOTAL SAMPLE (n=114)
THURSTONE SCALE

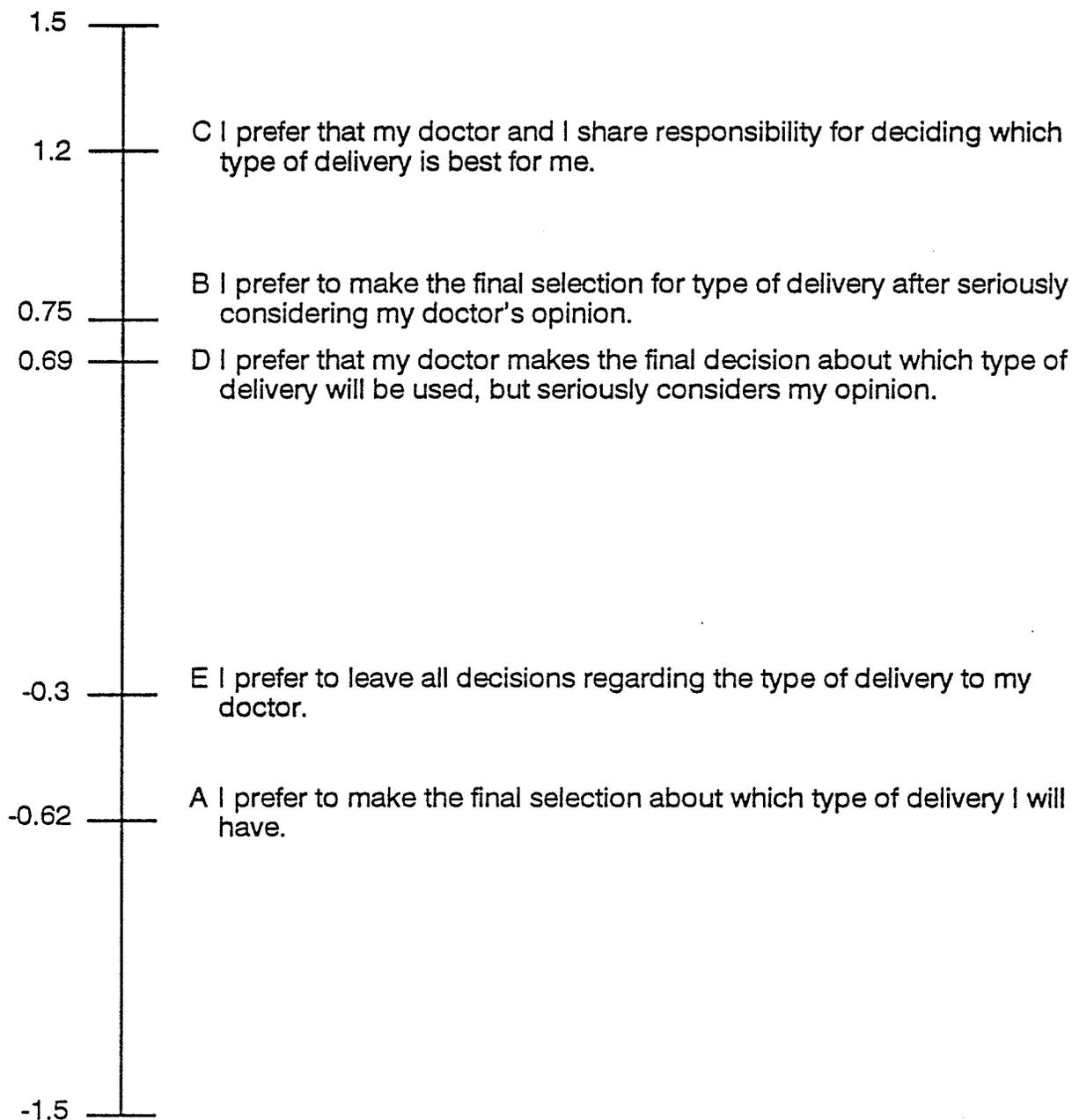
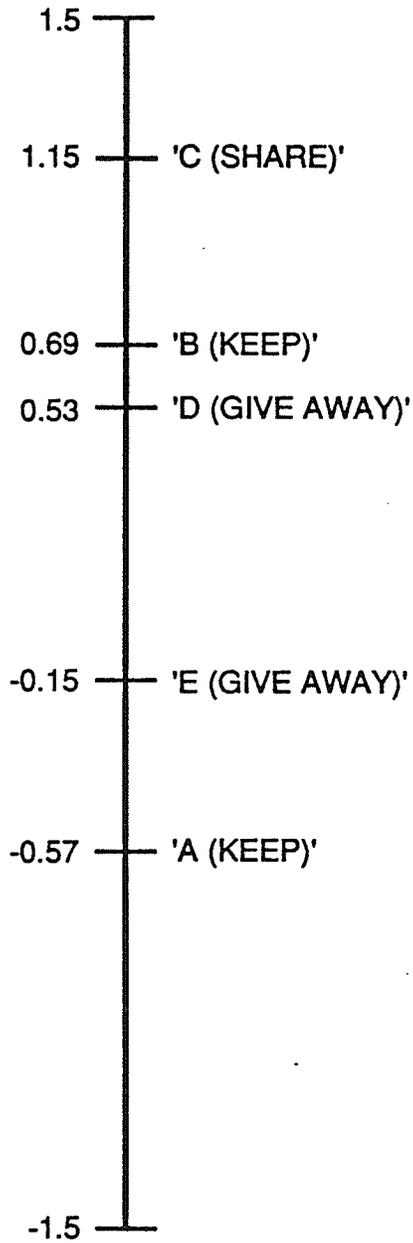


Figure 4 & 5

C/S and TOL Group Hierarchies for Preference for Control

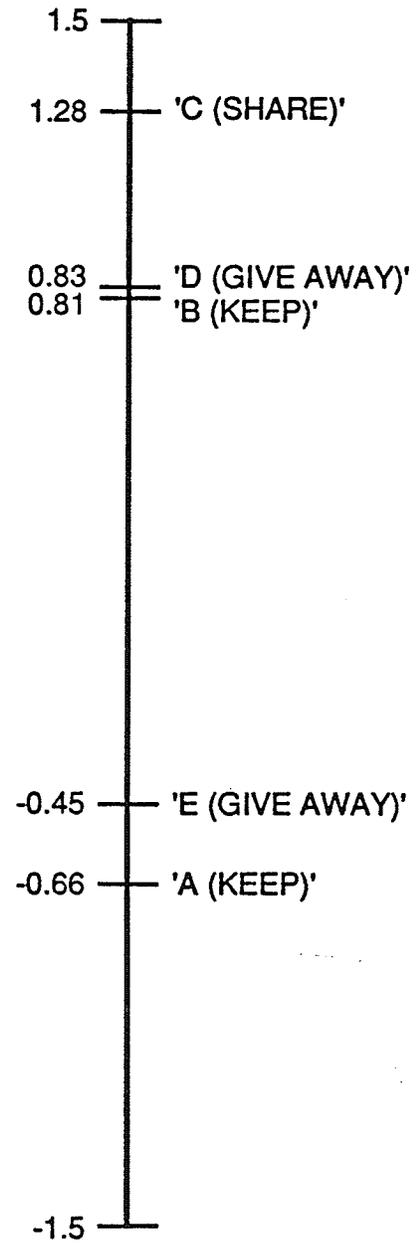
C/S GROUP DECISION CONTROL

PREFERENCES (n = 50)
THURSTONE SCALE



T.O.L. GROUP DECISION CONTROL

PREFERENCES (n = 64)
THURSTONE SCALE



A shared role in control over decision making was most preferred (C), followed by giving away (D & E) and the least preferred pattern was an active role in decision making (Keeping Control, A & B). However, according to the preference hierarchies, it is doubtful as to whether the following two statements were perceived as separate perspectives on the continuum of control: B. I prefer to make the final decision about my delivery approach after seriously considering my doctor's opinion and D. I prefer that my doctor makes the final decision about which treatment will be used, but seriously considers my opinion. It is possible that women had difficulty discerning a difference between these two statements and interpreted both of these alternatives as sharing, rather than keeping or giving control as the authors of the instrument suggest. Further investigation is needed in this area.

Perceived Physician Preference

The fourth research question was: Is there a significant difference between perceptions of physician attitudes in women who choose C/S and those who choose TOL? Perceived physician attitudes toward TOL were measured through the use of the PPP. Women chose one of the five following alternatives which ranged from physician support of TOL to active discouragement:

- 1) My physician feels that a trial of labor is the best alternative, and has actively encouraged me to pursue this route;
- 2) My physician feels that a trial of labor is probably the best route

- to pursue, but has left the decision up to me;
- 3) My physician is non-committal. He didn't state an opinion and/or he didn't favour one choice or the other;
 - 4) My physician felt that a trial of labor is not the best choice, but has left the decision up to me; and
 - 5) My physician feels that a trial of labor is not the best route to follow, and has actively discouraged me from pursuing this route.

The relationship between a women's perception of her physician's attitude toward the alternatives and her decision for delivery approach was analyzed through the use of Chi-Square. A significant difference between two groups was found ($p < .0001$). None of the women choosing TOL perceived their physicians as discouraging this course of action. The majority, 90.8 percent of the TOL group (59/65), perceived their physician's attitude as encouraging. In contrast, only 30.6 percent (15/49) of the C/S women felt their physicians encouraged a TOL even though they had no known contraindications for this alternative. When an odds ratio was calculated, it was found that women were 22.29 times as likely to have a C/S if they perceived their doctor to discourage TOL. A larger proportion of C/S (26.5%) than TOL women (9.2%), perceived their physicians to be non-committal (See Table 9).

Table 9

Perceived Physician Preference (n=115)

Response	Group	
	TOL (n=65)	C/S (n=50)
1. Encouraged TOL	41	4
2. Collaborative Encouragement	18	11
3. Non-committal	6	13
4. Collaborative Discouragement	0	8
5. Discouraged TOL	0	14

Chi-Square 55.682, df 4, $p < .001$

Chances of Delivering Vaginally

Spradley (1979) recommends an approach to interviewing in which the structure of the interview changes depending on the themes generated by the data. Assumptions are made during the process of data collection and additional questions may be asked to test these assumptions. The author states, "...both questions and answers must be discovered from the informants" (p. 84). In the present study, during the course of the

first 19 interviews, it became apparent that one of the predominant reasons women gave for choosing a C/S was a lack of confidence in their ability to deliver vaginally. This assumption was tested by asking one of the following questions: 1. Women choosing TOL were asked, "What do you think your chances are out of a hundred of delivering vaginally?" and 2. Women choosing C/S were asked, "If you changed your mind and decided to have a TOL, what do you think your chances are out of a hundred of delivering vaginally?" Women who chose TOL were significantly more optimistic about their chances of VBAC than C/S women. The mean, mode and median for chance of VBAC was 50 for the total number of women asked this question (n=96). Women in the TOL group estimated their mean chance of success to be 68 out of 100, while the C/S group estimated their mean chance to be only 28 out of 100 (See Table 10).

Table 10

Self Perceived Chances of Delivering Vaginally (n=96)

	Group	
	TOL (n=53)	C/S(n=43)
<u>M</u>	67.57	27.84
Median	75	20
Mode	80	0

Wilcoxon 2-Sample Test, p=.0001

Logistic Regression: Prediction of Choice

The relationship between choice of childbirth approach and the study variables was determined by the previous analyses. To examine the relative strength of these associations in their ability to predict choice, logistic regression was carried out (Hosmer, & Lemeshow, 1989).

An initial step in the analyses was to examine a correlation matrix for the following possible predictor variables, past C/S experience, future expectations, perceived physician preference, chances of delivering vaginally, ethnicity, parity, gravidity, and number of children in the home.

To eliminate redundancy, three closely related variables, gravidity, parity, and number of children in the home were analyzed through the use of a preliminary forward stepwise logistic regression. Number of previous C/S was also related to gravida, parity and children in the home, however it was included as a separate variable because of its relevance to study objectives. The purpose of this initial procedure was to choose the best predictor among the three variables. When parity was entered into the model, gravidity and number of children became redundant. In subsequent analyses, parity was used as a predictor variable, and gravidity and number of children were eliminated.

A second forward stepwise logistic regression was carried out using predictor variables which were determined by previous analysis to have a significant relationship to choice between C/S and TOL. They included, past C/S experience, future expectations, perceived physician preference, chances of delivering vaginally, ethnicity, number of past

cesarean births and parity. Preference for control over decision making was not entered as a co-variate as previous analysis revealed no significant relationship between choice and PCDM scores.

The resulting regression model included the following significant predictor variables: perceived physician preference; self assessed chances of delivering vaginally; and the number of previous cesarean births. The model was then used to predict choice of childbirth approach. When predicted choices are compared to actual or known choice, there is 95 percent agreement. Knowledge of the three variables allows correct prediction of delivery approach choice 95% of the time (See Table 11).

Table 11

Stepwise Logistic Regression Model

Variable	Parameter Estimate	Score Chi-Square	Pr > Chi-Square
Intercept	2.1221	3.3160	.0686
Step 1 Phys. Preference	-1.6297	47.0069	.0001
Step 2 Chances of VBAC	0.0395	11.4916	.0007
Step 3 No. of Previous C/S	-2.3796	5.5704	.0183

Due to the logistic regression analytic procedure, any participant having a missing

value was eliminated. In the case of data on chances of delivering vaginally, nineteen women were eliminated because this question was not asked until the twentieth participant. Two additional analyses were carried out to address this problem. The first consisted of substituting the sample mean (50) for each missing value and then repeating the logistic regression. This technique did not produce different results from the original logistic regression.

The second analytic approach to estimate missing values was to construct a multiple regression equation for chances of delivering vaginally by using perceived physician preference, past C/S experience, future childbirth expectations, history of previous C/S, parity, and ethnicity as predictor variables. The resulting regression equation was used to estimate each of the nineteen missing values and the logistic regression analysis was repeated (See Table 12).

Table 12

Logistic Regression with Derived Missing Values

Variable	Parameter Estimate	Score Chi-Square	Pr> Chi-Square
Intercept	5.5994	6.2119	.0127
Step 1 Phys. Preference	-1.2810	53.8162	.0001
Step 2 Chances of VBAC	0.0406	12.6992	.0004
Step 3 No. of Previous C/S	-2.5878	6.6886	.0097
Step 4 Future Expectations	-0.0548	4.7991	.0285

This final approach to analysis produced a fourth predictor variable, future childbirth expectations, however, it is a weak predictor and is related to chances of success. The distribution of scores on chances of vaginal delivery was bimodal with women choosing C/S scoring low and those choosing TOL scoring high. When missing values were estimated, using this last approach, the distribution was altered and future expectations emerged. Ability to predict choice was decreased through this approach, as the concordance level dropped from 95 to 91.1 percent. For these reasons, future expectations were not considered to be a significant predictor of choice.

Regression analysis of quantitative data substantiates the complex nature of decision making and confirms the important influence of the woman's perception of her physician's attitude toward the alternatives, the woman's concept of her ability to deliver vaginally and the number of previous cesarean births on choice of delivery approach.

Summary of Quantitative Findings

Past experience was significantly related to choice of childbirth approach as the theoretical literature has suggested (Abelson, 1976; Carroll & Johnson, 1990; Nardi, 1983). As expected, women who chose repeat C/S rated their past C/S experience as significantly more positive than women who chose TOL. Based on quantitative findings, it might be concluded that a negative past C/S experience influences a woman to choose TOL for future childbirth in the hope that it would provide a more positive alternative. Contrary to expectations, however, ratings of past experience did not emerge as a

significant predictor of choice, when physician attitude, self assessed chances of success and number of previous C/S were considered.

Expectations also failed to emerge as a significant predictor of choice. Based on the literature which describes the negative aspects of C/S (Lipson & Tilden, 1980; Marut & Mercer, 1979; Reichert et al., 1993) it might be anticipated that negative expectations for the future event, would be observed more frequently in women who chose repeat C/S. However, this was not the case, the C/S group had more positive expectations than those who chose TOL. The basis for positive or negative expectations is not found in the quantitative data.

Literature has documented the importance of physician influence on choice (McClain, 1987, 1990; Murphy & Harvey, 1989). In this study as well, perceived physician attitude is the strongest predictor of choice. All women who chose TOL indicated their physicians supported their course of action or were non-committal and left the decisions to them. In contrast, a number of women who chose repeat C/S (30%) reported their physicians were not in support of their decisions. It would appear that some women who chose repeat C/S did so contrary to physician advice. How the decision is made when there is a disagreement between the woman and her physician remains unclear. The high percentage of repeat C/S reported in the literature clearly documents adherence to the "once a cesarean, always a cesarean" dictum (Nair, 1991). However, women in both groups perceived physician support for TOL. Practice may be changing toward a more supportive attitude for TOL and the literature may be lagging behind actual practice.

No relationship was exhibited between preference for control over decision making and choice of childbirth approach. This is a particularly puzzling result when the previous finding is considered. This study found that many women wanting a C/S do so in spite of physician advice to the contrary. This would lead to the speculation that women wanting a C/S would desire more control over decision making, however this was not the case. A shared pattern of decision making is preferred by both groups, but how this sharing process takes place in cases of disagreement remains unknown.

In addition to the major study variables, data included women's predictions of their chances for successful VBAC. This variable emerged as the second strongest predictor of choice after physician attitude. When women in the C/S group were asked to speculate about their chances of VBAC should they change their minds and have a TOL, they were significantly less optimistic about the likelihood of VBAC than their TOL counterparts. How confidence in ability is formed and how it relates to previous experience will be examined in the qualitative data.

The number of previous C/S was the third predictor of choice. The literature does not discuss this relationship, perhaps because until recently women who had more than one C/S were not eligible candidates for TOL. This variable, as one aspect of past experience, will be explored also in the qualitative data.

Ethnicity was related to choice as those of visible minorities more often choose C/S. McClain (1987) also found a relationship between ethnicity and choice. In addition, she found those with higher levels of education were more likely to choose TOL. In this study, when the three major predictors are considered, ethnicity as well as education

failed to reach significance. However, this may be due to the size and homogeneity of the sample.

Logistic regression indicated chances of delivering vaginally, perceived physician preference, and number of previous cesarean births as the best predictors. Quantitative results, however, leave the relationship between past experience and future expectations and the predictor variables unclear. The self assessed chances of success may be formed in the past and related to future expectations. A past history of two previous C/S is a strong influence, however, how this past experience effects choice is not illuminated by quantitative results. The physician is clearly a strong influence on choice, yet, the issue of control over choice between women and their physician's remains less well understood.

Triangulation of interview and questionnaire data permitted the investigator to examine areas of information overlap and explain and elucidate quantitative results. According to Duffy (1987) validation of empirically generated constructs can be obtained by comparison and integration of qualitative and quantitative data. Chapter V summarizes what women said about the main study variables. Dialogue about their past experiences, future expectations and decision making processes served as a basis for understanding why women rated these influences as they did. To explore the unanswered questions generated by the quantitative results and increase understanding of the relationship between variables, quantitative and qualitative data are compared in the following Chapter.

CHAPTER V: QUALITATIVE RESULTS

Interviews

This chapter summarizes the interview data from 50 women and uses it to explain quantitative results. In the previous chapter, scores measuring past experiences and future expectations were shown. Through the analysis of interview data, this chapter provides the basis from which quantitative ratings were made. Factors related to positive or negative evaluations of past experiences and expectations are described and serve as a basis for rationalizing and understanding quantitative findings. Control over decision making and the role of the physician are explored in the interview data. Themes have been generated which serve as the basis for further understanding of the influences over decision making and comparisons have been made between data from women who chose TOL and that from those choosing C/S.

Qualitative analysis followed the general procedure for thematic analysis described by Polit and Hungler (1987). The data management software package Qualpro™ (Blackman, 1984-1991) was used to assist in collating and coding data. As data were collected, a search for themes or recurring patterns was carried out. New questions were developed for participants and clarification of thematic content sought. At the end of the data collection period, data were coded and placed in categories based on the organizational headings of the interview guide (See Table 13). Secondly, codes were refined based on the development of concepts and emerging themes. Themes were

developed within, as well as across, categories. Commonalities and variation across respondents were examined and relationships between themes developed.

Table 13

Main Categories and Subcategories of Qualitative Data

Past Experience	Future Expectations	Decision Making
Understanding o Reasons for C/S	Concerns & Worries for the Future	Processes
Feelings re: C/S	Childbirth Pain	Physician's Role
Sources of Past Concern	Coping with Pain	Influences
Childbirth Pain	Partner's Role	
Coping with Pain	Nurse's Role	
Partner's Role	Intervention	
Nurse's Role		
Postpartum		
Postpartum Blues		
Postpartum Pain		

The identities of women who participated in the interviews have been protected to provide anonymity. Excerpts from the data have been personalized with pseudonyms

and choice of childbirth approach (TOL or C/S) indicated to make comparison and differentiation of quotations possible.

Past Cesarean Birth Experience

In this section data on past experiences are described. Aspects of past experiences which led to positive or negative perceptions are explored. Women were asked to describe their past cesarean birth from the time labor began until the baby was born. Past experiences were remembered vividly and were related in a manner rich with detail. When asked why a C/S was necessary, the stories of past birth experiences evolved and women had no difficulty in explaining why they felt a C/S had been performed. There was no difference between the C/S and TOL groups in the causes given or in the manner in which they were described. Although reasons were related in their own words, common medical indications for C/S were described:

Tammy (TOL) described failure to progress:

I had a long labor, I was in labor for I think 30 hours, 34 hours maybe before the decision was made to do a section and that was because the baby didn't turn. He just wasn't progressing, he wasn't moving down and I was fully dilated at 10 cm and he just wasn't moving. (Tammy-TOL)

Labor was progressing well for Hilary (TOL) but she described events associated

with fetal distress as precipitating her C/S.

He was under stress, too much stress on the baby so they did a cesarean because they had induced my labor and they figured I could have done it on my own in two or three hours but it was getting too much for him, his heart was slowing down so they had to do a cesarean. It was all rushed, it was in a matter of a half hour at most that they had induced my labor and then had to go for the cesarean.

Malpresentation and a large baby were described by Irene (C/S) as the reasons for her C/S. She stated, "She was lying with her head on my hip and she was also too big. They tried kind of moving her about but it didn't work. She was really big.

Jocelyn (TOL) described toxemia as a precipitating cause for C/S:

But during the labor it [blood pressure] did shoot up quite a bit. So that and the fact that her head was turned, she was coming out face up, that is the widest way I hear that they tell me, and because of that and the possible fetal distress because of the high blood pressure.

Most women indicated that C/S had been necessary in their case for the safety of themselves and their unborn children. Cesarean section was perceived as a life saving

measure. Only a small group questioned the appropriateness of the intervention, "So he [the doctor] said, we'll just do a section. By that time I was really tired, I didn't want to go any further, but later I really wondered why and I didn't really get a good explanation (Tammy-TOL)." The reasons women gave for their past C/S served as a basis for reviewing the experience. A C/S that was perceived as necessary and justified led to acceptance and a more positive perception of the experience.

Attitudes Toward Past Cesarean Birth

Feelings about having had a Cesarean birth varied. Women discussed the importance of having a healthy child and in some cases felt that a healthy baby would have been an impossibility without having a C/S. The end seemed to justify the means. As Allison (TOL) said, "It was like if my baby is healthy then I don't care how she comes out." Elaine (C/S) explained her feelings in the following manner:

The only thing is that I have read articles about cesareans and I have often read statements along cheating someone from their so called right and ritualistic motherhood. I always thought I don't understand this, maybe it is just me, isn't the end result a happy and healthy baby, whichever way it happens? I suppose it would be different if someone goes in there determined it will be natural. To me it was as fulfilling one way or the other, it was, we are going to have the baby, let's have the baby. So it

wasn't at all a negative thing...

A feeling of relief and acceptance of C/S was described by women who were experiencing prolonged and painful labors. Their immediate reaction to being told they were to have a C/S was one of joy at having labor ended. Hilary (TOL) summarized her feelings by stating, "I was so tired and when they started putting me to sleep, [I thought] Let's just do it," and Stephanie (TOL) said, "I think we were relieved that there was an end in sight." Although women were glad to see an end to labor, they also retained their concern for the welfare of the unborn child and perceived C/S as a method of ensuring safety for the unborn child:

At that point we were just wanting to get it over with and we wanted the baby safe so it wasn't very difficult to make the decision then. So I think within a half hour to an hour after that, once they got me ready, we had the section. (Barbara-C/S)

Negative reactions to having a C/S also were reported. Some women discussed feelings of fear and trepidation upon being informed of the cesarean section, "I think I cried, just instantly. Oh, no, it's really happening. And I was scared. I remember talking about cesareans in class but I never thought that it would be me" (Teresa-TOL).

When negative responses were examined more closely, women who subsequently chose TOL described feelings of disappointment and felt that they had "missed out" or

had been deprived, "When I hear them [my sisters] talking about their experiences...I feel like I missed out sometimes" (Stephanie-TOL). The C/S group also described disappointment but more often reported feelings of failure and self blame:

Honestly, I feel maybe I didn't try hard enough, maybe things could have been different, not so much with this one now but after I had my second I felt that discouragement...but after my second it was, wow, it seemed like I kept thinking of things that I could have done differently or I was blaming myself basically. When girlfriends ask I sort of wish that I was more like them having them the normal way, vaginally. (Edith-C/S)

The degree to which the C/S was expected or unexpected appeared to contribute to how a woman viewed the experience, "It wasn't a very good experience at all because I was so upset that I had to have a cesarean and I wasn't prepared for it. I hadn't prepared myself for it at all. I was in shock" (Iris-TOL). Violet (TOL) described her reaction, "So, it was a horrible experience. It just went from bad to worse. It was nothing we ever expected from the beginning. And having a c-section was just another part of it. Like I never dreamed that I would have to have a c-section."

Most women assumed that C/S would not be necessary in their case. They did not contemplate the possibility or prepare themselves for such an event. Iris (TOL) who had her first child vaginally, described her feelings upon having her second child by C/S:

I didn't feel good about it at all. I guess the biggest thing was that I didn't prepare myself for it. Because of the first one, I had normally, I just assumed that the second was going to be normal. There was no indication that I would have to have a cesarean. I had just been to the doctor the day before and the head was down, I was even a couple of centimetres dilated. The doctor was even shocked when he came in and examined me because he said the chances of that happening are so slim. I was just basically in shock, I hadn't prepared myself for a cesarean, I didn't think that I would have to go through one. That was the problem, I didn't prepare myself.

In contrast Elaine (C/S), who described her experience as positive, explained it this way:

I guess perhaps although I had a week to get used to the idea it had been something that I had thought about and I was prepared, perhaps it is just lack of preparation in a lot of cases. You go in and in a lot of cases they say it has to be cesarean section. I wasn't afraid...

Although, C/S rates indicate approximately one in five women will have a C/S, most women did not anticipate giving birth by C/S. The unexpected nature of the event led to negative perceptions. Women who had time before the procedure to think about

C/S and accept it as a necessary procedure were better able to resolve misgivings. They interpreted their experiences more positively. Those who questioned the appropriateness of C/S characterized their experiences more negatively and particularly those choosing repeat C/S expressed feelings of self blame and failure. However, even those who had positive attitudes described their concerns about the past C/S.

Sources of Concern

After women related their feelings about past experiences, they were asked what would have made it better for them. Responses varied widely but centered on suggested improvements in painful medical procedures, poor communication practices, restrictive hospital policies and uncomfortable surroundings.

Epidural anesthesia was a source of complaint. Insertion of the epidural catheter was seen as painful and some women found it did not relieve their pain. Women complained about having to have repeated attempts at inserting the catheter which was anxiety provoking and painful. One woman commented that her back looked like a "pin cushion."

The epidural took a long time to get in and that's the only thing that I found high anxiety. It crooked to the right side and so my right side was numb from my toes up to the breast. My left side had very little medication in. It took them about 20 minutes to half an hour to get it

settled so that both sides were equal. (Rose C/S)

Women found internal examinations to be uncomfortable and felt that there had been too many health care professionals involved in their care. Barbara (C/S) said, "I did have a lot of internals and visits from extra people because of the teaching. Sometimes I felt like they had just finished one and someone else would come and do one, you are uncomfortable and you don't want someone doing this..." Edith (C/S) explained:

I found that I saw so many different people and sometimes the only thing that would happen they would come in and check me which was very uncomfortable because my cervix was posterior. It had not opened at all and I would get so tense as soon as I saw someone new walk in and it wasn't a familiar face. I think that if I would have had the consistency of one doctor I would have been better in control I think.

Communication between nurses, doctors and women was also cited as needing improvement. "For one thing, the doctor's bedside manner, if he had been gentler or even like he is a big person and he can't help that, if it had been done gentler and he had talked to me more, I might have felt a lot calmer. I felt so scared every time he came around" (Stephanie-TOL). Women complained of poor communication regarding decision making:

My mom is standing there holding my hand, and I am going, "Mom, what are they doing?" I am starting to freak out and everything and they are just talking like I am not there. She [the doctor] thought if she induced my labor I would have the baby in two or three hours, but the other doctor is going, the heart is slowing down, and I am lying there--"What are you doing?" I said to mom, "Find out what they are doing." (Hilary-TOL)

Hospital policies and/or management protocols were sources of concern. Hospital policies produced discontent when fathers were not allowed to remain with women throughout the experience and when babies were not allowed to remain with their mothers. Some women complained about the lack of privacy and about being able to hear other women scream during labor. Daria (TOL) found the enforced immobility difficult, "At one point they told me to stay in bed and not get out of bed and I found that really long and difficult. You couldn't find a comfortable way to sit or lie or do anything."

A final source of concern for women was found in the length of time it took before the cesarean was performed. Several women felt that they had been allowed to labor too long, while many others reported having the time and date for the C/S postponed. Tammy (TOL) stated:

Well the one thing I guess was he decided like I said, at about 10:30 in the morning that I was going to have this section and it wasn't actually done

until 2:30 in the afternoon. I was sitting around prepped for a really long time and they keep the epidural drip going so you have no feeling. It was a very uncomfortable experience that was too protracted in my opinion.

Sources of complaint revealed a variety of factors contributing to evaluation of the childbirth experience. The assessment began with a decision about the necessity of the C/S and ratings were further influenced by a variety of events during labor and delivery. Depersonalizing experiences exhibited through poor communication, unnecessary painful procedures and policies restricting family support and participation led to negative ratings. Ratings were influenced also by women's assessments of past experiences with the pain of labor and childbirth, including the past C/S.

Childbirth Pain and Coping with Pain

Descriptions of pain accompanying the previous delivery process also were detailed and vivid. Pain experienced during labor and childbirth and pain associated with examinations and procedures were described. Most women characterized their pain as extreme, using such terms as excruciating and severe:

I would say the back labor, it was excruciating. Until they gave me the epidural...I tolerate pain quite well, I am in the dental health field. But back labor was pretty excruciating and I welcomed the epidural, so I think

that because I didn't go through the actual birth, maybe if it was a vaginal birth then I might say the actual birth might be the most painful but I thought the back labor was the worst. (Jocelyn TOL)

In her efforts to characterize the severity of pain, Daria (TOL) describes feeling like she was going to burst open:

Like a big, big cramp, a tightening cramp all around your middle section and then towards the end it is a scary feeling to push...I thought I didn't know how to push differently, it just feels like everything is just going to burst right open. (Daria TOL)

Although the majority of women reported extreme pain associated with past childbirth experiences, a small number recalled having very little pain. Minimal pain reports were observed more frequently in the TOL group:

Okay, well labor wasn't bad, then I had an epidural. Well the way a lot of people explain it is excruciating pain, I didn't find it so excruciating, it was bearable because it didn't last for hours at a time, just a few minutes. Then I had an epidural and I didn't feel a thing. (Debbie-TOL)

Seven women, one in the C/S group and six in the TOL group, had never experienced labor. In these instances, conditions of the woman and/or her baby

necessitated admission to hospital and a cesarean birth before labor began. Subsequently, reports of pain were centered on the actual C/S procedure and women described it as a sense of pressure:

I didn't feel any pain or anything, you just feel a sense of--somebody else put it right--my sister-in-law has had three children and one was a cesarean too and she said it was like a tree being uprooted, I said that is about it. That is what it felt like, you don't feel pain but the pressure or whatever.
(Jocelyn-TOL)

Differences in the data regarding pain were often related to individual circumstances of the previous birth and not necessarily to subsequent choice of delivery approach. For instance, women who experienced induction or augmentation of labor through administration of intravenous Syntocinon™ described a great deal of pain coupled with a sense of losing control over the process of labor: "They were coming [labor pains] and I was pushing as hard as I could. It was painful but it was uncontrollable, the pain just keeps coming and coming" (Daria TOL). Rachel described extreme pain and loss of control during induction:

...and then around 5:00, they decided to give me something to start the labor, to increase it because I wasn't even feeling the labor. So they started and they said I would eventually feel the pain and then at about

7:00 my contractions started coming on strong, strong pains. I had about a 45 second rest in between, they were coming very strong, that stuff just kicked in and wouldn't stop. So I had to do breathing and around 10:00 I wasn't responsive to breathing, I was in too much pain to the point that I was practically delirious, I didn't want to listen to anybody, I just wanted the baby out. (Rachel-C/S)

Ratings of past pain experiences were integrated with reports of pain control. Judgments about the past were based on the amount of pain and more importantly on how women coped with pain.

Strategies Used for Pain Control

Strategies used for pain control were not different between those choosing C/S and TOL. Women in both groups used three main strategies to cope with childbirth pain, anesthetics, analgesics and breathing/relaxation techniques. Daria (TOL) described using both analgesics and anesthesia, but only achieved relief with the latter.

The Demerol™ did help me relax between the contractions but it didn't take away the pain of them and finally at one point when they asked me if I wanted an epidural, I gladly said yes. Then it was amazing how there was nothing, you go numb. (Daria-TOL)

Breathing techniques were effective for some women, "Well I used some breathing techniques and that helped me a great deal..." (Edith C/S). Others found them less effective, "With him I was so scared that I couldn't get into the breathing. They tried to get me to breathe and I was really stubborn with him, I just wanted it over with" (Hilary-TOL). Approaches to pain control were described as effective in most cases, however, pain was not lessened with analgesics and even with an epidural in a small number of cases.

In summary, there were differences in past childbirth pain between women choosing TOL and those choosing C/S. The TOL group more often reported having had minimal pain and was more likely to never have experienced labor. Additional differences in the interview data were related to individual characteristics of the birth experience such as induction and augmentation. Negative reports associated with loss of control were often described by women who had these interventions. C/S and TOL women used identical strategies to cope with pain.

Past Support from Husbands/Partners and Childbirth

The degree to which evaluations of past experiences were positive or negative was influenced by the participation and role of the woman's partner. The majority of partners was present during labor and C/S. Their roles were variously described as emotional supporter, provider of care, coach and as a communication intermediary. Descriptions of these roles were not different between groups. However, four women reported the father

being absent during the previous C/S. All of these women chose TOL for their upcoming delivery, perhaps to provide an enhanced opportunity for their partner's participation.

The provision of emotional support was the most valued input from partners:

He was there, he was sympathetic, I guess he was in shock as well as I was, probably didn't know what would happen, that is basically all I can say about that, supportive and "don't worry, everything will be okay," but I was so upset and he was trying to comfort me I think. (Iris-TOL)

Partners also fulfilled the role of care provider. Physical care often was provided through back rubs, massage, and offering other comfort measures, in the form of ice chips and damp face cloths. One woman described this activity as, "[He was] Very helpful, applying ice-packs and doing some massage, as much as he could." At times physical care was provided voluntarily and at other times care was given because nursing staff were unavailable or unable to provide it:

...then they brought him in and I was in one room with a newer bed with the remote control, so when they came in with this monitor and that monitor, he had to reach behind and plug this one in and unplug that one and turn this one on...Then I had to go in a bed pan and stuff and he had to be the one to clean me up and stuff. He really felt that that should have been done [by the nursing staff]. (Barbara-C/S)

The role of labor coach was also discussed. Timing contractions and directing the use of breathing techniques was frequently mentioned. Several women discussed the role of communications intermediary. This is a function in which the father would explain what was happening to the woman, make sure that her concerns were communicated to staff members and/or ensure that her wishes concerning delivery options were recognized.

Fathers' thoughts and feelings during past childbirth experiences were also described by participants. The same descriptive terms were used by both groups; anxious, nervous, in shock, concerned, worried, uptight and scared. Some women said their partners were upset and disappointed over the decision to have a C/S:

I think he was pretty anxious, I don't think he wanted the cesarean, in the end it was sort of something he had to go with but I think he was very disappointed. I think he felt not completely confident that the doctor had made the right decision because he was influenced by the other people around us as well, the nurses were saying, "It looks like there is enough room" and yet the doctor was saying, "no you can't do it." So he was saying, who do you believe kind of thing. To this day he has doubts as to whether it was really necessary, now I don't have any doubts because I know what I was feeling. He was quite anxious. (Tammy TOL)

Other fathers were characterized as relieved. In some cases they actually encouraged a decision for C/S:

He was very happy knowing that I was going to have a cesarean. He was equally if not more so worried about any potential harm to the baby. When he found out it was a go, he was very excited about it. He insisted from day one he had to be there, so he got right in there, he would have delivered that baby himself if he didn't have to sit on the stool...He thought it was just an incredible experience, he had his camera and had pictures with blood all over. He thought it was wonderful. He was really involved and he was happy with that. (Elaine-C/S)

Women reported that fathers often expressed general anxiety about the condition of mother and baby. Concern about the woman's pain and feelings of helplessness in coping with her pain were documented:

Well, he didn't have to go through labor so he was a real happy camper about that and this was the area he was real apprehensive at first...He always said, "No, just get put right under. I don't want to be there"...I think the only bad part that he had to go through was when they had to do surgery. When they brought me downstairs they saw how much pain I was in and it was just taking them a little while to get permission or doctor's consent to give me something for the pain, so he saw that and he was quite agitated and had to talk to several people until something got done. That was a bad part for him... (Allison-TOL)

...he felt like he wasn't doing enough for me, is what he kept saying. We had gone to prenatal classes here [St. Boniface General Hospital] and they had talked about different things, comfort measures...I didn't find that rubbing my back or doing some of the things they had suggested made any difference to me, I liked his companionship but I really wanted more to be left alone...my husband doesn't have a very good pain threshold, I think he found that part disturbing. He was concerned about everything and he felt that something should have been done. (Barbara-C/S)

Positive ratings of past experiences were associated with active participation of partners. When partners were absent the experience was perceived as less satisfying and it was the TOL group who had lower ratings and more reports of partner absence.

Past Nursing Care

Nurses were a part of women's past experiences. Their caring and compassion as well as their lack of support was discussed as an integral part of past experiences. During hospitalization women were cared for by several nurses. Comments regarding nurses and nursing care were predominantly positive: "The nurses were wonderful. I had a very positive experience" (Allison-TOL), and "They were wonderful. I found the staff here to be excellent and very helpful in teaching and very caring...They put up with a lot. Massaging, just keeping me relaxed and helping me with the breathing and they were

there and that was the main thing" (Rose-C/S), were typical responses.

When negative experiences were discussed, they often followed a global statement of approval. Descriptions of poor nursing care were coupled with reports of nurses being busy, overworked and/or understaffed.

I couldn't figure out why I was so nauseous. The care I got was good, I thought, but I got the impression that they are really overworked, they have too many patients each. The nurse that I had didn't have the time really to try and figure out what it was. (Tammy TOL)

Communication breakdown was a source for discontent with nursing care in both the TOL and C/S women's accounts:

Communication with not only the doctor but with the nurses and the anesthesiologist, those have to be stepped up a bit. They just treat you like another patient, they don't treat you like a person. They don't realize you need to know things about what is going on. (Rachel-C/S)

Like I didn't belong there, I was okay. The nurses of course were very busy and it was like somebody please talk to me, find out how my baby is, and get me out of here. I don't need to be here, I need to be where other people who make sense are. (Glenda-TOL)

A lack of communication led to a sense of depersonalization and alienation. Being treated like a "person" was an inherent part of good nursing care. Ratings of past experiences encompassed relationships with others. Perceived quality of nursing care was a part of the total experience and was rated as one of the aspects of childbirth. Women in the TOL group rated their experiences as less positive than C/S women and there were more negative reports of nursing care from women planning a TOL in the interview data.

Past Postpartum Experience

The early postpartum period (first few weeks at home after their previous C/S) was also explored. These early mothering experiences contributed to the evaluation of the childbirth experience. Women described this period with mixed emotions: extreme happiness related to having had a healthy baby, but this was also a period in which postpartum blues, fatigue and physical discomfort occurred. Women remembered feeling somewhat overwhelmed by the responsibility of caring for a new baby, especially first time mothers.

It was scary. Bringing a new person into your life. It was a wonderfully warm feeling because it was a new addition to your family and it was something that you and your husband were able to do together and [my husband] was wonderful with the baby because he cared or he looked after him just as well as I would have. And my mother was there to help me

so she guided me along. (Rose C/S)

The degree to which the experience was perceived as positive was often related to the amount of support received from the family:

Well it wasn't terrifically easy because we were building a new home at the time and my husband was looking after most of it so he was away, he was teaching all day and would come home and eat and go to the house. I was pretty much alone the whole time. Looking back at it, it was pretty awful, but you just deal with what you have to deal with. He was very supportive when he was around, but I was really quite alone most of the time. That was hard. (Tammy TOL)

The bitter-sweet postpartum experience, with its highs and lows, was described by everyone. Reports of these experiences contributed to women's evaluations of the total experience.

Postpartum Blues

Women often experience "baby blues" in the early postpartum period. Crying spells, sadness and feelings of unhappiness are not uncommon. Women were asked to relate past experiences with this phenomenon. Postpartum blues were described equally by both the C/S and TOL respondents:

I had the baby blues really bad but I could almost tell it was a hormonal thing, I just didn't feel like myself in my mind and I lost my appetite for about a month, I had to force myself to eat...It was just a really bad case of the baby blues for about a month and a half. I knew it would eventually pass but from day to day you would wait. I would wake up in the morning feeling fine but by lunch I would feel it coming over me and here we go again. That is how I could tell it wasn't just being depressed, it was something with my body just going through the changes. Then one day it stopped and I was fine. (Daria-TOL)

Some of the respondents denied having baby blues but described tearful periods in which they felt fatigued and concerned about the heavy responsibilities of caring for a newborn, however, neither the quality of the data nor number of those reporting this reaction varied between groups:

I was quite expecting them because I think I am predisposed to depression so I had done a fair bit of reading and I was really watching for the signs but nothing really happened. Every now and then when I got so tired, it was hard, and I would sit there and cry, I knew very well what it was and I was totally in control. (Tammy-TOL)

Postpartum Pain

Postpartum pain was described by all of the respondents. Although there did not appear to be a discernably different pattern of postpartum pain between groups, variation in the extent of reported pain ranged from minimal to extreme. For example, Susan (C/S) stated, "No. In fact I guess the pain was so bad when I was in labor that I never noticed any pain after the cesarean. I didn't feel any burning. I didn't feel nothing." Vera, who chose C/S stated, "I had a terrible time sitting up and moving in the bed. The pain was something hard to describe." Types of pain included: incisional pain; pain upon ambulation; gas pains; and pain associated with procedures such as injections and enemas. Pain was managed by injections of Demerol™, while in hospital and oral analgesics at home.

Summary of Interview Data regarding Past Experiences

Several aspects of past experience served as a basis for evaluating childbirth and explain quantitative ratings. When considering the past C/S in totality, a range of events was reported, however, most women were able to portray the experience as positive or negative. A positive C/S experience was characterized as a necessary and life saving procedure. Women who were content with the past were able to justify and rationalize the use of C/S in their particular cases. Women who had time to prepare themselves psychologically for the eventuality of C/S were more positive than those who felt the

event was totally unexpected. Negative evaluations included accounts of painful procedures and exams. Poor communication between health care providers and women led to negative evaluations. Too many professionals involved in their care and hospital policies which restricted interaction with family members were additional negative aspects. Pain was a central focus for evaluation and negative experiences were coupled with feelings of lack of control. The presence of a supportive partner and personal care and attention from nurses contributed to positive reports. The early postpartum period also was discussed in evaluating the total childbirth experience. Family support and absence of postpartum pain and baby blues were included in positive reports.

Differences between groups were subtle, however when data are reviewed several slight but crucial differences emerge. Negative ratings found in the TOL group may be due to a lack of support. More TOL fathers missed the actual childbirth and discontent with past nursing care were observed more often in the TOL group. Literature concurs with this finding, as support from others has been related to positive childbirth experiences (Cain, Pedersen, Azslow, & Kramer, 1984).

Although quantitative results showed that women in the C/S group rated their experiences as more positive, interview data indicated that they were more likely to have experienced prolonged and painful labors. Six women in the TOL group had not labored at all. Additionally, the C/S group reported feelings of failure more often than their TOL counterparts. Possible explanations for why women in the C/S group reported more pain and feelings of failure yet rated the experience as more positive may be found in the literature and quantitative findings. McClain (1990) has mentioned the importance of

bolstering. This phenomenon is one in which the woman makes a choice and then enumerates or reviews the positive aspects of the choice to support the decision made. The past may be viewed positively by C/S women in an effort to bolster a choice for repeat C/S.

Positive experiences may not be related to the amount of pain, but rather how the experience of pain gives rise to an assessment of their abilities to cope. This supposition is supported by the finding that self assessed chances of delivering vaginally was a strong predictor of choice. Quantitative results showed that past experiences did not emerge when this variable was entered into the regression model as a predictor. The reason ratings of past experience failed to emerge is shown in the interview data. Predictions of ability to deliver override or predominate over the rating of past experience. The past is an influence over choice through what the experience tells a woman about herself and her chances for success. Her ability to exert control is central to the development of positive expectations for success.

In summary, differences were observed in reported past childbirth experiences between women choosing TOL and those choosing C/S. The past experience is rated positively to bolster choice. Themes of pain, self concept including self assessed chances of success, control and relationship to others emerge as important influences over choice.

Childbirth Expectations

Women were asked to describe their expectations and to relate what they thought

the upcoming birth might be like. Questions were asked regarding overall concerns and worries about the impending birth. The pain they might experience and how they would cope with it was discussed. Expectations for their partners and nurse care givers were explored also. The amount of intervention expected was included in the descriptions they provided. Past experiences demonstrated subtle differences between those choosing TOL and those choosing C/S. However, differences in expectations were more pronounced.

Concerns Regarding the Upcoming Birth

In determining the expectations for the upcoming birth, concerns and worries about the impending event were ascertained. Both groups, those planning C/S and those planning TOL expressed concern and worry about the unborn baby's welfare:

My greatest concern is for the baby. If they [the babies] are going to be a natural birth - there is the meconium, the cord and there is the trauma of birth...I just hope that everything will go well. In my mind that is the only benefit of a c-section is having the babies out quickly. They are fine and don't have to go through labor. (Violet-TOL)

In addition to the common concern for the welfare of the baby, differences in the worries and concerns were found between groups. Women planning to have a C/S were concerned with the actual procedure of cesarean birth and the postpartum recovery period:

I just hope I take it as well as I did the last time because I came out of it pretty good last time, I wasn't really sore. I just hope it won't be as painful, I won't be in labor when they give me the epidural, I might feel it more but actually I am not too worried. The only thing I want is to see the baby after it is born, that is my main concern right now because I didn't see [my first child]. (Joan-C/S)

The postpartum recovery period was particularly worrisome for C/S mothers. They were concerned about their own recuperation and the care of their children. Barbara who was planning to have a repeat C/S described her concern for her older child:

More than with the new baby it is with the child I have at home already, I don't know if that is normal. I am more worried about him and how he will adjust to the new baby...I think that more than the actual childbirth is what concerns me, my lifestyle is different in that I am coming home to another child and I want to try to make the transition as easy for him as possible.

Elaine (C/S) was worried about the added responsibility of caring for a toddler during a difficult period of recuperation:

The other worries are regarding the recovery, I know how tired you are

and how bad you feel and because I have [an older child] who is only 19 months, I know it is going to be a long and difficult part. That is the only major worry I have. Of course I hope that the baby is healthy but we don't know [about that] until that actually happens. (Elaine-C/S)

Worries and concerns of mothers anticipating a TOL were centered on the process of labor. They expressed concern about the pain and whether the anesthetic would be effective or not. Additionally, for those who had never experienced labor they were concerned about knowing when labor was occurring:

I am worried about labor. I am not worried about delivery. Three days ago [my worry] would have been the same fear that first time mothers have and it's how do you know when you are in labor or how do you know when to go to the hospital? People can tell you a million times that you know when you have to go but if you have never gone through it, it is a very anxious period. (Allison-TOL)

One major concern expressed by those contemplating a TOL involved the possibility of recurring complications thus necessitating a repeat C/S. Women were worried that they would suffer the pain of labor only to wind up with another C/S. Stephanie stated, "I am just plain scared sometimes - it is all going to be repeated again..." Iris, who also chose TOL, expresses her concern that repeated complications

will necessitate another C/S and this concern is combined with worries regarding loss of control:

My biggest worry is that the baby is going to turn again just like it did last time and when it did turn last time, I was not even aware of it. I think it is probably possible, the baby might turn. I am always feeling for the head and right now the feet are up. That is my biggest worry that it will turn and I will have to go through another cesarean and I won't have a say in it. (Iris-TOL)

The same themes generated in the data on past experiences are found in women's expectations. TOL mothers are concerned about their abilities to deliver vaginally and whether they will be able to maintain control over pain and the childbirth process. Another C/S would lead to feelings of failure and lowered self concept. Concerns and worries expressed by the C/S revolve around their relationship to others and their abilities to maintain family roles. The postpartum period, with its concomitant pain and possible incapacity, prohibits fulfilling desired roles and thus becomes worrisome. Both groups expressed a concern for safe passage for themselves and their unborn children.

Pain and Coping Expectations

When asked to describe what they thought the pain might be like for the upcoming

birth, responses were based on the previous experience, and expectations were formed through the use of comparisons. Most women assessed the amount of anticipated pain by stating it would be the same as, better than, or worse than the last time.

As a group, those anticipating TOL expressed more concern about pain than the C/S group. Some of those planning a TOL had their C/S before labor began, for this group the pain of labor was feared as an unknown factor:

I am totally petrified at going through labor when I have never had to do it before. I almost feel like maybe I should have gone back to my prenatal classes and went through them again. I guess if I can go through inductions, I guess it is going to be something like that. I don't know, I have no answers, it worries me. (Ruth-TOL)

Although most women planning a TOL expected more pain during the actual childbirth, they anticipated an easier postpartum period:

I think the pain going through the childbirth is going to be a lot worse but the recovery time is also a lot shorter so that is certainly a big plus, especially with having this little munchkin at home. It is not as easy to run around and take care of a two year old when you can't even move out of bed. (Allison-TOL)

For those choosing C/S, knowing what to expect led women to believe they would experience less pain than with the previous birth. Typical responses were "I think the same or better now that I know what to expect" (Linda-C/S), and "I had suffered with my first cesarean because I didn't know what to expect..." (Alice-C/S). Women planning C/S also indicated a more positive outlook based on not having to experience labor, "I think in some ways it will be easier not having the twenty hours of labor. I know after the medication wears off it will be painful, but at least I won't be so exhausted that I won't be able to cope" (Fern-C/S). One woman, who obviously equated childbirth pain with the pain of labor, responded, "I'm not going to have pain, that is why I'm having a cesarean." (Christy-C/S)

When asked how they planned to cope with the pain, women planning a C/S focused on the postpartum and anticipated taking analgesics. C/S women more often talked about putting up with the pain. For example, "Oh, I just have to go through with it. That's all you can do" (Vera-C/S), and "You just put up with it. The pain is over soon." (Melissa-C/S)

In contrast, the women planning to have a TOL focused on pain associated with labor and delivery and described a variety of approaches to control pain. In addition to analgesics such as Tylenol™ and epidural anesthesia they referred to learned coping strategies: "I am hoping to cope successfully with relaxation techniques" (Marta-TOL) and "Just a focusing and relaxation and breathing." (Nikki-TOL)

Themes of pain and control were particularly apparent in the expectations of TOL women. The expected or known quality of pain of C/S led to diminished pain

expectations in the C/S group. The TOL group expected to play an active role in the use pain control strategies while the C/S group saw themselves as simply bearing the pain.

Expectations Regarding Partners

Women described the expected role of their partners during childbirth and their anticipated emotional reactions to being present at the time of birth. Women in both groups wanted to have their partners present. For all women just "being there" was important:

I have been very, very fortunate in my life but I can cope very well with pain. I'm fairly strong that way. It is my husband that can't. So, he keeps saying to me, "Allison, I hope I don't let you down. I hope I'm going to be there for you." And I hope he is too. I know that he can be a real big help to me. Just him being there. He doesn't have to do all this fancy stuff. I don't care about that. I just want him to be there. (Allison-TOL)

Women gave descriptions of their partners' desires to be present at time of birth. They varied from indications of willing participation, "...he demands that he be there the whole time and I prefer it that way too" (Elaine-C/S), to portrayals of reluctant participation, "He will probably be the same, he goes pale, he doesn't like it, he would

rather not come if it was his choice, but he doesn't have a choice." (Debbie-TOL)

Women anticipated both positive and negative emotional reactions from partners in response to being present at birth. Some women described them as having mixed emotions. A typical response is demonstrated by the following quote:

Well I think he is going to be quite anxious for the health of the baby, I know that is a major concern for him. He is very excited and very happy, he will be thrilled. He might be a little unhappy that it is so early because there is a lot that we would still like to do but that is okay. (Tammy-TOL)

Those planning to have a TOL gave more complete descriptions of their partners' anticipated roles and reactions and also tended to attribute more positive emotional reactions to their partners. They described reactions such as feeling excited, happy, thrilled and thought their partners were looking forward to the experience. Alternatively, the C/S group more often used the terms anxious, scared, nervous, concerned and apprehensive to describe their mates.

Expectations for support were demonstrated by both groups. The C/S group expected emotional support from their partners just by being present at the time of birth, while the TOL group described a supportive role that was more active. TOL partners were expected to provide physical comfort by rubbing backs and holding hands. They were anticipated to serve as labor coach and communication go-between with medical and nursing staff.

In general, fathers were expected to be present during birth and to provide the necessary support for their wives/partners. Women made their expectations known to partners and mutual roles and expectations had been explored. Additional family members were also considered in planning for the upcoming birth:

They have said the children could come and wait but I am going in at 6:30 in the morning if I have it on the 30th and that is a little early for the children and my mother doesn't drive so my husband would have to go and pick them up and I said, "maybe you could find an appropriate time to scoot back and get the kids." He said, "No, I want to be there with you." I can expect that he will be there the whole time and we will figure out how to get the kids there. (Thelma-TOL)

There were no differences in the desire to have fathers participate. Typical responses were "He will be right there" (Daria-TOL) and "Oh, yeah, he will be there the whole time. In fact, he's pretty excited about it. Yeah, he'll be there." (Susan-C/S) Fathers were expected to be present and take an active part in childbirth. Even when a father's reticence was acknowledged, expectations for his participation remained unchanged, he was expected to be there. Women recognized the possibility of negative reactions to being present at birth, yet fathers were expected to be there and be a source of emotional support. Relationships to others, particularly partners, emerges as an influence over decision making.

Nursing Care Expectations

Most women hoped that nursing care would be good for their upcoming childbirth. Expectations were tentative and most women, when asked to describe what they thought nursing care would be like, began by relating what they "hoped" it would be rather than what they actually anticipated. This approach may indicate the lack of control women have over the care they receive. If data on the firm expectations for the partner is compared to those for nursing care, the tentative nature of the expectations becomes even more apparent. Many referred to their previous positive experiences with nursing care and hoped the pattern would continue.

"Supportive" was the term used to describe both groups' expectations of nursing care. However, most responses were phrased in such a way as to indicate a hope for, as well as an expectation of, supportive nursing care. Elaine (C/S) summarized this feeling by stating:

I hope they are as friendly as they were last time. I don't really expect it to be that much different, they may not be quite as friendly but I don't expect the cold shoulder from, at least not from the staff as a whole, there may be one or two crabby people but you take those in stride. I just hope that, it would be nice...they may not be quite so busy.

Issues of control were more predominant in the accounts of the TOL women. For

instance, Allison (TOL) discussed her worries about nurses taking away her personal control:

And the other thing, I guess, I'm a little worried about is the nurses taking over for me. I don't want that to happen and I think that I'm educated enough and have enough self confidence to say, like "This is my birth, too." But, then again I don't want to ruffle any feathers, you know, so I just hope that the nurses, my husband and I can work together and make it positive.

A positive birth experience is anticipated and part of this is a "hoped for" supportive nursing care relationship. Because women are cared for by a group of nurses not previously known to women, a lack of control is manifested in the tentative nature of the expectations.

Expectations for Intervention

Both those planning C/S and TOL expected to have medical intervention. As in other anticipated aspects of the upcoming birth, most women formed their expectations for intervention in relation to their previous childbirth experiences. Although they described a great deal of intervention in their previous births, it was apparent that whatever had been used was deemed acceptable, necessary, and a standard part of

childbirth. Typical responses to "Do you think you will have lots of medical intervention?" included "nothing out of the ordinary" (Edith-C/S), "Probably the same amount as last time" (Alice-TOL), and "Machines will be normal, like last time. Nothing more than last time." (Irene-C/S)

The C/S group was more accepting of intervention. They were less concerned with the use of technology than with the unexpected nature of its use:

Well, I will have the IV, we were just explained all that today and it was wonderful, to hear it all ahead of time. Even if there are [a lot of interventions] it won't be such a scary thing, I don't anticipate it being as fearful as the first two. I imagine it will be to the same degree with the monitors and interventions. (Helen-C/S)

The one thing about getting my first cesarean section really made me familiar with all these needles and machines and everything and I think the second time around I will be used to it. (Rachel-C/S)

The TOL group also accepted technological intervention. There was an acknowledged lack of control over its use, as Arlene (TOL) explained, "I will probably have a lot of examinations because of the students over at the hospital but that is fine, I accept that. As for the machines or whatever we will have to take whatever we need." There was a resignation about the use of technology:

I was quite against shaves [the first time]...I just sort of dropped it because I thought it was going to be the same [this time] even if I request not to get shaved they will probably just do it anyways. I kind of felt like I was out of control there so I don't know. I was really strong against shaving and that stuff before but now I am just kind of going with the flow, so if they give me a choice I will make it then. (Ruth-TOL)

In spite of accepting technological intervention, the TOL group expressed concerns about its use more often than the C/S group:

I know all the stuff about the external and internal fetal monitoring and I think that is pretty common when you are being induced. I just hope I'm going to be able to have some kind of movement when I need it. Sometimes the labors can take an awful long time. I don't really want to be laying strapped to all this equipment for 15 hours, but if it happens it happens, but the doctor told me on Monday that I had started to dilate and soften and all that good stuff so I imagine what he is going to do is break my water first and then kind of wait and see what happens. So, I imagine I will have a certain amount of mobility in the beginning anyways. (Allison-TOL)

Both groups accepted intervention as a necessary part of childbirth. However, the

TOL group revealed expectations that were consistent with their choice of vaginal birth. They anticipated less intervention and more opportunity to exert control over the situation.

Summary of Interview Data on Expectations

In summary, distinct differences between the expectations of C/S and TOL groups were evident in the data. A diverse spectrum of worries and concerns was revealed with welfare of the unborn child taking the lead as primary concern for both groups. However, for C/S women the secondary focus of concern was on pain associated with the actual C/S procedure and postpartum period and for TOL it was the possibility of going through a painful labor only to wind up with another C/S. Although most women expected to experience pain during childbirth, the TOL group was more concerned with pain of labor while C/S women were worried about pain during the postpartum period. Coping strategies of TOL women were action-oriented, aimed at alleviating the pain of labor and birth. Less active strategies such as analgesics, or simply putting up with pain were coping strategies of the C/S women. Partners were expected to be present for both groups, however, C/S women described the emotional reactions of their partners in more negative terms than did their TOL counterparts. Both groups hoped their nursing care would be supportive but the TOL group had more concerns about nursing care. They were particularly worried that nurses might take control away from them. The TOL group was more concerned about the use of medical intervention, however, both TOL and C/S accepted use of technology as an inevitable part of childbirth.

Identical themes were found in past and future expectations. Pain was a dominant theme. Those who planned to have a TOL were concerned about labor pain, while C/S women worried about incisional pain and postpartum discomfort. Relationship to others was a second repeated theme. Partners of TOL women were expected to play a more active role. Control issues emerged in data regarding anticipated nursing care. Nursing support was desired but TOL women expressed concern about nurses taking away control. Intervention was expected by both groups, but TOL women were more likely to question its use. Self concept was a final emerging theme. Women anticipating TOL were most concerned about the pain of labor coupled with another C/S as a sign of failure.

Quantitative ratings of future expectations were significantly related to choice of childbirth approach with the C/S group being more optimistic about the future. The known quality of the experience led to less trepidation on their part. The TOL group had more negative expectations, however, this is not surprising when the qualitative data is considered. Fear of pain associated with labor as well as the possibility of an unwanted C/S led to a less optimistic view of the future. Many of the TOL women had not experienced labor and were very concerned about what it would be like and if they would be able to exert control. The uncertainty led to heightened concern for the future.

Although C/S women were more optimistic about the future, expectations did not emerge as a significant predictor in the logistic regression. The reason is apparent in the qualitative data. Positive ratings of the future are not as predictive as the degree to which a woman believes she is capable of delivering vaginally. The choice is made based on self assessed chances for successful VBAC, then expectations become more positive in

an effort to support that choice. Expectations do not drive decisions, rather they are modified by the choices made.

Decision Making

The Process

Women were asked to describe how they made the decision to have their particular type of delivery. The task of description was difficult for most respondents. They had not previously thought about the actual process of how the decision was made. When encouragement was provided to explore the process of decision making, most women depicted a stepwise progression in which the first step was to gather information, the second was to weigh the advantages and disadvantages, the third was to consult others and finally come to a decision. There was no discernable difference between TOL and C/S groups in descriptions of the process of making decisions. The following excerpts from the interviews exhibit this process:

I usually try to find out all the history and the background knowledge on the subject and then I will discuss it with the person who is knowledgeable in the area and then discuss it with my husband and other family members and then put all of it together and then make the decision. (Rose-C/S)

I am a very logical person, I go through all the pros and all the cons. Before we decided for [our last baby], we spent hours writing down the pros and cons, reading up about it and informing ourselves about it, and just waited from there. Even with all those pros and cons, the main point was - is the baby going to be safe? It is the whole point of the decision.

(Elaine-C/S)

This stepwise progression of decision making was described by those who were able to articulate it. It was difficult for participants to explain the process, however, the role of the physician was included in most explanations of decision making.

The Physician's Role

The majority of women described the physician as playing a central and important role in decision making. In some cases, physicians were perceived as directive:

I haven't really said anything. I don't think a trial labor is going to work but my doctor is bound and determined because he is not too crazy about cesarean sections to begin with and we are going to try labor. It is not my decision anyway. I would be just as happy to schedule it and get it over with because I think that is what is going to happen anyways, but if he thinks I can have it normally then I shouldn't argue because he is the

doctor and I am just the patient. He keeps telling me that if I have it naturally it will be so nice and I will think it is great compared to having a cesarean section. I keep telling him that I don't think that my cesarean section was that bad. (Ruth-TOL)

This directive role was assumed for both C/S and TOL, however, a small group of women described their physicians as sharing jointly in the decision making:

I went through six doctors when I was first pregnant and I said, "no way." Then I went to Dr. _____ and I feel he knows his stuff but he also lets me be a person, I am not a patient because I am pregnant. Based on that he is open to options and he doesn't have a good reason why an option isn't possible he is willing to reconsider. I wouldn't go to someone who considered I was sick and would tell me that this is what you have to do. I am not sick, I am pregnant, that is different. (Nikki-TOL)

An even smaller number of physicians were perceived as non-committal. The decision was left up to the woman "Basically she [the doctor] is looking at it from a purely medical standpoint. I tried to corner her on what she would do and she just will not say. She says she will respect my wish for a trial but if a medical decision has to be made then she will make it" (Tammy-TOL), and "Well, she didn't encourage one way or the other, because saying 50-50 chance is not encouraging one way or the other, she split

it right in half." (Debbie-TOL)

Most physicians were perceived to encourage women to have a TOL. With women who were reluctant to have a TOL, the physician offered control over the length of labor as an added inducement. In exchange for agreeing to a TOL, women asked for and were assured that the length of time in labor would not be as long as in the first childbirth. Stephanie (TOL) explained it in the following manner:

When I went to Dr. _____ and she suggested that they would give me a trial labor and wouldn't let me go as long as last time, but see if I could do it naturally. She explained it and everything and it was basically that was the way it was going to go. It didn't seem as scary once she explained it, it wouldn't go on and on like last time.

When examining the physician's role, the issue of control becomes dominant. Its absence or presence was related to satisfaction with care and care providers:

I would be really upset, this is my baby and I do have a say, it is me and my baby not just some person that they can pick and chose what they want to do. It really should be my decision, I should be included in on the decision, not just they are doing this and that is it. When they did the cesarean I was left right out, it scares you more because you don't know what is happening, they are just deciding what to do and you are left

totally out of it. For me it made things worse because you have no clue what they are doing or what is happening and you are sitting there trying to figure out from what they are saying, what they are going to do. I should have a say in it. (Hilary-TOL)

Many women suggested that if the physician had not agreed with their preference for delivery approach they would have changed physicians. Because most physicians recommended TOL to women, those wanting a repeat C/S often had to be more assertive in retaining control over decision making:

I don't think I ever thought that she [my family physician] would keep to her "No." I can be pretty persistent. I have seen her for a long time and trust that she is open minded, so I knew that I just really had to push her. That was just the first step, then I had to get the obstetrician to say yes. If I would have ended up with a no and time was getting so limited there, I would have probably just learned to live with it but I would definitely have been very unpleased. (Elaine C/S)

When women did make their wishes known and had a scheduled C/S in spite of medical advice, a process of soul searching took place:

I have to admit that I shouldn't be making this decision, when I was in the

hospital and looked at all the other women who had natural childbirth and thought my way was easier. It isn't in the recuperating stage, I am sure I was a lot worse off for the next six weeks than they were, occasionally I have these little thoughts that I am taking the easy way out by doing it this way, but the main reason is for the health of the child. (Elaine C/S)

Physicians' advice is a strong influence over decision making. When the woman's wishes are contrary to that advice, the decision becomes more difficult and women begin to have self doubts about whether they are making the right decision or not.

Influences over Decision Making

Physicians were cited as the most dominant influence over decision making, however, both C/S and TOL women described the influence of others. Partners were mentioned frequently in encouraging one alternative or the other. Some advocated for a C/S:

He is leaning towards the elective section right now, if he had his choice solely, that is what he would choose because he said that he didn't want me to go through what I went through last time in order to have the baby because it was long and painful. (Barbara-C/S)

Other partners encouraged a TOL, "Also my husband, for his sake, he would like to have a normal delivery, but I am not under any pressure from him but it is something I know he would prefer." (Tammy-TOL)

The woman's mother was also influential in the decision for both alternatives, "My mom told me I would like it, she said it was better than having a cesarean, she said the bond is closer" (Hilary-TOL) and "My mother, as soon as she heard it [the uterus] could possibly tear she said I better have another c-section. [She said], 'I don't want anything happening to you.'" (Irene-C/S)

A variety of other people were mentioned as influencing the decision. In addition to partners and mothers, women discussed friends, particularly those who had given birth in the recent past, sisters, sisters-in-law and nurses as contributing to decision making.

Both groups of women based their choice of delivery approach by stating that it was safer for the baby. However, the C/S group felt that it was safer because the baby wouldn't have to go through the stress of labor and childbirth. Alternatively, TOL mothers felt that a C/S section imposed dangers for the baby and that delivering the natural way, vaginally, was safest.

There was a distinct difference in how women assessed their chances for delivering vaginally. C/S women repeatedly assessed their chances for success and decided to have a C/S due to a lack of confidence in being able to deliver vaginally, "I felt that if I couldn't deliver [my last baby] at the weight he was born, I wasn't going to be able to deliver the next baby and I didn't want to put myself through that tiring experience again. And so I decided the cesarean would be the best way to go." (Rose

C/S) Linda (C/S) responded to the question of why she decided to have a C/S by saying, "I guess it was because it sounded like hard and painful for nothing." Irene (C/S) described this feeling as:

So if this baby is even bigger, there is more of a chance of a c. again. And we would rather have control over that decision rather than leave the hospital to say, "Well, Irene will go through eight hours of intensive pain and labor and then no, we've changed our minds and we are going to do a c. anyways."

Alternatively, those choosing TOL indicated a quite different influence. One of the strongest influences for this group was the belief that there is a shorter postpartum recuperation period for those delivering vaginally:

I guess first and foremost because I don't want to have another seven day hospital stay. That was probably the worst time of my life, being in the hospital for that many days. I want to keep that short, I want to feel well a lot more quickly than I did the last, although it wasn't a real horrible experience, the operation and recovery. I see these women who are up three hours after they have their babies and they are walking around and they are eating. That is attractive. I have a little boy at home and I am not to crazy to leave him for a whole week, that is going to be very

upsetting for me to be away for a whole week. (Tammy-TOL)

I think the most important reason for wanting to have a trial of labor rather than a cesarean for me is that I have a son at home who is almost two and he is at an age where he still needs picking up and cuddling and I know that after a cesarean I will be really limited in how much I can do with him. I am hoping to be able to have a successful labor. (Marta-TOL)

Several women talked about delivering "naturally" and how important that was to them. One woman stated, "Simply because it is the natural way of childbirth" and Glenda (TOL) explained:

I guess just because that is the way you are supposed to have babies. For me, my cesarean was a good experience basically, and it was a good recovery and I don't have horror stories to tell about having had a cesarean. I don't know what was really my big decision, that is the way it is supposed to be and that is the way I want to try and do it ...

Summary of Interview Data on Decision Making

Study participants found it difficult to describe the process of decision making but most referred to a stepwise progression of weighing pros and cons and consulting others.

The physician played a dominant role in decision making for all women in the study. Most physicians recommended TOL to women, therefore, those wanting a C/S had to be assertive with physicians to obtain their desired delivery approach.

Women included a wide variety of others in decision making including, partners, mothers, sisters, friends and other relatives. The safety of the baby was the major motivating factor for choice of childbirth approach. Cesarean mothers felt the baby would be safer because it would not have to undergo the stress of vaginal delivery and TOL felt it would be safer because the baby would not be exposed to the possible dangers of C/S. One of the most important influences on C/S women was a self assessed likelihood of failure. These women were largely convinced that they could not deliver vaginally even if they decided to have a TOL. A predominant influence on choice for TOL was the chance to deliver in the normal or natural way and the quicker recovery associated with vaginal delivery.

Quantitative findings showed that perceived physician preference was the strongest predictor of choice. This was apparent in the qualitative data as well. In addition to support for the influence of physicians, the intricacies of decision making were revealed. The issue of control over decision making is shown to be central to the decision making process. This variable failed to emerge as a significant predictor of choice in the qualitative data however. Women who participated in the study were in the final weeks of pregnancy. By this time differences between physician advice and choice were resolved. Women trusted in their physicians and although they encountered initial differences of opinion early in the pregnancy, by time of interview issues of control had

been resolved and most perceived their physicians to be in agreement with their point of view.

The three predictor variables, physician preference, chances of success and number of previous C/S were described as important in the qualitative and quantitative data. In addition to the support for these variables as important influences over choice, interview data provided a basis for development of a model of decision making unique to the TOL versus repeat C/S choice. Four themes emerged from the qualitative data which serve to describe the mechanism of influence imposed by the predictor variables. Interpretation of pain, self concept, control and relationship to others emerged as central themes which enlarged understanding of influences on the decision. The following chapter describes these themes and provides supporting arguments for the proposed model of decision making.

CHAPTER VI: EMERGING THEMES AS INFLUENCES ON DECISION MAKING

Introduction

This chapter examines influences over decision making which were revealed in the quantitative and qualitative data. Themes derived from the data will be explored in more depth. Using both sets of data, influences over decision making are described in a model of decision making specific to the C/S versus TOL decision.

Chapter IV examined the effects of past experience, future expectations, perceived physician attitude, and preference for control over decision making from a quantitative perspective. Women choosing repeat C/S were more optimistic about the future and rated their past experiences more positively. Perceived physician attitudes played a central role in decision making yet the degree to which a woman desired to maintain control over decision making was not predictive of delivery approach choice. The strongest predictors of choice were a woman's self assessed chances of delivering vaginally, her perception of her physician's attitude and number of previous C/S. Those with more than one C/S were more likely to choose a repeat C/S.

Interview data exploring past experiences, future expectations, perceived physician attitude and control over decision making were summarized in Chapter V. As in the quantitative data, qualitative data revealed that women choosing C/S rate their past experiences as more positive than those choosing TOL. It is suggested that reports were

more positive because C/S women remembered selective positive aspects of the past experience to support the choice for repeat C/S. Although the past was an important influence on decision making, it was not how positive or negative the previous experience was, but rather how the experience contributed to the formulation of expected ability to deliver vaginally. Cesarean women also had more positive expectations. Women choosing TOL were faced with pain of labor and the possibility of an unwanted repeat C/S and therefore, had lower expectations. The degree to which expectations were positive was not predictive of choice, the expectation of successful VBAC, however, was predictive. A reciprocal action between past experiences and future expectations was demonstrated. The past formed the basis for future expectations and expectations were affirmed through the selective review of elements of the past.

Perceived physician preference was revealed to be a strong predictor of choice in both sets of data. However, control over decision making failed to emerge as a significant predictor of choice. Interview data revealed the complex balance of control over decision making within the physician-patient relationship. The impact of the physician is discussed in regard to trust, control and affirmation. The trusting relationship between a woman and her physician overrode needs for control. Women used physician advice to affirm the chosen alternative and disconfirm the rejected approach.

The following discussion examines the themes which were generated in the first step in qualitative analysis. Analysis produced four major themes: interpretation of pain, self concept, control and relationship to others. Women's interpretation of childbirth pain led to choices which were consistent with socially constructed meanings and personal

values. Self concepts were altered by past experience and led to decisions which provided avoidance of lowered self esteem and heightened opportunities for success. The amount of personal control exercised in the past and desired for the upcoming birth was related to self concept and served as an additional influence. Women's relationships to others and their desired role within the family also affected their choice of childbirth approaches. The concepts do not affect decision making as individual influences, but are interrelated. Each influences the other and ultimately affects how the individual makes a choice between the alternatives.

Interpretation of Pain

The focus for study of childbirth pain has been on measuring physiological processes and intensity. Pain as a human experience, as opposed to a physiological process, has not been investigated to a great extent (Good, Good, Kleinman & Brodwin, 1992). The subjective nature of the pain experience has been recognized, however, childbirth pain within social and cultural contexts has not been studied widely.

The meaning of childbirth pain is derived from the social context within the realm of personal experience. Kleinman (1992) refers to these contexts of belief and behavior as "local moral worlds" (p. 172). He describes local moral worlds as particular, intersubjective and constitutive of the lived flow of experience. However, there is an underlying unification of individual local moral worlds found in language, kinship, emotions and aesthetic preferences derived from social and cultural customs. "For an

ethnography of experience, the challenge is to describe the processual elaboration of the undergoing, the enduring, the bearing of pain...in the vital flow of intersubjective engagements in a particular local world" (p.190).

Understanding of childbirth pain is enhanced by examining individual perspectives and ideologies. "The intersubjective experience of individuals in pain must be given legitimacy and placed at the center of analysis" (Good, et al., 1992, p. 199). Women hold unique systems of belief regarding pregnancy and childbirth. They are sets of beliefs and values referred to as childbirth ideologies. The following section describes the relationship of pain to choice of childbirth approach through the exploration of the meaning of pain to the individual within her unique social context and ideological perspective.

The extent to which pain is perceived as a natural and thus acceptable part of childbirth, the degree to which a woman expects intensity of pain to be under her personal control, and the degree to which this in turn influences her self image are interrelated concepts influencing childbirth decisions. The way in which pain is interpreted is related to choice of childbirth delivery approach.

Previous research has indicated that women chose repeat C/S to avoid the pain of labor (Joseph, et al., 1991; Kirk et al., 1990; McClain, 1990). Yet, avoidance of pain has also been identified as a determining factor in choosing TOL. Murphy and Harvey (1989) found that while those choosing C/S do so to avoid the pain of labor, those choosing TOL do so to avoid the pain associated with the difficult and painful C/S postpartum recovery period.

An initial examination of data in this study also might lead to the conclusion that women choose delivery approach to avoid pain: "...I remember thinking to myself, another section would be okay, then I wouldn't have to go through labor again." (Barbara-C/S) Choice for TOL was also influenced by a desire to avoid pain, "...I have gone through the cesarean and the recuperation period is more painful and I would like to try it normally so that I don't have another cut." (Jocelyn-TOL)

A more in-depth examination of the data reveals that although avoidance of pain was present in the dialogue, it is how pain was interpreted within the individual social context that is the critical issue. It is an oversimplification to assume that a major determinant of delivery approach is to avoid pain. In fact, women in some cases saw the pain of labor as a positive aspect of childbirth:

I wouldn't mind having some labor because then it gives you the feeling that you are having the baby, but I don't want to go through the whole thing again, if they said it would be five hours of labor I would say okay, but other than that no. (Joan-C/S)

This baby is scheduled for a cesarean on the 20th of February which is very close to the due date. The way this pregnancy is progressing, something inside me tells me I am not going to make it to that date, so I may get to know what the beginnings of labor are like, which may be satisfying just to be able to say that I do know what it feels like. (Elaine-

C/S)

Childbirth pain was part of an accepted ideology of what childbirth should be. Pain was perceived as a necessary, if not welcome part of the philosophy of natural childbirth. However, when a natural birth was perceived as unattainable, pain took on a different meaning. Pain was associated with the event going awry and was a violation of natural childbirth ideology. Women repeatedly stressed they wouldn't mind the pain of labor if it resulted in a normal vaginal delivery. Women didn't want to go through extreme pain just to wind up with another C/S. It is not a simple avoidance of pain, but rather, avoidance of what they perceived as unnecessary suffering coupled with an unexpected, unnatural event.

I would hate to go through what I went through the first time and have a repeat anyway. I never made a decision until last month or so to have a cesarean, up until then I thought I would try with a trial of labor. I just don't want to be put through that again, and it isn't something that someone can guarantee you. (Karen-C/S)

Further support for interpretation of past pain as an influence over decision making was disclosed. It generally is expected that experiences which are fraught with pain are most often associated with negative memories. However, study findings did not support this contention. Women in the C/S group were more likely to report extreme pain

associated with childbirth, yet rated their experiences more positively than the TOL group. This finding at first glance would seem to be illogical or contradictory. A possible explanation is that the amount of pain is not as important as how one copes with pain. Although pain is an important part of evaluating the experience, it is remembered and rated within the total experience. Salmon and Drew (1992) found a multidimensional quality of childbirth experience in which pain is independent of feelings of fulfilment. A positive birth experience was associated with feelings of involvement and achievement. Alternatively, distress was associated with loss of control and these relationships were independent of the amount of pain experienced.

The meaning of pain and how the individual copes with pain are interpreted within the local world of individuals, influenced by personal ideologies and in turn influencing perception of the total experience. Lumley and Astbury (1980) state, "Having severe, even uncontrollable, pain involved more than the pain itself. It also involved the awareness that pain was evidence of deviation from a model of what they felt childbirth should have been like" (p.50).

Past pain experiences also led to the formulation of expectations for future pain. Interview material indicated that positive attitudes of women were related to expectations regarding pain and the ability to cope with pain. Quantitative results showed that those choosing a C/S had significantly more positive or optimistic expectations for their upcoming births. Cesarean women based their optimism on the "known" quality of the experience. In contrast, women choosing TOL held less optimistic expectations for childbirth due to the unknown factor of the upcoming labor: "I am totally petrified at

going through labor when I have never had to do it before." (Ruth-TOL)

I don't know, the closer it gets to the delivery date, to the anticipated delivery date, the more I start to feel that past pain. Hopefully it will be better, if not, there is always that epidural that you can ask for I guess. At least I do know what to anticipate...(Jocelyn-TOL)

The future scenarios women depicted were based on past interpretation of pain. Positive aspects of the experience were used to affirm the decision. Thelma (C/S), in affirming her decision stated:

I have had good experiences, I don't think I really have a high pain threshold but I think it is knowing what is available and keeping control of it, and secondly, I think I heal very quickly, I think that is quite obvious from a number of things that have happened.

Expectations regarding the amount of pain that would be experienced were developed within a social context. Pain and its place within a childbirth ideology were reviewed. Women found comfort in knowing what the upcoming childbirth would be like, based on past experiences, and were reassured by instances of successful coping in the past. Previous support from partners was reviewed and expectations developed. Plans for social support were made and partners' participation planned. Those who had never

experienced labor and perceived it as an "unknown quantity" were less optimistic. The meaning ascribed to childbirth pain was based on childbirth ideologies. Pain experiences were coupled with reviews of past performance, and those who adhered to a philosophy which stressed performance often found themselves lacking. They chose avenues to prove themselves and enhance their self concepts in upcoming deliveries.

Self Concept

Self concept was the second emerging influence on decision making. The quantitative relationship between negative ratings of past experience and subsequent choice for TOL was illuminated by the qualitative findings. Those in the TOL group rated their past experience more negatively and interview data revealed that those choosing TOL more often expressed feelings of guilt, failure and self blame in regard to their previous C/S. Self blame contributed to a sense of failure and resulted from an ideology that placed responsibility for control over childbirth on the individual. Self assessment in terms of one's ability to control or perform resulted in choice of TOL to provide another opportunity to prove oneself. A sense of inability to perform or control also led to selection of repeat C/S. Those who rated their abilities to deliver vaginally as low, chose C/S.

This sense of defeat or inability is especially apparent in those who have had two previous C/S. Quantitative results indicated that having had two previous cesareans was highly predictive of choice for a subsequent C/S. The added effects of two births

perceived as failures led women to feel resigned to the belief that they had to surrender any hope of normal vaginal delivery:

...you have this feeling, that my body has failed twice now, I don't even trust it to do it the third time properly, the way the textbooks write it up to be done...I don't think I weighed the factors as much this time as I did the second time around. This time it is more a feeling that you have been conquered, let's get on with it and plan it. (Helen-C/S)

Joan (C/S) expressed her defeat by saying, "You can't say well, I want this kid come hell or high water to come naturally. If you can't, you can't. That is something you have to face, I just faced it and that is it." Feelings of failure and subsequent resignation to repeat C/S are observed in the following, "I guess I felt bad because I felt that there was something that I had done wrong. But, this one, I've sort of grown accustomed to having a cesarean...(Alice-C/S)

Quantitative results support judgements about ability to deliver vaginally as the best predictor of delivery choice. Women's review of past experiences influenced the level of confidence in their abilities. The remembered experience and individual performance was evaluated in relation to values and personal ideologies. The choice for childbirth approach was then dictated by the estimated chance of being able to deliver vaginally.

McClain (1990) stressed the influence of personal ideologies and cultural models

as important influences over decision making. She states, "...their evaluations of the previous cesarean both reflected and shaped their personal ideologies about reproduction and their images of themselves as individuals, as mothers, and as women" (p 208).

Personal childbirth ideologies incorporate a system of beliefs about childbirth, including expected and desired roles and behaviors. Past experiences are reviewed within the context of personal ideology and performance compared to ideal scenarios. The self concept is formed through how well one meets the ideological ideal.

One of the strongest cultural influences which has shaped the North American childbirth experience has been the ideology of natural childbirth. This approach discourages the use of technology and medical intervention. Also implicit is the belief that the quality of the birth experience is within the personal control of the woman. The gap between expectations for natural childbirth and the reality of modern obstetrics precipitates negative self concepts when a C/S is required (Marut & Mercer, 1979).

Lumley and Astbury (1980), Brewin and Bradley (1982) and Tcheng (1984) compared women exposed to natural childbirth philosophies in prenatal classes with those not taking classes and hence, possibly less familiar with natural childbirth philosophies. The investigators found that women who took classes were more likely to have expectations for a childbirth in which very little intervention was used and one in which the pain of childbirth was minimized through the use of personal control. Unrealistic expectations engendered by the ideology led to a lowered sense of self esteem. Expectations were developed that led women to believe pain would be minimized through the application of learned techniques. After childbirth, women interpreted pain and

reviewed their abilities to cope within a philosophical context which made them judge themselves harshly.

There were repeated references in the interviews, as well as the literature, to giving birth in the natural way and how important that was to women. "I kept thinking, I had gone to childbirth classes and I am a naturalist, if anybody would be for natural childbirth, I think I would be. If I was 'normal' in every way I would have a home delivery with a midwife and be happy." (Betty-TOL)

I would kind of like to experience having a baby. When you have a cesarean it is not the same, part of me is scared and I would prefer to have a cesarean because it is much easier in my way of thinking because you just lay there. But part of me would like to try doing it the real way.
(Mary-TOL)

Unmet expectations for a birth that fit within the natural birth ideology led to feelings of diminished self worth and disappointment:

It was just, I don't know, it was more like surgery than it was of a natural birth. We went to prenatal and we were built up to believe that we were going to have this natural baby, the natural way, and it was going to be all happy and it wasn't going to be so scary. It wasn't a happy time...(Rachel-C/S)

...it seemed like I kept thinking of things that I could have done differently or I was blaming myself basically. When girlfriends ask I sort of wish that I was more like them having them the normal way, vaginally." (Edith-C/S)

Disappointment is apparent in the following statement for both Maureen (TOL) and her husband, "I really feel like I missed out on something. My husband and I were really looking forward to him being there and he was going to cut the cord and everything...I really want a normal birth this time."

This important relationship between ideology, self concept and decision making is further exhibited in the effort to protect or bolster one's self concept. Women protected themselves from a sense of failure in reviewing their past experiences. In an effort to protect their self concepts, women considered themselves as blameless and C/S as inevitable.

Sandelowski and Bustamante (1986) found women attributed the cause for C/S to characteristics of their anatomies rather than their own abilities, motivation or performance. Similarly, interviews revealed two approaches women used to protect self images. First, women removed the cause for C/S from within the realm of their control. They perceived their bodies, for which they were not responsible, as separate from themselves as individuals. Characteristics of their anatomies or complications beyond their control were often to blame, "...my pelvic area is too small" (Pam C/S), "...the placenta came off" (Georgia-C/S), and "...because of the high blood pressure." (Jocelyn-

TOL) Alternatively, the baby was often perceived as a determining force. "Okay, we found that he was breech about a month before he was born, they tried turning him and he wouldn't turn" (Glenda-TOL), "...it sounded like she was up very high so we sort of thought that it was probably best because she probably wouldn't come down and that she wouldn't fit and that was why we made our decision that way" (Thelma-C/S), and "...she was squeezing her placenta, cutting off her air supply..." (Susan-C/S)

A second approach to protect the self concept involved focusing on the end result rather than the events leading to birth. This strategy is illustrated in the following quotes: "After I had him I felt really good that I had done that [had a C/S], I had a healthy baby and I was okay" (Glenda-TOL), "Well at the time it was a relief just to have the baby safe and sound" (Marta-TOL), and "It was like if my baby is healthy then I don't care how she comes out." (Allison-TOL)

My mom always told me once you go through all the pain, once you see the baby you forget it all. I was [thinking], how could you forget all this pain, but it is true. After you have the baby, you forget all that happened in between, you going in the hospital and it being born. The baby makes it all worthwhile. (Hilary-TOL)

Sandelowski and Bustamante (1986) explain this effort to protect the self concept as, "The women emphasized the outcomes of birth rather than the process of birth, and frequently rated those outcomes high despite complaints about the process" (p. 85).

In spite of efforts to protect the self concept, several women in the present study associated their past experiences with a sense of failure. Those who associated their previous C/S with failure and chose a repeat C/S had very little confidence in their ability to deliver vaginally. This was particularly evident in those with two previous cesareans. Those choosing TOL perceived it as an opportunity to prove themselves through successful vaginal delivery.

When previous experiences engender a sense of failure, women's expectations for future events are affected. A primary concept of social learning theory is Bandura's conceptualization of self-efficacy (1977, 1978, 1982). Self efficacy refers to personal expectations of mastery. The most influential source of self-efficacy expectancies is past performance accomplishments. Women who have had positive birth experiences have been shown to have a sense of mastery and be more confident in their abilities to cope with future stresses. According to Lowe (1991), "...confidence in one's ability to cope with specific situations is most positively influenced by successfully accomplishing or coping with those situations" (p.458).

Bandura (1977) states, "The strength of people's convictions in their own effectiveness is likely to affect whether they will even try to cope with given situations" (p.193). Quantitative findings showing self assessed chances for successful VBAC as an important predictor variable as well as qualitative data revealing the association between self concept and choice lend credence to this tenet.

The themes of interpretation of pain and self concept are closely related to the third theme which is control. Tchong (1984) explains the sense of failure and lowered

self esteem as being related to a loss of control and unmet expectations, "For many women the surgery symbolizes a profound loss of control which generates tremendous anxiety. Viewing prenatal natural childbirth preparation in the context of a way to attain and maintain control makes the anxiety following loss of control understandable" (p. 332).

Personal Control

The third influence closely related to interpretation of pain and self concept is personal control. Loss of control over one's own behavior or the behavior of others has been associated with negative interpretations of past childbirth experience (Butani & Hodnett, 1980).

Pain interpreted as extreme coupled with a feeling of inability to cope can lead to loss of personal control, which in turn leads to a lower self concept and an absence of a sense of mastery. Several studies have supported the contention that loss of control results in diminished self-esteem. Butani and Hodnett (1980) found a relationship between self-esteem and control. Primiparous and multiparous women in their study expressed regrets about their behavior during labor which led to feelings of inadequacy and negative interpretations of the experience.

Negative experiences were also associated with feelings of loss of personal control in a study by Tilden and Lipson (1981). These authors state, "For many women the surgery symbolizes a profound loss of control which generates tremendous anxiety" (p.136). Cesarean deliveries were associated with loss of self esteem in a study by Cox

and Smith (1982). Women in their study who had cesarean births had lower self esteem scores and this was attributed to unmet desires to participate in the birth experience.

Conversely, satisfaction with the childbirth experience has been associated with control (Lipson, 1984). Mastery, described as self control, independence and self reliance, was associated with childbirth satisfaction in a study by Humenick and Bugen (1981). Confidence in one's ability to control pain was predictive of satisfaction with the childbirth experience (Crowe and von Baeyer, 1989). Some have suggested that all women in labor have the need to maintain control (Hodnett, 1982; Marut & Mercer, 1979).

Interview data, in the present study, revealed issues of control as well. Control over the situation and events and maintaining self control was important to women in this study. Choices were often based on the perceived amount of control inherent in the two alternatives. Betty (TOL), who described her previous C/S as a negative experience stated, "...it seems like they do everything sort of like clock work. And once you sign the form it is like giving yourself up to be a guinea pig, that is how I feel, I had really felt like I had lost control at that point." She went on to explain:

This time I am even resisting, I didn't even go to the doctor until I was four or five months pregnant because I said what is the use, it is going to end up the way it is going to end up anyway. It is not like they can change the course, you can't change your body too much.

The unexpected nature of past events was related to loss of personal control and also influenced perception of childbirth and decision making. Enkin (1977) described this phenomenon as, "If it [the C/S] is a sudden decision, she often feels cheated, and even devastated. If she has had prepared childbirth classes, she has usually been prepared only for a normal birth. She has heard of cesareans, but she feels sure that they happen to someone else" (p.100). Anger toward physicians and prenatal class instructors for not preparing them for C/S has been a reported concomitant of unexpected C/S (Erb, et al., 1983). Affonso and Stichler (1980) attributed dissatisfaction, depression and angry feelings to lack of congruency between expectations and actual events in a group of C/S women.

Women in the present study discussed their feelings of fear and anxiety about past C/S in relation to it being unanticipated.

So, it was a horrible experience. It just went from bad to worse. It was nothing we ever expected from the beginning, and having a c. section was just another part of it. Like I never dreamed that I would have to have a c. section. (Violet-TOL)

...prenatal doesn't prepare you for the fact that you might have a cesarean section, they go totally on the assumption that the baby is going to come naturally. That is something they should start preparing the first time mothers for, a cesarean section. They did show a film but they didn't

really stress--this might happen to you, this is what will happen. (Rachel-C/S)

The need for control was a part of the explanations women gave for deciding on delivery approach. The following example expresses the lack of control Hilary felt during her unexpected C/S. She subsequently chose to have a TOL for her current pregnancy as an alternative allowing enhanced opportunity to exercise control.

...this is my baby and I do have a say, it is me and my baby not just some person that they can pick and choose what they want to do. It really should be my decision, I should be included in on the decision, not just they are doing this and that is it. When they did the cesarean I was left right out, it scares you more because you don't know what is happening, they are just deciding what to do and you are left totally out of it. For me it made things worse because you have no clue what they are doing or what is happening and you are sitting there trying to figure out from what they are saying what they are going to do. I should have a say in it.

The issue of control was instrumental in the choice for C/S as well. Irene described the sense of control gained in having a scheduled C/S. She found comfort in a pre-scheduled C/S date because it gave her a sense of control. She did not want to leave the decision for C/S to the physicians during a potentially unsuccessful TOL. She

states, "It's always nice to be able to make that decision [for C/S] yourself instead of leaving it up to the doctor."

Many women expressed a concern about losing control over self during labor. "But I am afraid of how bad it is going to get, I don't like to be out of control. I am afraid that it is going to be that hard and go all out of control again." (Stephanie-TOL) Some women who had emergency C/S chose an elective repeat C/S because of the opportunity to make the decision under more controlled circumstances. Helen (C/S), who had an emergency C/S the first time describes her second C/S as under more control:

...there was at some time, hours before when an emergency might have happened and we all, the doctor, my husband and myself, all decided to have a cesarean section. It was much more pleasant, there was time for a few minutes of decision making...If it [the C/S] is at a time where I can have some control over it I certainly would like to. (Helen-C/S)

Control and a sense of mastery are gained through previous experience. Reviewing past childbirth in relation to elements of control and self concept influenced the decisions women made. They looked for avenues to increase self esteem and enhance control. For some who judged themselves harshly, TOL represented an alternative in which they might prove themselves through mastery. Yet, for others repeat C/S as a scheduled and known entity represented an opportunity to avoid lowered self concept and was perceived as an approach allowing them a sense of control.

The theme of personal control was evident in expectations as well as in past experiences. Decisions for delivery approach were often based on expectations for control. Women based their decisions on opportunities to exercise control. Tammy (TOL) felt knowing what to expect would allow her to remain in control during a TOL:

Well, having been through it once it would be much easier, knowing what to expect. I think I would be more in a position to say, no I don't want this and yes I do want that, sort of demand the attention I need, instead of just laying there and expecting them to do it all.

Expectations for self control and control of others, including the situation, were tempered by past experience. Knowing what to expect led women to believe that maintaining self control would be easier for the upcoming delivery, particularly when repeat C/S was chosen. Many expressed a desire for control over their childbirth experience, but expressed concerns that nurses might not permit it, based on past experiences.

Relationships with Others

The fourth influence was women's relationships with others. Influences on decision making were derived from past experiences and relationships with nurses, doctors, partners/husbands and families. Women did not make decisions in isolation, they

considered and were influenced by the social realities of their lives. Past experiences and present needs of family influenced the decision as did the advice from and relationship with the physician. Evidence in support of the importance of relationships to significant others in decision making was found in the literature and qualitative data.

Carol Gilligan (1982) has emphasized the importance of human relationships in her study of women's moral decision making. She suggests that women define themselves based on their relationships to others. "Women's sense of self is defined and developed based on their ability to make and maintain relationships" (p. 169). The way in which they make decisions is also intimately related to human "connectedness." Decisions are made within the context of relationships. Personal rights versus responsibility to others and selfishness versus self-sacrifice are the dichotomies that serve as a basis for dilemmas in decision making. "...the opposition between selfishness and responsibility complicates for women the issue of choice" (p. 138). Authors found that when dilemmas arose, choices were made by women on the basis of an ethic of nurturance, responsibility and care. Alternatives were selected which were consistent with this ethic.

Interview data also emphasized the importance of relationships to others. Quantitative results indicated that women choosing C/S rated the experience more positively. Qualitative findings revealed a higher number of these women had their partners present during birth. Women who had negative experiences reported a lack of support from their care givers and their spouses. Tilden and Lipson (1981) indicated spousal support as a major influence on the evaluation of childbirth. Women in their

study were more satisfied with their C/S experience when husbands were present. Likewise, in the present study those separated from their husbands during the previous birth indicated that this was the most important factor to change in the upcoming birth:

...the cesarean room was a general operating area and for that reason my husband wasn't allowed to be there. I didn't find this out until the day of the cesarean, it was an oversight, but I would say the one thing that would have made it a lot more pleasant would have been if my husband could have been with me. (Marta TOL)

All women desired the presence of their partners at the impending delivery and based decisions for delivery approach on the likelihood of spousal participation.

Women were asked if other people in their lives were influential in making the decision. Influence of the partner over decision making is revealed in the following quotes: "Just my husband, he doesn't want to see me go through what I did last time because he didn't think it was really necessary to go through, especially if they knew the baby was too big for me..." (Joan-C/S), "Also my husband, for his sake, he would like to have a normal delivery, but I am not under any pressure from him, but it is something I know he would prefer" (Tammy-TOL), and "Yes, my husband, he liked the idea. The doctor had told him when we had her that there was no possible chance and it really scared him and he didn't want anything to harm the baby so he would rather me have the cesarean section." (Rose-C/S)

Previous research has indicated that women chose C/S because of the convenience of a known scheduled date. They can prepare and freeze meals in advance, arrange baby sitters and not have to worry about having to go to hospital in the middle of the night (Joseph, et al., 1991; Kirk, et al., 1990; Meier & Porreco, 1982). Evidence of this phenomenon was present in the interviews, "...I wanted to know ahead of time to arrange for home care and other stuff like that, and get ready for Christmas." (Irene-C/S)

However, when the qualitative data are examined more closely it is not simply the convenience of making arrangements, but what this means in terms of family relationships. Tammy chose a TOL in order to care for and nurture her toddler. She hoped to avoid the longer stay and separation from her child necessitated by C/S, "I guess first and foremost because I don't want to have another seven day hospital stay...I have a little boy at home and I am not too crazy to leave him for a whole week, that is going to be very upsetting for me to be away for a whole week." (Tammy-TOL) Many women, when questioned directly about the influence of convenience, denied its impact, "It has been tempting, but every time I think about it, oh that is silly. It would be nice to know the date especially with one at home, to make child care arrangements and stuff but no, in the end it was not part of the decision at all." (Tammy-TOL) "I know I have been thinking about it lately because of my younger one at home always wants to be picked up and played with and sit on my lap. And I kind of want to get back into that sooner. But it's nothing like I want to know the date or anything like that." (Teresa-TOL)

Those having a scheduled C/S described the convenience as a possible benefit but did not indicate that it played a major role in decision making: "Then it would be

convenient with having another child at home, making the sitting arrangements, have everything organized and not have any of these surprises in the middle of the night. But really, it is the safety of the baby." (Barbara-C/S) The role the woman assumes within the family makes the convenience of a scheduled C/S important. The woman who sees her role as primary care giver for her family recognizes the benefits of decisions which allow her the opportunity to continue to fulfil that role.

Through the analysis and interpretation of past experience, relationships with physicians were reviewed. Those who rated the experience negatively reported problems with interpersonal communication and lack of caring on the part of physicians. In some cases where the physician was perceived negatively, a different physician was sought for the present pregnancy. One woman went to six physicians before finding one that she felt shared her ideology of childbirth. A shared ideology was an important factor in a study by Morcos, Snart and Harley (1989a & b). Sixty-five percent of the women in their study thought it was very important that if a doctor other than their own physician attend the birth, the two physicians share a common philosophy. Only 27 percent, however, thought this was likely to occur. The past relationship with the physician cannot be interpreted in isolation of the event. It is influenced by how the event is remembered. Experiences judged as negative have also included negative reports of care givers (Janis, 1958). There is a totality of the past experience in which negative attitudes are all encompassing and those in control are perceived to be to blame.

Past relationships with nurses were also reviewed. There was a higher number of negative reports from those choosing TOL. Several incidents of dissatisfaction with

nursing care were described, however, they were frequently coupled with an explanation. For example, the nurses were overworked, busy, and had too many patients. Nursing care was described by all women in the study and was an integral part of past experiences. Women hoped to receive support from nurses in their upcoming deliveries. The theme of control once again emerged in the data as women described their hopes for positive supportive nursing care without having their personal control taken away.

Relationships with others as an influence on decision making was present in data regarding future expectations. The role the husband would play was specified and well defined. All women expected partners to participate and chose alternatives which would allow the opportunity for them to take part in the experience at the desired level. The social context of women's lives incorporated roles of partner/spouse, nurturer and primary care giver. Choices were made that allowed a continuation of those roles. Expectations and plans for the couple's previous children were evident in the data as were desires for safe passage for the unborn child.

Nursing care was desired but not necessarily expected to be supportive. Women wanted support from nurses without having options for control taken away. The expected role of the physician was based on an established trusting relationship. Future scenarios were depicted and relied on an assumption that the physician would act in the best interests of the woman and her child. The relationship between the woman and her physician was extremely important and influential in decision making.

The Role of the Physician and Control over Decision Making

Quantitative results showed that the perceived attitude of the physician toward the alternatives was the most important predictor of choice. The woman's physician and her relationship to her/him played a dominant role in decision making. Women indicated repeatedly that the reason for the previous C/S was based on physician advice and that the present alternative also was chosen due to physician recommendations.

A reliance on physician advice for decision making often incorporated a statement of trust in the physician's abilities: "I guess that even though you read up on it, to me he still knows more about it than I will ever know so I then take what he says as having a lot of weight" (Linda-C/S), "I have every faith in the nurses and doctors that they know what they are doing, I don't" (Wendy-TOL), and "I feel confident with my family doctor that he will let me go for the trial but if nothing happens they won't let me suffer for a long time before they decide to do the cesarean." (Mary-TOL)

Tilden and Lipson (1981) examined attitudes of women having C/S and also found the relationship between women and their physicians to be centered around trust. Those women who judged their physicians as competent yet caring, were less anxious and more positive about the experience.

McClain (1990) describes a process in which women cite medical authority to justify their decisions. This process also was described by women in the present study:

Right from my first prenatal visit he said, "Is there any reason why you

were told you can't deliver a baby?" And I said, "No, nothing was ever told to me why I couldn't." And he said, "Good, then we'll have this one naturally." So I was right from the beginning. (Allison-TOL)

Women used medical opinion to affirm their decisions, however, there were instances in which disagreements between physician and woman occurred. In these cases women changed physicians, assertively convinced the physician to change his/her mind or demanded their own choices. Irene saw the choice as hers to make and insisted on having a C/S, "She [the doctor] did suggest going to a trial of labor at first and I just told her, no." Elaine described a continuing, frustrating process in which she had to convince more than one physician to allow her a C/S.

...very angry with her. I don't think I ever thought that she would keep to her "no," I can be pretty persistent. I have seen her for a long time and trust that she is open minded, so I knew that I just really had to push her. That was just the first step, then I had to get the obstetrician to say yes. If I would have ended up with a no and time was getting so limited there, I would have probably just learned to live with it but I would definitely have been very unpleased.

Fiona (C/S) points out her sense of loss of control in decision making, yet continues to assert her desire for a C/S.

...prior to finding out that the cesarean was a go for the first, I felt really out of control. It was ironic to me, having read the so called reports about people having cesareans all the time, to have my doctor say that I wouldn't be able to have one...I read about women having cesareans for nothing. I was happy to admit that this was my childbirth, my body, and I didn't think I was making an unwarranted or unresearched demand.

Other women looked for compromise. One approach was to schedule the C/S close to due date. This option alleviated some of the pressure of decision making and allowed the woman to let "nature" decide. If she went into labor before the C/S then she would try a TOL, otherwise a repeat C/S would be done. In other instances, negotiations with physicians took place in which a bargain was struck about length of labor:

Actually with the labor threatening to come early, my doctor has said it is best for the baby if we could bring it through the birth canal, if at all possible. I have certainly been open to that if it were any date before the cesarean date, I would certainly be open to that. But I am not into that for a long time with the baby in distress either. (Helen-C/S)

When I went to see Dr.____ and she suggested that they would give me a trial labor and wouldn't let me go as long as last time, but see if I could do it naturally. She explained it and everything and it was basically that

was the way it was going to go. It didn't seem as scary once she explained it, it wouldn't go on and on like last time (Stephanie-TOL).

Some women accepted medical advice in spite of their own preferences. Based on a relationship of trust and the assumption of superior knowledge and expertise of the physician, some women went against their own best judgment:

I haven't really said anything. I don't think a trial of labor is going to work but my doctor is bound and determined because he is not too crazy about cesarean sections to begin with, and we are going to try labor. It is not my decision anyway...he is the doctor and I am just the patient. (Ruth-TOL)

The degree to which control over decision making was desired varied from woman to woman, but the quantitative data revealed no relationship between desire for control over decision making and choice. At the beginning of the study it was assumed that women who wanted control over decisions would be more likely to have a TOL, the less "medical" alternative. However, in spite of evidence in the literature that physicians are doing routine repeat C/S, several women in this study had to convince physicians of the "necessity" of C/S. In several cases it was the assertive woman who convinced her physician or was willing to change physicians so that she achieved her goal of C/S. The qualitative interviews enlightened and explained why preference for control over decision

making was not predictive of childbirth approach. Control was not predictive because perception of control was altered by the trusting relationship and the assumption of the physician's concern for women's welfare. Interviews took place in the later weeks of pregnancy. By this time, the majority of women indicated that differences of opinion had been resolved and they had a trusting relationship with their physicians:

They tried to more or less assure me that everything would go alright doing it naturally because I was real leery after what happened to him [her previous child]. I came around and told him I didn't like the idea. They more or less reassured me that if something did go wrong they are there and ready, don't worry about it. After a while I didn't even think about it any more, okay they are all going to be there if something happens.
(Hilary-TOL)

Women had strong preferences in both groups but the trust between physician and woman tempered the need for control:

I think I am in between, I would like some control, I don't want to lose control completely, that would really be disturbing. I don't think I have in this situation, I think if I walk into her office today and said forget this, I want a section, she would just do what I wanted. At the same time I want her to have enough control that she will do what is medically correct

or what is best for us. (Tammy-TOL)

Perceived attitude of the physician toward the alternatives was a strong influence over decision making. Trust in the relationship between the woman and her physician was the basis for decision making. The need for control over decision making was influenced and modified by a trusting relationship. Physician advice was used to affirm and justify decisions.

An Alternative Model of Decision Making

In summary, data on past experiences, future expectations and decision making revealed four major interrelated influences on decision making. The interpretation of pain, development of self concept, need for control and relationship to others influenced decisions within ideological and social contexts. Childbirth pain was alternatively interpreted as part of normal childbirth or as a sign of abnormality, inability to cope and ultimate failure depending upon childbirth philosophy. A woman's self concept was based on her past experience and those who perceived themselves to be failures became resigned to another C/S or desired a TOL as a chance to prove themselves. Self concept was related to ideologies that stress performance as part of the childbirth process. Personal control was related to interpretation of pain and self concept. Pain which was perceived to be within the control of the individual led to feelings of diminished self-worth when pain was extreme and unabated, and when personal control was lost.

Interpretation of pain, self concept and personal control did not influence decision making in isolation but were considered within the social context of human relationships. Women considered others in their decisions and made choices which enhanced their abilities to fulfil social roles.

There is an interactive process between how the event is recalled and decision making. There is a reciprocal action in which interpretation of past events is in turn influenced by the decision. McClain (1990) points out that past experiences are not recalled as a series of events but memories are reconstructed in ways that hold meaning for the current pregnancy. Past experiences are used to affirm and reinforce decisions, for example, "The positive experience that I had with the first one definitely made it easier to say yes again." (Elaine-C/S)

McClain (1987) describes a process in which the past is reviewed and benefits of the chosen alternative are found. As well, negative aspects of the rejected alternative are delineated, "I felt that if I couldn't deliver _____ at the weight he was born, I wasn't going to be able to deliver the next baby and I didn't want to put myself through that tiring experience again." (Rose-C/S)

As the past is reviewed, multiple mental images or scenarios are developed for the anticipated birth. Individual roles within the chosen alternative are projected and possible outcomes anticipated. Hopes and expectations for the upcoming birth were based on past experience. They were easily described and the same interrelated influences of control, relationship to others, self concept and interpretation of pain emerged.

Perceived physician preference influenced decision making yet desire for control

over decision making did not emerge because control was tempered by trust. Physicians were perceived to have expertise and knowledge which would ensure a safe outcome for the pregnancy by producing a baby free from defect. Social ideologies serve as a frame of reference for understanding childbirth decisions. The different ways women and their physicians view pregnancy and childbirth is a subtle but strong influence over decision making. Ussher (1989) describes how a concept of women is "framed" by current ideologies. Expectations for childbirth and motherhood are formed by a world view which bases a woman's success on her ability to bear children. Motherhood is perceived as women's "raison d'être" and her ability to give birth, a measure of her worth. Feelings of failure described in this study are understandable within this frame of reference. The goal of a healthy child becomes paramount not only for the child's sake but for how this affects her views of herself as a woman. A healthy child and a vaginal delivery become symbols of her success and reinforce her role within the family as mother. Women judge their successes by their relationships, according to Ussher. A childbirth which is considered a success not only strengthens the concept of self worth, but also enhances her concept of herself as wife and mother.

Quéniart (1990) discusses how perception of pregnancy as an illness is associated with a concept of being at "risk." Acceptance of technology and intervention is understandable when a woman considers herself to be in peril. Ideologies, which view pregnancy as an illness requiring medical intervention, lead to an acceptance of technologies such as C/S. When study participants perceived obstetrical intervention as a means to lowering risk and ensuring a healthy baby, they readily accepted the offered

technology. Their first cesarean birth was perceived as an unquestioned life saving procedure for the majority of the women in this study. Cesarean was only rejected by women when self assessed ability to delivery vaginally was high and a philosophy of natural childbirth was valued. In these instances, C/S was seen as inconsistent with the ideals in that philosophy.

When birth is perceived as an illness requiring the expertise of medicine, women consider themselves at risk and become reliant on medical advice. Autonomous decision making decreases as a priority when interventions controlled by medical experts are perceived as the key to a successful birth. Women trusted their health care providers would use technology to ensure a healthy child. They accepted intervention as a part of the physician's professional domain and perceived it as a method of reaching women's childbirth goals.

Through the analysis of quantitative and qualitative data, decision making regarding the choice between C/S and TOL has been described as a multi-dimensional complex process. Decisions do not take place in isolation but incorporate values, beliefs and emotions encountered in each woman's unique social world. The interrelated influences of interpretation of pain, self concept, control, relationship to others and influence of physicians have been explored within a context of childbirth philosophy.

The tenets of a model specific to the choice between TOL and repeat C/S are summarized below:

1. Internal influences of past and anticipated pain, self concept and need for control are interpreted through the values and beliefs of an accepted childbirth ideology.

These interpretations then lead to development of expectations for success or failure. Choices are made based on the alternative providing the best opportunity to avoid failure and meet the goal of safe passage.

2. External influences on expectations and decision making include physician advice and relationship to others. Choice depends on expected opportunities for enhanced support and ability to fulfil roles associated with each alternative. The development of trust in physician advice and the expectation of support from others ensures the goal of safe passage is met.

3. Interpretation of pain--It is not the amount of pain but how pain is interpreted which influences decision making. In the widely accepted ideology of natural childbirth, labor pain is an acceptable part of a vaginal birth. Women chose TOL in spite of expecting more pain with this alternative because pain symbolized a natural part of giving birth and was therefore acceptable. When a natural birth is unattainable, labor pain is viewed as unnecessary and a resulting C/S is divergent from a natural childbirth ideology. The pain becomes a symbol of failure. C/S was chosen to avoid the sense of failure engendered by a labor which would result in another C/S.

4. Self Concept--A perception of failure in past experiences led to an assessment of continued inability to delivery vaginally. Women who chose repeat C/S did so because they assessed their abilities to have a VBAC as low and wanted to avoid an unsuccessful TOL. Women chose TOL to provide another chance to prove themselves by delivering vaginally.

5. Personal control--Loss of control over self and the situation was associated

with negative experiences and a lowered sense of self concept. Women chose alternatives which provided opportunities to enhance control. The known quality of the previous C/S led women to choose repeat C/S to avoid the unexpected events which might precipitate loss of control over the situation. Women chose TOL to gain control through mastery.

6. Relationship with others--Social realities and relationships influence choice. Partner's participation and influence directed choice. Women chose an alternative which they perceived would provide an opportunity for husbands to take part in the experience. Those choosing C/S did so because the planned nature of the event might lead to enhanced participation by partners. Those choosing TOL expected partners to take part in the labor experience and offer support through the event. Options were chosen which would allow continued fulfillment of family roles and responsibilities.

7. Physician influence and preference for control--Physician advice is a strong influence on choice of childbirth approach. Women indicated they based their choices on physician advice. Women who chose C/S did so because it was advised and the same is true of those who chose TOL. However, physician advice was used selectively to affirm and justify decisions. Decision making took place in the ongoing relationship between physician and patient with trust modifying the need for control. Most physicians were perceived to prefer TOL and when disagreement occurred it was resolved by the later weeks of pregnancy.

The tenets generated from both sets of data have been developed into an enlarged model of decision making. The following chapter will compare the tenets generated in this study with theories of decision making and discuss the implications of the model on theory.

CHAPTER VII: DECISION MAKING THEORY

Introduction

This chapter will compare decision making theories described in the literature review with the study model. Major premises of the rational choice model and the normative-affective model will be contrasted with findings from the present study and possible inconsistencies explored.

Comparison of Study Model with Decision Making Theories

The Rational Choice Model

The results of this study portray a model of decision making which is quite different from the rational choice model described in the literature review. The underlying assumptions of rational choice were not supported in the data. Criticisms of rational choice theory enumerated by Brennan (1992), Etzioni (1992), and Zey (1992) were revealed in the present study as well.

One rational choice model assumption is that decisions are made by individuals independently. The process of decision making is described as being carried out in isolation from social contexts or group influences. Decisions are made solely by the individual based on his/her own best interest. The model gives little acknowledgement

to the influence of others. It does not recognize how concern for the welfare of others may act as an influence. In opposition to these assumptions, the present study confirmed the importance of the influence of others on decision making. Participating women described physicians, partners/spouses, friends and family as influencing their decisions. How the decision was assessed by others, particularly the partner, was also important. Although decision making was done by the individual, others played an interactive role in the process. Data from a study by Gilligan and Attanucci (1988) also failed to support a model of independent decision making, particularly for women. They describe two orientations to making moral choices, justice and caring. The justice perspective was characterized by not treating others unfairly and caring was characterized by not turning away from someone in need. Investigators found that women, in most cases, based decisions on a philosophy of caring while men used the concept of justice to make decisions. Women's choices were directed by concern for the well-being of others within the context of relationships. The focus was not on right or wrong, but on what would be best for everyone involved.

Gilligan and Attanucci's (1988) findings support another criticism of the model (Brennan, 1992). It involves the rational choice assumption that humans are only self-interested. The model assumes people make decisions which are best for them from an individual perspective. There is little recognition for moral values such as caring, altruism or emotional influences on decision making. Contrarily, women in the Gilligan and Attanucci study as well as the present study often made decisions based on what was best for their families, not just themselves. Study participants often considered their

choices as the "right thing to do." Safety of the unborn child was a predominant consideration. The welfare of children already at home, as well as women's partners were included as important factors in decision making. Elaine's (C/S) primary concern was for her unborn baby, "...I pushed to have a cesarean because I didn't want to put the baby in any jeopardy." Tammy decided to have a TOL and based her decision on her children, "I think that the health of this baby and my son were probably the two most important things." Anna (C/S) and Maureen (TOL) described the importance of their partners in the decision:

...my husband is making decisions in this too and he really wants me to have a C/S. I think he thinks and I kind of agree with him, if it is planned it is going to be a better experience for both of us and we are going to be more relaxed. (Anna C/S)

Also I really want my husband to be a part of it, it is so important to him. I don't think a lot of people put enough importance on their husbands, it is just as important for my husband to see it as it is for me to experience it too. (Maureen TOL)

That humans act out of rationality is assumed in the rational choice model. Rationality in this case refers to basing decisions on known facts and figures. However, findings from this study and those by McClain (1985, 1987, 1990) and Kirk et al. (1990)

showed that women do not consider medical risks and probabilities as important influences when deciding between C/S and TOL. The fact that approximately 70 percent of those having a TOL deliver vaginally is an important finding for medical decisions, however, women choosing C/S estimated their chances of delivering vaginally much lower than the rate reported in the literature. Higher statistical risks associated with C/S did not surface as an influence in either those choosing C/S or TOL. Women use different criteria for assessing personal risk. Even when they are informed of the statistics in the literature, they do not assume the rates apply in their particular case. Nisbett, Borgida, Crandall and Reed (1976) support these findings by stating, "...some kinds of information that the scientist regards as highly pertinent and logically compelling are habitually ignored by people. Other kinds of information, logically much weaker, trigger strong inferences and action tendencies" (p.133). Women did not make illogical choices, but based their decisions on a different but equally compelling logic. There are multiple outcomes of childbirth for the woman and her family. Health professionals often assume that only epidemiological data are rational and objective, however, the personal factors and social exigencies women consider in decision making may be another aspect of rational influences. It is the qualitative aspects of the childbirth experience that must also be considered in judging the appropriateness of decisions.

In the rational model, value assigned to alternatives is defined by the individual's preferences, desires and wants. Value varies from person to person, and using a collective moral standard to assess values is precluded by the model. Value arises from the individual in this model and there is little room for the sharing of values or the

development of relationships as a part of decision making. However, in the present study values were formed through relationships to others. Values were shared based on relationships. For example, many women who chose TOL discussed the feeling of trust between themselves and their physicians. They trusted that the physician would not let them labor too long, that there was a shared value for minimizing suffering. The rational choice model makes no allowance for values and moral standards established by the larger society, nor the relationships based on shared values necessary for decision making. Zey (1992) describes the problem in this way:

A relationship must exist between agents that would generate cooperation necessary for a postulated agreement. Commitment, solidarity, and trust are relational and do not exist in non-relationships. If actors trust each other, they can establish an agreement. (p.17)

This agreement was described by study participants. Physicians and women made bargains such that she would agree to a TOL if the physician would limit the length of labor. Women and their husbands/partners often exhibited shared values in terms of natural birth ideologies and the role they would play, and a mutual desire for safe passage. Mary's trust in her physician was a strong influence on choice for TOL, "I feel confident with my family doctor that he will let me go for the trial but if nothing happens they won't let me suffer for a long time before they decide to do the cesarean."

An additional assumption of the rational model is that decisions are based on

utility-maximizing, which means decisions are made on the basis of functional means-ends relationships. This precludes the effects of values and emotions. Women were very concerned that they chose the best alternative for the desired outcome, a healthy baby. However, both alternatives (TOL and repeat C/S) were perceived as safer for the baby. The same outcome was desired but the means varied depending upon ideology and social influences.

Altruistic acts are interpreted as self satisfying and thus have utility in the rational choice model. The model explains altruism as a subtle form of self-interest. However, decisions that are made which are against one's best interests, yet meet the needs of others, cannot be explained by the rational choice model. Women frequently made decisions that were not in their own best interest, such as deciding to have a C/S which entails higher risk to baby and mother and prolonged postpartum pain because it was perceived as the best choice for the baby and significant others in their lives.

The rational choice model is limited in its ability to explain and describe decision making in the choice between C/S and TOL. Focusing decision making at the level of the individual negates the process that takes place within dyads and families. An enlarged more comprehensive model is called for which considers rational, normative and emotive bases for decision making.

The Normative-Affective Model

The normative-affective model for decision making developed by Etzioni (1992)

more accurately reflects the findings of the present study. The step-wise process described in the rational choice model is not totally rejected in Etzioni's model. According to his theory there is a gradient which reflects the interaction between rational choice and normative-affective approaches. The extent to which logical-empirical factors predominate in decision making may vary from exclusion to infusion to indifference. Exclusion occurs when a decision is made without using the rational choice approach, but rather is based on the individual's emotions, beliefs and values. Infusion is where values, emotions and beliefs are infused into the rational step-wise process. Indifference is characterized by predominant use of the rational choice approach.

Exclusion was demonstrated by some women in the study who did not weigh alternatives. They chose a delivery approach because it was "right." Internalized natural birth values and emotions precluded any other alternative. The following two women describe the exclusion of a rational choice process:

Well I made it [the decision] because in my mind there is no comparison between a normal delivery and a cesarean...So there was no question as whether I would have another cesarean unless it was because I had no choice in the matter...A vaginal birth in my mind is so much pleasing and rewarding than going through a cesarean. (Iris-TOL)

I guess right from the very beginning when I decided to have a cesarean section with my first, they said that doesn't mean that I have to have

another one again. So I never assumed that I would have a cesarean with this one, it was always that I won't unless something happens and I have to, but I don't know if it was ever a conscious decision of me to say either I am going to have a cesarean or I am not going to. I think it was always made. (Glenda-TOL)

Infusion was demonstrated also. When women described a logical-empirical approach consisting of information seeking and weighing alternatives, the process was infused with normative-affective considerations. Infusion involves a reinterpretation of information. When infusion takes place, steps in the rational process may be shortened and an individual may "jump" to conclusions. Some of the steps may be eliminated. The decision is not made as a series of rational steps but as in the cognitive theories of decision making, scenarios of alternatives are examined and compared. The chosen alternative is then affirmed and supported through the use of normative affective factors.

The process of infusion is described by Abelson (1976) as one in which distortions of reality are made to make the choice easier. For example, women decided to have a C/S because it was safer for the baby. Safety was assessed on a normative-affective basis. Safety became a qualitative judgement on the part of the woman rather than a statistical prediction. The likelihood of a particular desired outcome was assessed individually without assessing the statistical association between a course of action and outcomes. The rational approach model would have indicated a decision for TOL due to documented lower morbidity and mortality statistics for both mother and baby.

esteem, indifference is minimal. The decision for delivery approach was not described as easy or simple. The decision was characterized as important by all participants and involvement, risk and hence normative-affective influences apparent: "Up to this point in my life I don't think there have been any decisions that have been quite so important in the sense of another human being..." (Elaine-C/S) "This one I actually thought about. I didn't give the doctor my actual decision until September, but it was something I really thought about from the time I found out I was pregnant." (Susan-C/S)

Emotions and norms can play a positive role in assessing the attractiveness of one choice over the other. Abelson states, "Beliefs may be comforting, may protect against anxiety, may organize vague feelings, may provide a sense of identity, may be the prerequisite for participating in a cause, may provide something to say to avoid seeming uninformed etc..." (1976, p.61). The ideology of natural childbirth is an example of a norm which influences choice. Adherence to the values of the ideology makes the choice less complex. TOL is an obvious choice to natural birth adherents because it is in accord with the tenets valued by the philosophy. Alternatively, choice for C/S may be explained by Quéniart's model which describes an ideology in which women consider themselves at risk and thus choose C/S because it is perceived as a way of decreasing risk, insuring a healthy baby and avoiding a sense of failure (1992). The following quote demonstrates the acceptance of risk status resulting in a decision for C/S. Delivering the baby naturally became a secondary concern, "I had come through those nine months and I was not going to have the child born with something wrong, I wouldn't have been able to live with the guilt of that. I wanted to have this child born safely, there was an alternative and I

Jocelyn (TOL) described the process as, "I do imagine what it would be like, I have been told that usually the second delivery may be a bit easier than the first one..." The rational approach depicts a process in which each stage occurs at one point in time. However, women in this study described a process in which various scenarios were considered and reconsidered. "This one took a long time, a lot of debating. I originally said that I wanted this one naturally, but later I changed my mind and then I went back to the natural, just from talking to myself" (Debbie-TOL).

Once an emotional commitment had been made to one choice or the other, new information was rejected. The stronger the emotional involvement in beliefs, the firmer the decision. For instance, physician advice which was contrary to choice was often disregarded and other opinions were sought to support the chosen alternative. Susan, who chose C/S states:

Actually, I talked to the doctor about it and he is one who would prefer you to do the regular delivery. I went and checked with other people who had cesareans and who had regular births and thinking back about the whole previous experience--that's what made the decision [for C/S].

The third position on the gradient of influence by normative-affective factors is described by Etzioni (1992) as indifference. Indifference exists in decision making where risk is low and the task simplistic. The logical-empirical approach predominates in these cases. In complex decisions, where there is a high degree of involvement and risk to self-

wanted to take it." (Elaine-C/S) Nikki who chose TOL indicated that should she be considered at risk she would discard her value for a natural birth. "...I would have no problem deciding, well, cesarean is the safest way. There is more value in having a safe delivery for me and baby than there is in saying, I am a hero, I did it." (Nikki-TOL)

Study findings support the theoretical perspective in which normative-affective factors are the primary concepts involved in decision making. The steps of rational choice do not accurately reflect the complexity of the decision making process. Data did not support a simple step-wise procedure, but a complex development of alternative childbirth scenarios, influenced and shaped by emotion and norms, as the ultimate influence over decision making.

Rational choice theory suggests that values and emotions are one aspect of the logical-empirical approach. However, this study has shown that normative-affective factors are not simply two more influences over decision making among several, but are an overriding influence over the decision process. Norms and emotions are not simply reflected in preferences or constraints, but form the basis for a separate paradigm in which they are the primary force in a highly complex process.

Women's past childbirth experiences were an internal arena in which subjective ratings and interpretations of pain, self concepts, relationships with others, and assessments of personal control took place within the context of childbirth ideology. The interaction between these concepts reflected and cemented a perspective of the past in which emotions were evoked and value systems reviewed. Hopes and expectations were intimately related to values. Choices were made which reflected an enhanced opportunity

to adhere to values and evoke emotions associated with a positive birth experience. Family relationships and roles played a dominant part in decision making. Choices were made that ensured continued fulfilment of role and opportunities for a positive emotional experience.

CHAPTER VIII: STUDY IMPLICATIONS

Introduction

This chapter explores implications of the study for health care providers. Discussion is focused on changes to the health care system which would improve the childbirth experience for women and their families. Issues involving ethical decision making and their implications for health care policy are discussed, as well as legal and economic issues. The chapter ends with a description of the limitations of the study and implications for future research.

Implications for Health Care Providers

Findings from the present study have several important implications for health care providers and the development of health care policies. In the following section, suggestions for improving the childbirth experience are made and possible solutions to ethical, legal and economic problems related to decision making in TOL versus C/S are described at the individual, institutional and system levels.

Improving the Childbirth Experience

Findings revealed that a woman's self assessment of her abilities as a childbearer

and woman served as the basis for a projection of her of future ability to deliver successfully. Improving the childbirth experience for women through education, creation of environments which foster autonomous choice and policy change might lead to improved decision making. The goal is to provide positive experiences leading to self concepts which foster confidence in women and hence decrease the perceived need for technology.

As mortality and morbidity have decreased and fertility rates have declined, there has been a corresponding emphasis placed on the quality of the birth experience. There is a widespread attitude among women that childbirth should be emotionally fulfilling. It is perceived as a peak experience in life, not as an illness. Women's goals for a healthy baby have led to speculation that low rates of maternal and infant mortality are indicators of high childbirth satisfaction. The fact that this is not the case confirms the importance of the experience as well as the outcome (Sullivan & Beeman, 1982).

Results support the contention that improving the quality of women's experiences is dependent upon enhanced interpersonal relationships and increased flexibility in childbirth options. Sullivan and Beeman (1982) have suggested that the two most important factors related to satisfaction with maternity care are choice and communication. Levels of satisfaction were higher in those who had good rapport with their care givers and who had their desires respected concerning management of labor and delivery.

Recognizing the value of individual perspectives may mean encouraging alternative birth sites in which the medical context of birth is diminished. Hospitals foster the use

of technology and are perceived as depersonalizing institutions. It may not be appropriate for women who have had previous C/S to deliver in the home setting. However, comfortable birthing rooms which de-emphasize technology may facilitate labor and VBAC. For women who have not had previous C/S alternate birth settings may play a role in decreasing primary C/S rates, thus eliminating the sense of failure leading to repeat C/S.

Providing opportunities for social support during childbirth, particularly the presence of a support person, is fostered by more personalized settings and related to positive childbirth experiences (Affonso & Stichler, 1978; Bennett, Hewson, Booker & Holliday, 1985; Cain et al. 1984; Norr, Block, Charles, Meyering & Meyers, 1977; Tilden & Lipson, 1981).

The present medical context of birth has fostered a sense of failure in women. To avoid feelings of diminished self worth and poor self concept, it has been suggested that care givers in the postpartum period assist women to review and integrate the experience (Affonso, 1977; Konrad, 1987; Marut & Mercer, 1979). Affonso refers to this process as "fitting in the missing pieces." It is described as comparing expectations to the reality of the event. It is not uncommon for women to be critical of their behavior during childbirth. An opportunity to review and discuss feelings may correct misunderstanding and misinterpretations.

The degree to which a woman is able to maintain control and gain a sense of mastery has been associated with childbirth satisfaction (Butani & Hodnett, 1980; Hodnett, 1982; Hodnett & Osborn, 1989; Humenick & Bugen, 1981). Providing

supportive care during labor and delivery and allowing opportunities for decision making have been suggested strategies to enhance a sense of personal control. McNiven, Hodnett and O'Brien-Pallas (1992) defined supportive care as emotional support, provision of physical comfort, information/education and advocacy. Advocacy involved supporting women's decisions and acting as intermediary to convey women's decisions to others. However, when authors actually measured the amount of time spent in supportive activities, it constituted only 9.9 percent of nurses' time. A greater amount of time allowed for supportive activities for all health care professionals may enhance childbirth experiences.

Prenatal education has been associated with satisfaction in some studies (Cohen, 1977; Doering, Entwisle & Quinlan, 1980; Salmon & Drew, 1992). Preparation to avoid unmet expectations has been the goal to enhance childbirth evaluations. Many women in the present study, rather than finding the experience rewarding, associated childbirth with unnecessary and uncontrollable pain which led to a lowered sense of self esteem. Prenatal classes have often taught women that pain can be eliminated through use of a variety of techniques. Women develop unrealistic expectations that the events of childbirth are under their control, including childbirth pain. When they are unable to exert control, a sense of failure ensues. This is particularly true of those experiencing a previous cesarean birth. A sense of failure led to assessments of inability to deliver vaginally and hence to decisions for repeat C/S.

Knight and Thirkettle (1987) have suggested that those involved in childbirth education be wary of inculcating unrealistic expectations to avoid engendering feelings

of failure. These authors found unfavourable birth experiences, including feelings of failure, to be associated with unmet expectations. Lumley and Astbury (1980) acknowledge this relationship and recommend that each woman be treated as an individual:

Women with rigid expectations about birth who think that positive attitudes in pregnancy bring about a painless, peak-experience kind of labor and who have high ego-involvement in labor going a certain pre-determined way, would seem to be in particular need of care and counselling. For the more dogmatic and insistent a woman is regarding the type of labor she will have the more likely she is to suffer acute feelings of disappointment and failure if her actual labor does not conform to her expectations (p. 53).

The major aim of childbirth education should be to provide women with information on which to develop realistic expectations. Stolte (1987) recommends regular assessment to prevent unrealistic expectations: "...assessment of a woman's expectations at various times throughout pregnancy may indicate when help is needed to change unrealistic expectations" (p. 102). Prenatal class curricula, particularly pain control content, often implies that if women practice and carry out certain techniques, childbirth can be painless. This is misleading and sets the woman up for failure. Confidence in one's ability to control pain has been shown to predict less painful childbirth experience

(Crowe & von Baeyer, 1989). The aim for educators should be to instill a sense of confidence in managing pain rather than in eliminating it. Knight and Thirkettle recommend, "...successful antenatal preparation may require testing and challenging primiparous women's expectations of the delivery experience, and rehearsal of the possible negative features of labor and birth, in order to strengthen their coping abilities" (1987, p. 356).

At the individual level, improving the quality of childbirth through emotional support, communication and opportunities for participation in decision making may enhance feelings of control, self worth, and coping abilities. Women who have positive childbirth experiences are less likely to perceive themselves to be failures, become overly reliant on technology and thus choose C/S.

Improving the childbirth experience benefits the individual and also has positive ramifications for her family. There is an important relationship between levels of satisfaction with childbirth and later mothering skills and attitudes. Those with negative experiences have been shown to take longer to feel close to their infants (Hillan, 1992a & b) and dissatisfied adolescents in a study by Mercer (1985) exhibited fewer mothering behaviors than their satisfied counterparts. Improving the quality of childbirth experiences may result in improved mother-infant relationships.

Health care policies need to be changed to enhance childbirth experiences. At the institutional level, hospital policies which support family participation are needed. Policies which foster choice of childbirth options enhance feelings of control and allow the provision of experiences consistent with ideological preferences. Hospital staffing

policies which include a low patient to staff ratio promote personalized care from nurses. At a broader level, the legalization and institutionalization of midwifery in Canada may lead to a less technological and more personalized approach to childbirth. The practice of midwifery incorporates a philosophy of autonomous decision making and personal support during childbirth which is consistent with changes called for by the consumer. Nursing and medical education need to emphasize the importance of interpersonal relationships and psychosocial issues involving childbirth to improve communication and emotional support for childbearing women. Policies which support the provision of prenatal education for all women are desirable. Prenatal courses which inform women of their options lead to enhanced autonomy in decision making and ultimately improve childbirth experiences.

Recommended changes to enhance the childbirth experience have been described. Graham and Oakley (1979) have indicated similar needs for change. They discuss change as taking place within two areas, one within the present system of care and another approach which would involve changes to the system itself. Recommendations made by these authors have been supported by study results:

The first type of solution would involve, for example, redesigning antenatal clinics so that the sense of rush and anonymity is minimised, educating doctors to be less dogmatic about the 'needs' of maternity patients, and encouraging mothers to be more articulate and more reasonable about the kind of maternity care they want...It may be that

changes of the system itself, rather than changes in the system are required. Such changes might entail the development of neighbourhood maternity centers, a move back towards home delivery, a transfer of medical responsibility from doctors to midwives, and less task-oriented and more patient-oriented maternity care (pp. 70-71).

These changes would enhance the experience for first time mothers, possibly reduce the C/S rate and negate the necessity of having to make the TOL versus C/S decision. Making changes at the individual, institutional and system level involves a variety of social factors. Ethical issues, economic implications and legal aspects of reproductive care are also part of the process of change.

Ethical Issues and Implications of the Study

It is widely accepted that ethical practice includes allowing childbearing women to play an active role in decision making. A paternalistic approach in which decisions are made for women is seldom perceived as acceptable in today's health care system. Women have the right to refuse treatments they perceive as unacceptable and it is increasingly common for women to request certain options from their physicians (Johnson, Elkins, Strong & Phelan, 1986). Women are informed about childbirth choices and are constructing birth plans to ensure they receive the type of care they desire. There has been an observed change in obstetrical services to women. The consumer movement

which calls for a more personal approach to childbirth has been the driving force behind this change. Health care providers need to continue to support autonomous choice for childbearing women.

From the medical perspective, Johnson and colleagues (1986) have described competing ethical issues arising when women ask for procedures such as C/S when there are no medical indications for such a course of action. The patient's right to make informed autonomous decisions is accepted as an important ethical principle. A woman may decide to incur the risks of C/S to insure the safety of her baby. If she has been informed and understands the implications of her decision, this ethical tenet would stress the importance of allowing her this choice.

Valuing of autonomous choice, however, may be in conflict with the medical ethic of doing no harm. When conflict arises and the physician decides that the risks associated with the woman's preference are too great, she/he may make a decision to refuse a C/S in absence of medical indications, or a TOL in women who he/she feels are not suitable candidates. A paternalistic approach in which the physician decides what is best for the patient is taken, based on the assumption that risks outweigh the benefits (Johnson, et al., 1986).

On one end of a continuum, a woman's autonomy is absolute; on the other end, decisions rely upon medical statistics and probabilities alone. Study findings here indicate that women use the qualitative aspects of childbirth as an important deciding influence. Morbidity and mortality statistics did not lead to favouring one choice over the other. Safety of the baby was rated subjectively and considered an important factor in support

of both alternatives, C/S and TOL. Decisions were based on the desire for a type of childbirth that conformed to ideological beliefs and expectations. In contrast, the physician often uses rates and probabilities to make predictions about the "best" course of action. When a woman chooses an alternative which is contrary to predictions based on probabilities, it is seen as an illogical or "bad" choice by the physician.

In a study by Joseph et al. (1991) women's decisions for C/S are characterized as inappropriate. "Poor" decision making is suggested as a determinant of low rates of TOL. They explain choice of repeat C/S in the following manner, "These patients apparently view repeat cesarean delivery as an advantageous procedure that allows a known time of delivery without the uncertainties of attempted VBAC. Medical concerns pertaining to costs and safety seem to be overlooked by such patients" (p.1444). The authors' solution to the problem also indicated an underlying assumption that those choosing C/S make faulty decisions due to ignorance, "In our opinion, enhanced patient education and neutralization of the convenience factor should theoretically reduce patient resistance to a trial of labor in the future" (p.1444). The importance of qualitative aspects of childbirth and recognition or valuing of individual differences would appear to be negated. This is in direct contrast to study findings here which strongly support the influence of individual values and emotions. It is apparent that there are two value systems in operation, the woman's, which values safety as much or more than the physician but judges it subjectively, and the physician's, which judges safety on the basis of probability without consideration of the quality of the experience or how it fits with the social context of family relationships. Women do not make illogical decisions. Their decisions are logical

in terms of a wider set of factors which are relevant to themselves and their families. Rationality is based on women's goals, ideologies and values.

Silver and Minogue (1987) attempted to reconcile the two ends of the continuum to develop a decision making model which incorporated morbidity and mortality figures as well as non-medical factors such as discomfort of labor and anxiety awaiting labor. Both medical and non-medical factors were rated by physicians and entered into a decision analysis. An hierarchy of outcomes was constructed based on these utility ratings with maternal death being rated most heavily and the inconvenience of awaiting labor as the least. An approach to decision making based on this method misses the point. It is not medical facts or figures that are the important matters to consider to predict the "best" choice. Choice must be based on individual differences and valuing one choice over another must be placed within an individual context. The question must be asked, "best" for whom, under what conditions, and in what circumstances?

Results from this study support a model of decision making in which women use qualitative judgements and rules of thumb based on past experience and how they perceive themselves and the world around them. For women, rational decisions are based on the realities of their lives. For the physician, rationality is based primarily on statistics and clinical judgement.

This process is illuminated by the work of Tversky and Kahneman (1974). Their major premise is that individuals assess the probability of an uncertain event through the use of heuristic principles. These rules of thumb are based on experience and reduce the complexity of decision making. The authors describe the process in the following way:

An internally consistent, or coherent, subjective probability measure can be derived for an individual if his choices among bets satisfy certain principles, that is, the axioms of the theory. The derived probability is subjective in the sense that different individuals are allowed to have different probabilities for the same event (p. 1130).

Women's autonomy in decision making is a desired goal through the process of informed choice. Ethical dilemmas for health care providers, however, may arise when a woman's decision is perceived as contrary to her or her infant's best interests. Value labels are often applied to decisions without considering the individual and social context in which they are embedded. Examination of the processes of decision making reveals divergent value systems and approaches to assessing probabilities of outcome and risk between women and their health care providers. In the present study the subjective nature of evaluating probabilities was demonstrated. Ethical dilemmas arise when physicians assess risks on the basis of statistics and women assess risks based on subjective ratings. Health care providers may encourage autonomous decision making, reduce ethical dilemmas, and avoid labelling decisions as good or bad, if a shared valuing and understanding of the basis for decision making is understood between a woman and her care givers.

Implications at the individual level substantiate a need for physicians to increase their efforts toward understanding the rationale of their patients. At the institutional level, ethical rounds in which these dilemmas are discussed might lead to greater understanding.

From a broader perspective, medical education must provide a basis for ethical decision making. The consumer point of view is not always considered. Inclusion of consumers on committees responsible for determining health care policy is a measure which may enhance the provision of autonomy in decision making.

Legal and Economic Implications

Assessing the probability of outcome is one influence over the degree to which physicians allow women to exercise autonomous choice. Autonomy is also affected by a wide variety of social forces. Additional factors such as the fear of litigation may play an important role. Legal and economic changes are needed to discourage the use of spiralling increased use of technology.

In one American study it was found that women characterized as "at term, in labor, no medical problems and married to a lawyer" were considered more appropriate for C/S than a woman with the same characteristics but not married to a lawyer (Johnson, et al., 1986). In another publication (Feldman & Freiman, 1985) a legal case is described in which a lawyer asks the question, "Don't you think a mother has the right to assume the extra risks of cesarean section for the sake of her unborn child if she wishes to?" (p.1264). A law suit was filed in the United States testing the assumption that in order to prevent poor perinatal outcome, an elective repeat C/S should have been done in the absence of any medical indications. Feldman and Freiman conclude that "Patients ought to be given a definitive opportunity to consider electing prophylactic cesarean section,

especially since personal and subjective value judgments are as important to the decision as uncertain quantitative estimates of morbidity, mortality, and cost" (p. 1267).

Fear of litigation has been related to increased rates of C/S. To enhance autonomous choice, changes are needed to decrease the influence of this factor. At the individual level, changes are needed in parents' expectations for the perfect baby. Childbirth educators and health care providers must not hold out false promises. Unmet expectations for a fulfilling experience and a child free of all defect or deformity results in law suits when complications arise. Medicine needs to portray the capabilities of medical science in a realistic manner. From a broader perspective, changes to the legal system are called for. Decreasing the number of law suits and reducing the amount of awards are other possible solutions.

It is an oversimplification to assume that delivery approach is a decision made between a woman and her physician. Control over decision making may vary, however, both women and their physicians are affected by societal trends, such as legal issues, which may strongly influence personal choice. In the United States, economic factors are an additional relevant influence. More recently, insurance companies are refusing to pay for C/S in the absence of medical indications. They are requiring second opinions where medical indicators are not clearly delineated. The prohibitive costs of C/S may decrease and even eliminate opportunities for autonomous decision making. Governments in Canada are also concerned about the high costs of surgical delivery, and although there have been efforts to reduce C/S rates, there have been no restrictions placed on elective repeat procedures. Women's autonomy in decision making may be co-opted in the

interest of lowering health care costs.

Decreasing C/S rates through autonomous choice and education rather than restriction or economic penalty would offer a better solution. Denying women autonomous choice and exerting economic constraints is addressing a symptom of the problem but not the cause. Women choose C/S because they assess their abilities to deliver vaginally as low. Their sense of previous failure leads them to choose C/S. Coercing women to choose an alternative against their better judgment reinforces a lack of autonomy and sense of failure.

The consumer movement continues to push for and influence childbirth choices. Yet, enlightened women who are assertive in exercising the right to decision making may find choices imposed by legal issues, economic factors, ethical considerations, and professional power and control needs. In the present study, many women indicated that if their physician had not agreed with their choice they would have changed physicians. Autonomous choice is an ideal, however, the reality is that choice is often influenced by a wide array of social forces. As TOL becomes a more common procedure a new negative dogmatism toward C/S arises limiting women's choices. The solution is through the suggested changes to the individual, institutional and system levels.

While the ultimate goal of decision making through informed consent may be difficult to achieve in light of social influences, it is no less a desirable aspiration. Informed consent should include presenting the range of options, descriptions of the advantages as well as disadvantages of the options and an opportunity provided to make a decision free from external pressures (Silver & Minogue, 1987). Unclear information

or inadvertent coercion may be detrimental to decision making. There is a subtle coercion in the terms used to describe TOL and VBAC. Language used to discuss the options is value laden (Hannah, 1986). For instance, "trial of labor" might better be referred to as simply "labor." Failure to progress might be changed to non-progressive labor, with the terms "failed" or "successful" discarded as descriptors for TOL and VBAC. A woman planning a VBAC is often referred to as a "candidate." Terminology often implies and reinforces ideas of failure. Unclear information may be presented and in some cases information may be withheld. For instance, debate exists as to whether to divulge the possibility of uterine rupture. The incidence is low, less than one percent, yet consequences so dire that some physicians might argue against full disclosure to avoid frightening women unnecessarily.

Several implications of study concepts (relationship to others, personal control, self concept and interpretation of pain) for health care providers have been presented. The goal of the study has been to illuminate influences over decisions involving C/S versus TOL. Results reveal the subjective nature of this particular decision making task and describe the close relationship between evaluation of childbirth experiences and decision making. Decisions which benefit mother and child can be fostered through an understanding of the importance of these normative-affective factors. Suggested changes to policy are a possible solution.

Limitations of the Study

Before discussing the implications of study findings for future research, the limitations of the present study will be described. A relatively homogeneous sample in terms of demographic characteristics was used. Due to the small number of women from ethnic minorities and lower socioeconomic classes, generalization to these groups can be only tentative, at best. In addition, data were gathered in one teaching hospital whose clientele may not represent fully the population it serves. The physicians caring for study participants also may not have been representative. Their practice styles and hence the perception of their attitudes may have been influenced by this factor.

No significant differences were found between those choosing TOL and those choosing C/S through use of the PCDM instrument. Qualitative data revealed that the trusting relationship between physician and patient may have eliminated a need for control. However, the tool itself presented some concerns. Women were unable to differentiate between the two responses, "I prefer to make the final decision about my delivery approach after seriously considering my doctor's opinion," and "I prefer that my doctor make the final decision about which approach will be used, but seriously considers my opinion." Although the first of these statements was categorized as keeping control and the latter as giving, it may be that women considered both of these statements as sharing decision making. Further investigation of the scoring procedure for the tool is appropriate.

The instrument to measure perceived physician preference was developed by the

investigator and needs further testing for validity and reliability. All of the items on the scale use TOL as the referential starting point, and ask the respondent to indicate her physician's preference from active encouragement of TOL to active discouragement of TOL. The tool was based on an assumption that attitude toward TOL is reflective of an attitude toward C/S. This assumption should be empirically verified. Using C/S as the referential starting point may produce different data.

Although the bi-polar adjective pairs on the two semantic differential scales were pre-tested, it may be that there are alternative pairs which would be more suitable for the study purpose. Pairs were only included on the instrument if their polarity was supported by 80 percent agreement on the pretest. There remains a possibility that other word pair combinations might have resulted in higher levels of agreement and thus a stronger tool.

The study was restricted to investigating women's perceptions of their physicians' attitudes and no actual measurement of doctor/patient decision making interaction was undertaken. Women stated their perceptions of physician advice, but physicians were not asked to describe their recommendations or the bases from which these were made. An additional area of investigation to shed light on decision making may be in an exploration of physician advice and patient perception or interpretation of that advice.

Implications for Future Research

The study results have enlarged understanding of the decision for TOL versus repeat C/S, however, additional hypotheses and research questions have been precipitated

by the proposed model. This section will suggest hypotheses for the prediction of choice and examine research questions generated by each of the four influences described in study findings.

Although it was not the focus of the study, findings have suggested a strong influence between childbirth ideology and decision making. It might be hypothesized that women who choose C/S will be more likely to assess themselves to be at risk and therefore, perceive technology as a way of dealing with and lowering risk status. Women who choose TOL will have stronger beliefs and value for natural childbirth ideologies than those choosing repeat C/S. Although both groups will perceive their chosen alternative as providing safe passage for themselves and their infants, TOL women consider vaginal birth as a chance to prove themselves by gaining control through mastery and have higher ratings of self-efficacy. Their C/S counterparts have accepted themselves as failures, see no personal relevance to a vaginal birth and will rate self efficacy lower.

Additional hypotheses may be formulated regarding the influence of physician advice. Study findings reported physician support and advice for TOL for all women without contraindications. It might be expected that women who desire C/S may be forced into undesired TOL. For those women who then have another repeat C/S after TOL, feeling of failure will be compounded. Anger toward the physician and negative childbirth ratings will result.

Decision making for women with previous C/S was described by participants as a complex process. Values and emotions that ultimately influence decisions were revealed through reviewing past experiences, future expectations, control over decision

making and the role of the physician. The tenets of the proposed model require further exploration. Greater insight is critical to providing quality care to childbearing women. The four major influences over decision making described in the model have generated additional research questions. Each influence on decision making might be investigated individually to support and further develop the model.

Interpretation of Pain

Meaning ascribed to childbirth pain was shown to be an influence on decisions. However, the ideological bases for interpretation of pain are not well studied. If a philosophy of natural childbirth places pain within a context which gives it meaning, what is the role of pain interpretation in decision making for women who do not adhere to natural childbirth ideologies? Sandelowski and Bustamante (1986) examined the effects of cesarean birth on women outside the natural childbirth culture and did not find the expected negative effects associated with C/S to be evident in reports from their respondents. Women in lower socioeconomic classes are less likely to adhere to natural childbirth philosophies and at least one study has found higher rates of C/S in these women (Hurst & Summey, 1984). Further study of the relationship between ideologies, the meaning of pain, childbirth decisions are needed. Research questions include: What is the relationship between childbirth philosophy and the ascribed meaning of childbirth pain? What is the relationship between interpretation of pain, cultural background, social class and childbirth philosophy?

Interpretation of pain within the individual context has not been examined widely. The individual lived experience of childbirth pain is not well understood. Although there is a relatively large amount of literature on childbirth pain, the focus has been on pain intensity and pain control measures. Qualitative studies are needed which explore the experience of childbirth pain and the narratives of women who have had cesarean births. Study findings here support the need for understanding how pain interpretation and experience is embedded in the broader social and family context. The relationship between local social worlds and lived experiences needs to be studied further.

Self Concept

The relationship between childbirth decision making and self concept is also an area for future exploration. If self concept is formed through past experience, it may be that it is further affected by future experience and intervention. Investigations are needed which will increase understanding of self assessed abilities in coping with childbirth and levels of confidence. Strategies to increase autonomous choice and women's sense of control need to be developed and tested. Women are calling for de-medicalization of childbirth. Will the provision of a more personalized and less technological approach increase positive evaluations of the childbirth experience and increase self esteem?

Studies are called for which explore these issues in diverse populations. The effects of childbirth education programs aimed at enhancing childbirth experience for women of limited income or women from other cultural backgrounds should be explored.

Approaches to teaching prenatal classes might be tested for their effects on self efficacy and empowerment of women.

Control

Desire for control over decision making was not related to choice of childbirth approach. Amount of trust in the relationship between a woman and her physician overrode the need for control. A study which focuses on the specific relationship between trust and need for control over decision making might be conducted. Further research is needed to explore the role of trust in decision making, through research strategies involving observation and exploration of woman/physician interaction.

Divergent mechanisms for evaluating risks of alternate choices were described and constitute another area for future investigation. Women based decisions on subjective ratings of risk while physicians have traditionally relied on mortality and morbidity statistics. Further elucidation of the processes and perspectives of women and their physicians may improve understanding of decision making.

Women's need for control and its relationship to self concept is another area for investigation. Perceived control and mastery during childbirth influences physiological and psychological outcomes. Loss of control has been associated with negative reports of childbirth experience and increased levels of discomfort. Individual differences in expectations and experiences of control during childbirth have yet to be investigated. Strategies for enhancing perceived control and increasing women's sense of mastery have

yet to be developed and tested.

Relationship to Others

Women's relationships with significant others also needs further exploration. The influence of a partner/spouse on decision making was obvious in study results here and women repeatedly commented on seeking the advice of others, however no exploration of decision making and C/S was carried out with fathers or other important family members. Additional studies might include family members as participants to investigate their role in decision making. The presence of social support has been shown to improve birth experience and diminish self reported pain. Women discussed the importance of spouses/partners being present. The couple's relationship and its effects on decision making may be another important area for investigation.

Future Research on Childbirth Ideology

The social system is capable of exerting a strong influence on women and childbirth. An enlarged understanding of the social ideologies which influence how care is delivered to childbearing women is needed. Philosophies of natural childbirth and Quéniart's model of risk provide a deeper understanding of social influence. Before concrete changes can be made, additional studies are needed to continue exploration of social ideologies. A single alternative ideology is not necessarily the answer, but rather,

recognition and appreciation of individual values outside the medical science paradigm.

According to Quéniart (1992) the acceptance of childbirth as a medical phenomenon and its situation within hospitals has meant an acceptance of birth as a potentially pathological event. All women are now considered "at risk" and normal birth is the exception rather than the rule. The focus of the risk is not centered on the woman or her pregnancy, but on the baby. This changing ideology of risk forms a doctrine which justifies and legitimates the use of intervention and technology. Women are expected to make decisions which will ensure a healthy baby. This concept of risk also places the responsibility for outcome on the woman and emphasizes how her decisions and lifestyle will effect her unborn child. A normal birth becomes the "only valid parameter of women's experiences" (p. 166). Since the woman is personally responsible, she develops a sense of self-blame for any undesired aspect of childbirth. Women want to be assured of a normal outcome even if, ironically, it means taking the risks associated with technological procedures such as C/S. Technology represents eliminating risks to their unborn children, and thus ensures women's acquiescence to its use.

If the social ideology described by Quéniart (1992) predominates, a growing reliance on science and technology will result. Women will remain overly dependent on medical intervention, fail to question its use and have a restricted understanding of its limitations. Ussher (1989) recommends offering alternative explanations of behavior and experiences and this necessitates challenging many of the present accepted concepts of woman as childbearer and mother. She states, "We need to construct our own discourses, which will define success in terms which are appropriate for each woman and her

particular context" (p. 101). Over-reliance on technology and science is related to a devaluing of human experience.

Through the examination of women's childbirth experiences, an understanding of the influence of prevailing medical ideologies of birth becomes clearer. The context of women's experiences fosters the development of a broader perspective on the influences on decision making. A single alternative childbirth ideology is not necessarily the answer, but rather, recognition and appreciation of diverse ideologies and values outside the medical science paradigm. The truth imbedded in women's perspectives and experiences needs to be explicated.

Conclusion

Understanding decision making has implications for reducing C/S rates. Choices for C/S based on self assessed inability to deliver vaginally and perceived risk may be altered by changing the delivery of care to childbearing women. Improving childbirth experiences may decrease feelings of failure and subsequent reliance upon technologies such as C/S. Changing the perception of birth from a high risk medical event to a normal process is a desired end. Provision of alternative care givers such as midwives and changing the site of birth to less technological settings has been suggested as one possible solution.

Results of the study have broader implications than the C/S versus TOL decision. Through the provision of experiences which foster positive self concepts, a closer

relationship between mother and child is facilitated. Clarification of the underlying bases for decision making may enhance care givers' abilities to create environments which foster autonomous decision making, and to assist women in reaching decisions which hold promise of enhanced outcomes for themselves and their babies. Childbearing women and their families will continue to expect and desire optimal experiences. Through supportive activities from health care providers, women may have the experiences they desire.

GLOSSARY

Amniotomy--The rupturing of the amniotic sac (bag of waters around the fetus) using a sterile instrument. Sometimes done to induce or speed up labor.

Augmentation (of labor)--The use of oxytocin to stimulate/accelerate the progress of labor.

Breech Presentation--fetal malpresentation in which the buttocks or feet present first.

Cesarean delivery (section)--Surgical incision through the abdominal wall and uterus to deliver the fetus

Cesarean incision--Skin incisions for cesarean delivery are either vertical or transverse. Uterine incisions are either vertical through the body of the uterus, vertical through the lower segment, transverse through the lower uterine segment or occasionally may be "T" shaped by necessity. A "Classical Incision" is a vertical incision through the center of the upper segment of the uterus.

Childbirth Expectations--A woman's mental images of what her upcoming childbirth experience might be like.

Dehiscence--The separation of tissues along natural lines or at the site of an incision.

Dystocia--difficult delivery caused by maternal or fetal factors, such as malpresentation, malposition, macrosomia, anatomy of the woman's pelvis, or uterine expulsive powers.

Failure to progress--A term used to refer to a wide variety of problems associated with prolonged labor.

Induction (of labor)--Process by which labor is initiated artificially, often by intravenous drip or amniotomy.

Low birth weight--Infants weighing between 750 g and 2500 g. Very low birth weight included those between 500 g and 750 g.

Oxytocin--a hormone that produces uterine contractions

Past Cesarean Experience--The degree to which a woman rates her most recent cesarean birth as positive or negative using a semantic differential scale.

Perceived Physician Preference--A woman's perception of her physician's attitude toward a TOL or repeat C/S.

Perinatal Mortality Rate--The number of stillbirths plus the number of deaths occurring in the perinatal period as a rate per 1,000 live and still births.

Perinatal Period--The time after the 28th week of pregnancy through 28 days following birth.

Preference for control over decision making--An approach to decision making which lies on a continuum from the patient preferring to keep control, to preferring to give control to others.

Trial of Labor (TOL)--In trial of labor the woman awaits spontaneous labor, then comes to hospital, is closely monitored, and delivers vaginally or by repeat cesarean depending on clinical progress and evidence of maternal/fetal wellbeing. In some cases a woman might come to hospital before labor ensues and have an induction.

Vaginal Birth after Cesarean (VBAC)--When a woman gives birth vaginally after experiencing one or more previous cesarean births.

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APPENDICES

APPENDIX A

AGENCY APPROVAL



Hôpital général St-Boniface General Hospital

April 5, 1991

Ms. Annette Gupton

**Re: Approval of Access: Trial of Labour
vs. Repeat Caesarean**

Dear Annette:

Your study entitled "Trial of Labour vs. Repeat Caesarean" is now approved for access to SBGH. Our apologies for the delays due to strike-related factors. The study should provide valuable comparisons which are likely to benefit both families and the health care system.

You may begin as soon as you are ready, and please feel free to use the Research Space if you need a carrel, access to a computer, etc. We look forward to your presence once again at SBGH, and will be very interested in the outcome of your study. May we have a summary when it is concluded?

Sincerely,

Eleanor J. Adaskin
Director of Nursing Research
Tel. 235-3480

EA/mj

APPENDIX B
ETHICAL APPROVAL

UNIVERSITY OF MANITOBA
FACULTY COMMITTEE ON THE USE OF HUMAN SUBJECTS IN RESEARCH

NAME: Dr. Annette Gupton

OUR REFERENCE: E91:53

DATE: April 1, 1991

YOUR PROJECT ENTITLED:

Trial of Labour versus Repeat Cesarean Section:
Influence on Women's Decision Making.

HAS BEEN APPROVED BY THE COMMITTEE AT THEIR MEETING OF:

March 25, 1991.

COMMITTEE PROVISOS OR LIMITATIONS:

Approved as per our letter dated April 1, 1991

You will be asked at intervals for a status report. Any significant changes of the protocol should be reported to the Chairman for the Committee's consideration, in advance of implementation of such changes.

** This is for the ethics of human use only. For the logistics of performing the study, approval should be sought from the relevant institution, if required.

Sincerely yours,

J. P. Maclean, M.D.,
Chairman,
Faculty Committee on the Use of Human
Subjects in Research

JPM/11

TELEPHONE ENQUIRIES:
788-6255 - Lorraine Lester

APPENDIX C

POWER ANALYSIS

Although this is an exploratory descriptive study, a power analysis was conducted to solve for the sample size needed to increase the likelihood of demonstrating significant results. Using the procedure and tables for test of difference between two independent means recommended by Cohen (1969), a sample size of 100 is more than adequate to allow the detection of large effect size (0.8 SD) within 90% confidence limits.

Test Between Two Independent Means

<u>Effect Size</u>	<u>80% Power</u>	<u>90% Power</u>
Small (0.20 SD)	n=393	n=526
Medium (0.50 SD)	n=64	n=85
Large (0.80 SD)	n=26	n=34

When examining the power of the Chi square test, a sample size of 100 would allow the detection of medium effect size within 82% confidence limits and large effects size within 92% confidence limits.

Chi Square

N=100	alpha=0.05
<u>Effect Size</u>	<u>Power</u>
small	50%
medium	82%
large	99%

APPENDIX D**SAMPLING SOURCES**

Data Collection Resource	Procedure
1. Fetal Assessment Unit	Women were invited to participate while waiting for ultrasound assessment
2. Same Day Admission Program for Elective Cesarean Birth	Program nurses asked women for permission to give their telephone numbers to the investigator. Women were invited to participate over the telephone by the investigator
3. Obstetrics and Gynecology Outpatient Clinic	Nurses sought release of telephone number. Investigator contacted women to arrange an appointment to participate.

APPENDIX E**INFORMATION PROVIDED BY THE PROGRAM NURSE**

"Hello, my name is, _____, I am the nurse from the Same Day Admission Program for Elective Cesarean Birth (Fetal Assessment Unit/ Obstetrics and Gynecology Outpatient Clinic). A student in the doctoral program in Community Health Sciences at the University of Manitoba is conducting a study with women who have had a previous cesarean birth. May I have your permission to give her your telephone number so she can telephone you and describe the study? You can wait until you talk with her before you decide whether or not to participate. (If the woman agrees and gives the nurse the telephone number...) Her name is Annette Gupton, she will telephone you in the next two days. Thank you."

APPENDIX F

TELEPHONE CONTACT WITH A POTENTIAL SUBJECT

"Hello, my name is Annette Gupton. I am a student in the doctoral program in Community Health Sciences at the University of Manitoba. I received your telephone number from the Same Day Admission Program nurse (Fetal Assessment nurse/ Obstetrics and Gynecology Clinic nurse). I am doing an investigation involving women who have had a previous cesarean birth. Would you like to know more about the study? (If the answer is 'no' the contact is terminated. If the answer is 'yes' the study will be explained using the invitation to participate, Appendix G). Do you have any questions? Are you interested in participating? (If the answer is 'no' the contact is terminated. If the answer is 'yes' an appointment will be made at the convenience of the respondent for data collection). Thank you very much.

APPENDIX G
SAMPLE RECRUITMENT

Participant No.	C/S	TOL	Questionnaires	Interview
1-2		X	X	X
3	X		X	X
4-5		X	X	X
6	X		X	X
7-11		X	X	X
12	X		X	X
13-14		X	X	X
15-16	X		X	X
17		X	X	X
18	X		X	X
19		X	X	X
20	X		X	X
21		X	X	X
22-23	X		X	X (Unusable)
24		X	X	X (Unusable)
25-27	X		X	X (Unusable)
28		X	X	X
29	X		X	X
30		X	X	X
31	X		X	X
32-33		X	X	X
34	X		X	X
35		X	X	X

Participant no.	C/S	TOL	Questionnaires	Interview
36	X		X	X
37		X	X	X
38-42	X		X	X
43		X	X	X
44	X		X	X
45-46		X	X	X
47-49	X		X	X
50-51		X	X	X
52-53	X		X	X
54		X	X	
55-56	X		X	X
57-58		X	X	
59	X		X	X
60		X	X	
61-62	X		X	
63-74		X	X	
75	X		X	
76-81		X	X	
82	X		X	
83		X	X	
84	X		X	
85-88		X	X	
89-94	X		X	
95-99		X	X	
100-102	X		X	
103-109		X	X	

APPENDIX H

INVITATION TO PARTICIPATE

You are invited to participate in a study designed to examine how women make childbirth decisions. The information obtained from this study will provide a better understanding of the how women make the decision between having a repeat cesarean birth or, alternatively, a trial of labor. Women in the later weeks of pregnancy who have experienced a previous cesarean birth are being asked to participate. While there are no immediate benefits to participating in the study, the information you provide may assist in the understanding of how women make decisions. The study is being conducted by Annette Gupton, R.N., M.N. who is a doctoral student at the University of Manitoba, Department of Community Health Sciences, Faculty of Medicine.

If you agree to participate in this study it will involve filling out a questionnaire and taking part in a brief tape recorded interview. The questionnaire takes approximately 30 minutes to fill out and the interview will take from 30 minutes to an hour. The questionnaire and interview are designed to determine your past childbirth experiences and your expectations regarding your upcoming labor and delivery. There are no right or wrong answers, we are simply interested in your attitudes and feelings.

You may decide not to participate and if you decide not to, it is perfectly acceptable for you to refuse. You may withdraw from the study at any time without influencing in any way the care that you receive. Your name will not appear on any of the questionnaires. All participants in the study will remain anonymous. The questionnaires and interview tapes will be stored in a locked filing cabinet accessible only to the investigator and her advisor. The questionnaires will be destroyed and the tapes erased following completion of the study.

The results will be based on group data, not individual questionnaires. In this way no one will ever know how you, as an individual, answered the questions. The results will be published as a doctoral thesis and may be published in the form of a journal article. Summary of the study results will be provided to those requesting it.

It you have any questions that you would like answered you may reach **Annette Gupton** at

APPENDIX I

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

In signing this document, I am giving my consent to take part in an interview and fill out a questionnaire. I understand that I will be part of a research study that will investigate the experiences and expectations of women who have had a previous cesarean birth. The results of this study will be used to gain an understanding of how women make childbirth choices, specifically, the choice between repeat cesarean and trial of labor.

I understand I will be asked some questions about my past childbirth experiences and my plans for the present birth. The tape recorded interview will take from 30 minutes to an hour and the questionnaire takes 30 minutes to fill out.

I have received a written explanation of the study and had any questions I might have had answered to my satisfaction. I understand my decision to participate is voluntary and that I have the option to withdraw my participation at any point. I understand that such a decision will not affect my care in any way.

My signature below indicates that I am informed and that I agree to participate as a volunteer respondent.

Date _____

Respondent

Date _____

Annette Gupton, R.N. M.N.

APPENDIX J

MY PAST CHILDBIRTH EXPERIENCE

For each of the pairs of words listed below put a check mark in the space closest to the word which best describes how you feel at this time about your past cesarean childbirth experience. Please rate the experience as a whole (overall). There are no right or wrong answers.

Example:

lazy _____ : _____ : _____ : ✓ : _____ : _____ : _____ ambitious

good _____ : _____ : _____ : _____ : _____ : _____ bad
 unpleasant _____ : _____ : _____ : _____ : _____ : _____ pleasant
 fair _____ : _____ : _____ : _____ : _____ : _____ unfair
 rugged _____ : _____ : _____ : _____ : _____ : _____ delicate
 hard _____ : _____ : _____ : _____ : _____ : _____ soft
 fast _____ : _____ : _____ : _____ : _____ : _____ slow
 sour _____ : _____ : _____ : _____ : _____ : _____ sweet
 clean _____ : _____ : _____ : _____ : _____ : _____ dirty
 heavy _____ : _____ : _____ : _____ : _____ : _____ light
 valuable _____ : _____ : _____ : _____ : _____ : _____ worthless
 kind _____ : _____ : _____ : _____ : _____ : _____ cruel
 happy _____ : _____ : _____ : _____ : _____ : _____ sad
 relaxed _____ : _____ : _____ : _____ : _____ : _____ tense
 rough _____ : _____ : _____ : _____ : _____ : _____ smooth
 nice _____ : _____ : _____ : _____ : _____ : _____ awful
 ugly _____ : _____ : _____ : _____ : _____ : _____ beautiful

APPENDIX K

MY FUTURE CHILDBIRTH EXPERIENCE

For each of the pairs of words listed below put a check mark in the space closest to the word which best describes how you expect your future childbirth experience to be. Although it is not possible to know exactly what your experience will be, we are asking for your best guess. Please rate the experience as a whole (overall). There are no right or wrong answers.

Example:

lazy _____ : _____ : _____ : : _____ : _____ : _____ ambitious

good _____ : _____ : _____ : _____ : _____ : _____ : _____ bad
 unpleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ pleasant
 fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair
 rugged _____ : _____ : _____ : _____ : _____ : _____ : _____ delicate
 hard _____ : _____ : _____ : _____ : _____ : _____ : _____ soft
 fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow
 sour _____ : _____ : _____ : _____ : _____ : _____ : _____ sweet
 clean _____ : _____ : _____ : _____ : _____ : _____ : _____ dirty
 heavy _____ : _____ : _____ : _____ : _____ : _____ : _____ light
 valuable _____ : _____ : _____ : _____ : _____ : _____ : _____ worthless
 kind _____ : _____ : _____ : _____ : _____ : _____ : _____ cruel
 happy _____ : _____ : _____ : _____ : _____ : _____ : _____ sad
 relaxed _____ : _____ : _____ : _____ : _____ : _____ : _____ tense
 rough _____ : _____ : _____ : _____ : _____ : _____ : _____ smooth
 nice _____ : _____ : _____ : _____ : _____ : _____ : _____ awful
 ugly _____ : _____ : _____ : _____ : _____ : _____ : _____ beautiful

APPENDIX L

PERCEIVED PHYSICIAN PREFERENCE

Please mark an "x" by the statement which most characterizes your physician's attitude toward a trial of labor versus repeat cesarean. There are no right or wrong answers we are simply asking you to indicate your opinion.

1. _____ My physician feels that a trial of labor is the best alternative, and has actively encouraged me to pursue this route.
2. _____ My physician feels that a trial of labor is probably the best route to pursue, but has left the decision up to me.
3. _____ My physician is non-committal. He didn't state an opinion and/or he didn't favour one choice or the other.
4. _____ My physician felt that a trial of labor is not the best choice, but has left the decision up to me.
5. _____ My physician feels that a trial of labor is not the best route to follow, and has actively discouraged me from pursuing this route.

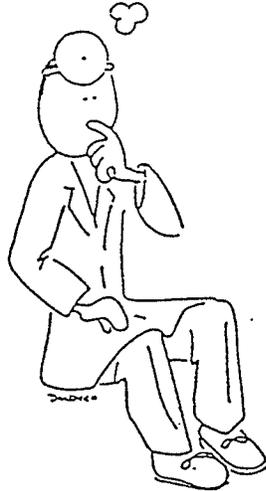
APPENDIX M

CONTROL OVER TREATMENT DECISIONS

The four vignettes describing various degrees of control over treatment decisions have been modified for use with pregnant women contemplating choices between a trial of labor or a repeat cesarean section.

I. Patient-Physician Dimension

- A. After learning about my pregnancy, I explore possible delivery options and then select a doctor who proceeds with the type of delivery I feel is appropriate.
- B. After my doctor explains the various delivery options available for my childbirth, I have the major responsibility for selecting which type of delivery will be used.
- C. After my doctor explains the various delivery options, the selection of any delivery type is a joint decision between myself and my doctor.
- D. My physician decides which type of delivery would be best for me without discussing all the available options.



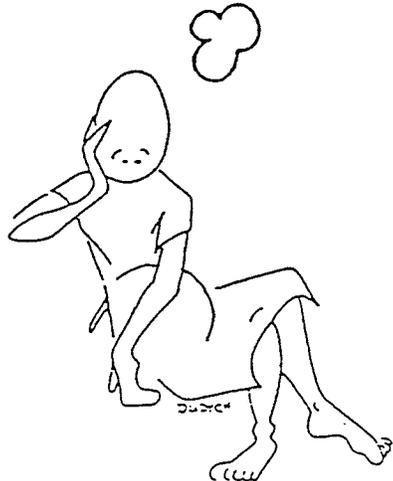
I PREFER THAT MY DOCTOR MAKES THE FINAL DECISION ABOUT WHICH TYPE OF DELIVERY WILL BE USED, BUT SERIOUSLY CONSIDERS MY OPINION



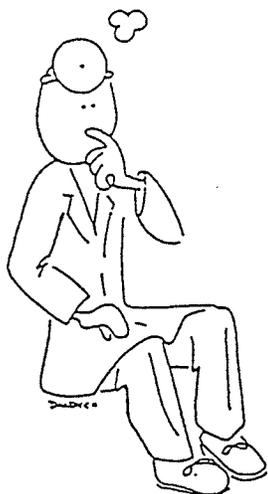
I PREFER TO MAKE THE FINAL SELECTION ABOUT WHICH TYPE OF DELIVERY I WILL HAVE

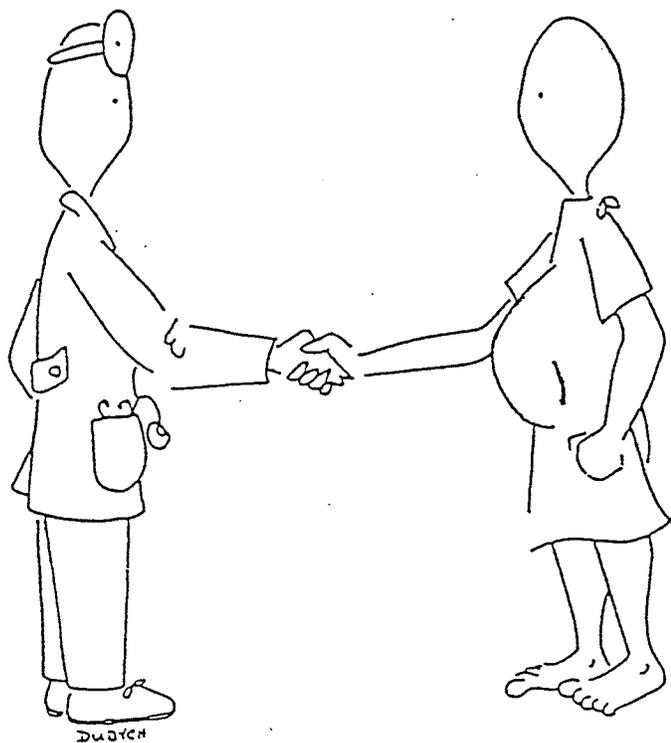


**I PREFER TO MAKE THE FINAL SELECTION
FOR TYPE OF DELIVERY AFTER SERIOUSLY
CONSIDERING MY DOCTOR'S OPINION**



**I PREFER TO LEAVE ALL DECISIONS
REGARDING THE TYPE OF DELIVERY TO
MY DOCTOR**





**I PREFER THAT MY DOCTOR AND I SHARE
RESPONSIBILITY FOR DECIDING WHICH
TYPE OF DELIVERY IS BEST FOR ME**

APPENDIX N

INTERVIEW GUIDE

I. Previous Childbirth History--I would like to begin by asking you some questions about your childbirth history. (The investigator will complete an obstetrical history by exploring each previous pregnancy).

year	type of delivery (Vaginal or Cesarean)	Birth Weight	Complications

II. Tell me about your most recent labor and/or delivery--from the time it began until after your baby was born--and what it was like for you?

Probes

- A. Why did you have a cesarean birth?
- B. Did you have someone to help you during childbirth? Who?
- C. Can you think of anything that could have been done to make the experience more pleasant?
- D. Tell me about any pain or discomfort you experienced?
- E. How did you cope with the pain/discomfort?
- F. How did you feel about having a cesarean birth?
- G. Tell me about the nurses who took care of you?
- H. Tell me about your husband/partner during your labor and delivery?
- I. Tell me about the first few days/weeks at home with the new baby and what it was like for you?

III. Have you decided to have a repeat C/S or TOL/VBAC? Can you tell me how you made this decision?

Probes

- A. Why did you decide to have this type of delivery?
- B. Were other people influential in making the decision? If so, who were they and how were

they involved ?

- C. What role did your physician play in the decision?
- D. What aspects of your present life situation did you consider in decision making?
- E. Did you make this decision the same way you make other decisions in your life?
- F. How important is it for you to have your chosen type of delivery?

IV. When you think about your impending childbirth, what thoughts, concerns or worries do you have?

Probes

- A. What do you think the pain will be like this time?
- B. How do you think you will cope with the pain and discomfort?
- C. What will the nurses be like during your upcoming childbirth?
- D. Will you have a lot of medical intervention for your delivery, like examinations and/or treatments?
- E. What role will your husband/partner play during your childbirth?
- F. What will he be thinking and feeling?

V. Could you tell me about your life situation?

- A. Are you presently married or living with a partner?
- B. How many children are in the home for which you are responsible?
- C. What are your plans regarding having more children?
- D. How do you feel about being a mother?
- E. Are you presently employed?
- F. What is your occupation?
- G. Are you returning/going to work outside the home after your pregnancy?
- H. Do you have someone who looks after your child/children?
- I. What is your family's main source of income?
- J. How old are you?
- K. What is the highest grade or level of education you have ever completed?
- L. What is your ethnic background?

VI. Did participating in this study effect your decision regarding delivery approach?
If so, in what way?

*Questions on Past Childbirth Experience adapted from Marut & Mercer, 1979. Questions on Childbirth Expectations adapted from Beaton & Gupton 1990.