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THE PSYCHOLOGICAL IMPACT OF OBSTETRIC PROCEDURES

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A dissertation submitted to the Faculty of Arts, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Arts in Clinical Psychology.

Johannesburg, 1989

DECLARATION

I hereby declare that this dissertation is my own work and that I have not submitted it, nor any part of it, for a degree at any other university.

J.M. HAYWARD

To John

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ABSTRACT

The primary aim of the present study was to compare mothers' reactions to obstetrical interventions and procedures and obstetricians' perceptions of these. The sample population consisted of one hundred and forty seven white, married, English-speaking mothers and a group of fifty three obstetricians practising in the Johannesburg area. Questionnaires, developed for both groups, were administered postally to obstetricians and in hospital within the first post-partum week to mothers.

Perceptions of interventions occurring in the ante-natal period and during the three stages of labour were explored. Reactions to psycho-social and hopsital procedures were also obtained. Median and modal ratings of these events were calculated for both samples. The data were analysed using the Median test to compare the *groups and Fisher's exact* probability test to determine significant differences. Using a significance level of one per cent, several significant findings emerged.

Results suggested that, in general, obstetricians rated mothers' experiences more negatively than did the mothers themselves. These findings were discussed in the light of available research and literature in the area.

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INTRODUCTION

For a woman childbirth is one of the most compelling and significant events in her life. It is the central drama in the transition to motherhood and as such has implications far beyond the purely biological act of giving birth. As with all major life events, many factors influence a woman's response and adaptation to pregnancy and childbirth: individual motivations, sociocultural supports and expectations and religious affiliations are among them. Possibly of equal significance is the medical management of pregnancy and childbirth which over the last few decades has seen *significant changes* in the western world.

One of the most important changes in maternity care has been the *shift in place of delivery* from home to hospital. In most western countries today hospital confinement rates are over 90 per cent (Oakley, 1981). Concomitant with this change *has been a sizeable* increase in the technology applied to pregnancy and childbirth. Since the mid-60's in particular, there has been a tremendous increase in the use of induction and acceleration techniques, drugs, caesarean section and forceps during labour and delivery, particularly in the United States and Britain (Chalmers and Richards, 1977; Haire, 1978). Although there is variation between countries in the medical management of birth, in many industrialized countries medical intervention during childbirth has become the norm rather than the exception (Zajicek, 1981).

The increasing use of technology as a routine part of maternity care has recently engendered much public debate and discussion concerning both the physiological and psychological impact of medical interventions on *women and their infants*. The primary issue in this

childbirth debate seems to lie in a consideration of needs; what needs should be met during pregnancy and birth and what needs are being met (Zajicek, 1981). Proponents of the medical approach to childbirth place primary emphasis on the physical needs of the mother and child. They point out that maternal and perinatal mortality rates have decreased dramatically during the last fifty years, largely as a result of increasing obstetric sophistication and intervention during pregnancy, labour and delivery. They argue therefore that continued medical supervision of pregnancy and labour within the hospital setting is necessary for continued maintenance of low morbidity and mortality rates. While there is no doubt that many procedures in obstetrics today are clearly beneficial to the mother and child, particularly in those cases where complications arise, proponents of more natural forms of childbirth believe that the routine usage of procedures in the majority of cases is of doubtful benefit (Chalmers and Richards, 1977). Moreover, they argue that the decline in mortality rates can also be accounted for by improved socioeconomic conditions, better nutrition linked to affluence, and decrease in parity and maternal age at birth (Alberman, 1977).

Cross-cultural studies provide some indirect support for the viewpoint that technological interventions occurring during pregnancy and birth may not at all times be advantageous to the mother and child. A comparison between the United States of America's approach to childbirth which leans heavily towards technological intervention and that of the Netherlands, which adopts a seemingly more natural approach to childbirth, is useful in this respect. Figures for the late 1970's indicate that the majority of births in the United States are hospital based deliveries (over 90 per cent) whereas in the Netherlands approximately

35 per cent of the births are home births attended by midwives rather than doctors (Arms, 1977; Kloosterman, 1984). At the same time, the United States has a relatively high infant mortality rate of 17,7 per 1 000 live births compared to 11,5 for the Netherlands. (Romalis, 1981). Although there are a number of factors which may account for this discrepancy in *infant mortality rates, the argument* that technology alone is responsible for safer obstetrics is contraindicated by experience in the Netherlands (Kloosterman, 1982).

Concerning the psychological needs of the mother, the debate tends to centre on the issue of dependence and control. Those against the medicalization of birth argue that hospitalization places the mother in an alien impersonal environment which frequently lacks the human comfort and support associated with a home birth. Moreover, once the woman becomes part of the hospital routine she tends to assume a passive dependent role in which she begins to respond to the expectations and commands of the medical attendants rather than to those of her own body (Zajicek, 1981). Supporters of medicalization, on the other hand, believe that hospitalization and intervention during labour can have beneficial psychological effects upon the mother. Induction and acceleration, for example, mean that the mother need not undergo a prolonged overdue pregnancy nor an excessively long labour, resulting in a more pleasant experience for her. In addition, except in extreme *cases, medical proponents believe* that the woman may still exert a positive influence on her labour and where minor interventions do occur they are likely to facilitate the retention of control rather than impede it (Zajicek, 1981).

The debate described above has been largely initiated

by consumer organizations and academics from disciplines such as sociology, psychology and anthropology. In addition, numerous books written since the mid-1960's for the lay general population have taken up the theme of the new obstetrics. Most of this literature (bearing titles such as the Cultural Warping of Childbirth, Immaculate Deception and The Trap of Medicalized Motherhood) is extremely critical of the medical management of birth and implies widespread dissatisfaction among women with the technology encountered in pregnancy and childbirth (Evans, 1985).

Despite the ongoing controversy there is little in the way of scientific evidence to confirm or refute either viewpoint. On the physiological level, some research has been conducted on the effects of medical interventions on mother and infant although for the most part many procedures appear to have been introduced into obstetric practice without a systematic evaluation of their effectiveness (Chalmers, 1978; Oakley, 1981). Chalmers, for example, states that "perinatal medicine suffers from a dearth of experimentally derived knowledge upon which rational practice can be based" and that the current debate on modern obstetrics has served to highlight the reality of the situation (Chalmers, 1978, p.51). There is some evidence that such experimental research is now being conducted more frequently, prompted partly by the ongoing debate, but a great deal more research is required by medical workers in the field before different obstetric practices can be effectively evaluated.

On the psychological level, research has tended to focus on the mother-infant relationship with particular emphasis on the impact of hospitalization and medical procedures on the bonding process (Oakley, 1981). Far

less attention has been paid to the mother's perspective of childbirth and, in particular, the psychological impact of obstetric procedures on her experience (Hartman, Nielsen and Reynolds, 1979). Although some research has focussed on the effects of childbirth preparation on the birth experience as well as the impact of specific obstetrical interventions (for example, caesarean section), there is a paucity of research on mother's reactions to the whole range of medical procedures and interventions which are experienced during the course of pregnancy and childbirth. Indeed, Oakley (1981) has cited this as one of the most 'neglected' areas of research in the field of pregnancy and childbirth and the least amenable to analysis.

Related to the issue of mothers' experiences of medical interventions is the question of obstetricians' perceptions of these experiences. A number of writers in the field have suggested that there is a fundamental difference in the medical and maternal perspectives of childbearing (Comaroff, 1977; Graham and Oakley, 1981). Graham and Oakley (1981) use the concept of a frame of reference to indicate this difference while Comaroff (1977, p.131) refers to it as 'the conflicting paradigms of pregnancy and childbirth'. Both writers believe that obstetricians and mothers have a qualitatively different way of looking at the nature, context and management of reproduction which influences their interactions as well as their respective experiences and perceptions. Although some aspects of these differences have been explored, particularly in relation to antenatal care (Comaroff, 1977; MacIntyre, 1978), there have been few systematic attempts to study possible differences which may exist between mothers' experiences of medical technology and obstetricians perceptions of these experiences (Graham and Oakley, 1981).

In the context of the South African maternity system, an exploratory study investigating possible differences between mothers' reactions and obstetricians' perceptions would seem to be particularly relevant. Kitzinger (1978b), in a cross-cultural comparison of maternity systems found the South African maternity system to be an extremely rigid one. While some western societies do allow different procedures during pregnancy and birth to be followed if required, in South Africa white women appear to have little choice about maternity care. In a recent survey conducted by the National Childbirth Education and Parenting Association, only . per cent of middle income South African women opted for a home birth while the majority had their babies in a conventional hospital setting attended by a private obstetrician. Although two alternative birth units which allow the women to play a more active role in the birth process have recently been established - one in the Johannesburg General Hospital and the other in Libertas Hospital in Cape Town - the percentage of patients who have their babies in these special units is still extremely low (du Toit, 1987).

In the light of the preceding discussion the primary aims of this study were to investigate mothers' reactions to medical procedures and interventions occurring during pregnancy and birth as well as obstetricians' perceptions of these reactions. A further aim was to explore possible differences which may exist between these two groups in terms of their reactions and perceptions. Due to the nature of the area being investigated as well as the lack of available data, the study was considered exploratory in nature and a field study approach was adopted.

CHAPTER ONE

THE DEVELOPMENT OF TECHNOLOGY IN CHILDBIRTH

1.1 Historical Overview of Childbirth

When examining the evolution of childbirth in historical terms three major points of transition extending over a long period of time are apparent. The first is the change from female midwife to male midwife, and later physician. The second is an associated move from home setting to hospital setting. The third is the exponential increase in the technology applied to pregnancy and the birthing process as it has become increasingly medical and professionalized. In combination, these changes have significantly altered the experience of childbirth for many women in the western world.

The major control of childbirth remained securely within women's domain until the Middle Ages (Romalis, 1981). Prior to that time, male presence at birth (except for the husband who appeared as an observer or helper) had generally been associated with abnormal or complicated labour (Graham, 1960). For example, among the Ancient Greeks, births were attended by midwives except in unusually complicated cases (Kramer, 1978). Similarly, the Talmud provides evidence that normal births were attended by midwives while difficult cases were delivered by Rabbis (Graham, 1960). Male specialists have thus had a long association with pathology but until recently were rarely found at normal births.

During the Dark Ages in Europe, midwifery was strictly delegated to women and men were prohibited by the Church from attending women in childbirth. Only in

extreme cases was the barber-surgeon summoned to assist the midwife; usually in order to remove a dead foetus with hooks or to perform a caesarean on a dead mother (Donnison, 1977). All uncomplicated births were attended by the midwife who received no formal training and tended to rely on charms and superstitions as much as skill (Kramer, 1978).

With the dawning of the Renaissance, the reawakening interest in nature and secular learning began to affect both the ideas and practices surrounding childbirth. During the thirteenth century, the Church began to loosen its hold on education and the first secular medical schools were established (Romalis, 1981). These universities were attended by upper class men who increasingly enjoyed an advantage over the uneducated midwives who were predominantly drawn from the peasantry and for whom schooling was not an option (Kramer, 1978). Moreover, the midwives' intimate association with the sexuality and reproductive power of women together with their reliance on superstition led increasingly to an association between lay women healers and witchcraft. The resulting victimization of women healers culminated in extensive, church-dominated witch-hunts from the fourteenth to the seventeenth centuries (Ehrenreich and English, 1973).

During the sixteenth and seventeenth centuries an ongoing struggle emerged between female and male midwives. In addition to witch-hunting which diminished the number of midwives, two *discoveries* proved to be an important turning point which tipped the scales in favour of the male midwife.

The first of these discoveries occurred in 1551 when a French surgeon Ambroise Paré rediscovered the technique for turning a breech in utero (Donnison, 1977). This

technique, originally discovered by Soranus, a Roman physician, but lost during the Dark Ages, was an important advance in obstetrical knowledge. Paré described the technique in a textbook he wrote intended for male surgeons, not for midwives (Romalis, 1981).

The second discovery, attributed to the Chamberlain family, was the obstetrical forceps, a pair of spoon like objects by means of which the foetal head could be grasped and pulled down the birth canal. These modern forceps, unlike the primitive instruments used by the barber-surgeons, greatly increased the chances of a live baby being born in cases where the mother was unable to push out the head (Kramer, 1978).

Despite the discovery of the forceps in the sixteenth century they did not come into wide obstetrical use until the 1730's (Graham, 1960). The Chamberlains, a family of noted barber-surgeons as well as formally trained physicians, retained their innovation as a secret for several generations. Deliveries conducted by members of the Chamberlain family were cloaked in secrecy and methods such as blindfolding the labouring women and excluding relatives from the delivery room were used to ensure the secret was maintained. Consequently it was only in 1720, over a hundred years after the invention of the forceps, that they were sold to the Dutch for a large fee and came into general use (Graham, 1960).

The use of the forceps had a profound effect on the status of male midwives. Among the upper classes a great deal of prestige became associated with having a male midwife present. Moreover, because the male midwife was viewed as more competent in dealing with complicated labours, the services of the female midwife were increasingly restricted to so-called "normal

labours". So began the process whereby the female midwife came to be viewed as a helpmate or nurse to the male physician (Donnison, 1977).

The move from the home setting to the hospital setting began in the middle of the eighteenth century. The first lying-in hospitals were established in England and France as charitable institutions to provide the poor with an opportunity to give birth in a safer environment (Kramer, 1978). Ironically this move had the opposite effect when puerperal fever became rampant in the hospitals and resulted in a soaring maternal mortality rate which was to last for two centuries. Such was the reputation of these early hospitals that they came to be viewed as "the gates which lead women to death" (Parsons, 1978, p.140) and many women would go to great lengths to avoid being sent to them (Kramer, 1978).

Lying-in hospitals proved to be an ideal breeding ground for puerperal fever, a disease caused by a streptococcal infection. Conditions in the hospitals were unhygienic and no effort was made to separate infected patients from healthy ones. Moreover, doctors themselves became carriers of the disease by moving from the autopsy table to the labouring woman with unwashed hands, unaware that they were frequently the source of infection (Kramer, 1978).

In the 1840's Ignaz Semmelweis, a Hungarian physician, observed that in his own hospital in Vienna women attended by midwives had a low incidence of puerpural fever whereas those delivered by medical doctors and students had a death rate of one in ten (Tanzer and Block, 1976). In contrast to the doctors who used corpses for tuition, midwives received their instructions in anatomy with mannequins. Anticipating

Lister's discovery of asepsis, Semmelweis instructed all doctors to wash their hands in an antiseptic solution, chloride of lime, before examining a labouring woman. The results were impressive and the maternal death rate dropped from one out of ten to one out of one hundred (Kramer, 1978).

Despite the striking results obtained by Semmelweis, his discovery was met with hostility by the medical community. Doctors were reluctant to accept their own role in transmitting puerpural fever and his findings were ignored. Consequently, it was not until the 1870's, with the discoveries of Louis Pasteur and Joseph Lister, that the medical community finally acknowledged the real cause of puerpural fever. With the widespread introduction of antiseptics in the hospital, the epidemic problem was solved and hospitals finally became a safe place for women to give birth (Kramer, 1978).

The movement from home to hospital was further facilitated by the discovery of anesthesia and its use in childbirth during the 1840's (Romalis, 1981). Although this innovation initially met with opposition from the Church, which maintained that God had intended that women should bring forth children in pain (Genesis 3:16), it was welcomed enthusiastically by most women. When, in 1853, Queen Victoria made use of chloroform for the birth of a child, the resistance to labour pain relief was overcome and the use of anesthesia in obstetrics became widespread (Graham, 1960).

Since anesthesia required special skills and sophisticated equipment only to be found in hospitals, for the first time upper class women began to choose to give birth in hospitals, attended by physicians, rather than at home attended by midwives. Nevertheless, in

numerical terms, the number of women having hospital births remained fairly low and most women continued to give birth at home assisted by a midwife. In Britain, for example, the hospital confinement rate in 1927 was 15 per cent and this consisted mainly of mothers who were considered to be high risk (Oakley, 1981).

By the 1930's, however, with the perfection of safer surgical techniques, antibiotics, conduction anesthesia and monitoring equipment, the hospital increasingly came to be viewed as a safer place for all women to give birth (Romalis, 1981). Moreover, the obstetrical profession began to express the opinion that "childbirth could no longer be regarded as a natural process, nor could 'natural' labour be accurately defined. Every birth should therefore be attended by a medical practitioner, who should 'guide' and 'control' it" (Donnison, 1977, p.127). With the widespread movement of births into hospitals, the female midwife came increasingly to perform the role of assistant or nurse to the physician, and today in most western countries few are either trained or available for home births (Romalis, 1981).

Although there are variations between western countries, home births have become a rare occurrence with the exception of Holland. For example, 2 per cent of babies are born at home in Germany, 3 per cent in Canada, 1 per cent in the United States, and none in Sweden (Oakley, 1981). The shift from home to hospital together with advances in medical science has led to a tremendous increase in the use of technology in pregnancy and birth. In the 1980's a large number of technological procedures have become standard practice in most western countries. Oakley (1981, p.17) provides a list of the more common procedures which are performed :

- Regular antenatal checkups
- Iron and vitamin supplements
- Vaginal examinations in pregnancy
- Ultrasound monitoring of pregnancy
- Enemas or suppositories in first stage of labour
- Shaving of perineal or pubic hair in labour
- Artificial rupture of the membranes
- Pharmacological induction of labour (oxytocin, prostaglandins)
- Vaginal examinations in labour
- Bladder catheterization in labour
- Mechanical monitoring of the fetal heart
- Mechanical monitoring of contractions
- A glucose or saline drip in labour
- *Epidural analgesia in labour*
- Analgesics such as pethidine and tranquilising injections in labour
- Birth in a horizontal or semi-horizontal position
- Episiotomy
- Forceps or vacuum extraction of the baby
- Cutting the umbilical cord immediately after birth
- Accelerated delivery of the placenta by injection of ergometrine and/or oxytocin and pulling on the cord.

When it is considered that very few of these common procedures had been performed at all prior to this century, the scale of the technological revolution in this area is readily apparent.

Conclusion

Despite the developments in modern obstetrics in western technological societies, it is nevertheless estimated that over 70 per cent of all women, most of them in developing countries, deliver their infants at home without the benefit of modern obstetrical care (Sich, 1982). In view of the debate surrounding the impact of modern obstetrics, researchers have begun to look with increasing frequency and interest into traditional birthing practices of non-western societies. This has led to a growing awareness of the socio-cultural aspects of birthing and the extent to which childbirth is an integral part of the fabric of a total culture.

1.2 Cross-Cultural Comparison of Childbirth Practices

> "Any argument about women's instinctive maternal behaviour which insists that in this one respect a biological substratum is stronger than every other learning experience that a female child faces, from birth on, must reckon with this great variety in the handling of childbirth". (Mead, 1967, p.222)

Available information about childbirth in traditional societies reveals much variation in its cultural management. Such variety demonstrates an often ignored fact in western society: methods and procedures of childbirth, even the significance placed on the event, are products of historical and cultural factors, influenced by scientific and social trends. The childbirth situation is in no way absolute and permanent and is everywhere socially marked and shaped (Ford, 1964; Mead and Newton, 1967).

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> "Any argument about women's instinctive maternal behaviour which insists that in this one respect a biological substratum is stronger than every other learning experience that a female child faces, from birth on, must reckon with this great variety in the handling of childbirth'. (Mead, 1967, p.222)

Available information about childbirth in traditional societies reveals much variation in its cultural management. Such variety demonstrates an often ignored fact in western society: methods and procedures of childbirth, even the significance placed on the event, are products of historical and cultural factors, influenced by scientific and social trends. The childbirth situation is in no way absolute and permanent and is everywhere socially marked and shaped (Ford, 1964; Mead and Newton, 1967).

Birth is almost universally treated as a life crisis event (Jordan, 1980). In order to deal with the danger and uncertainty associated with birth, people tend to produce a set of cultural practices and beliefs, which are designed to manage the physiological, psychological and social aspects of parturition in a way that makes sense in that particular societal context. As a result - whatever the details of a given birthing system - its practitioners will tend to view it as the best way and possibly the only way to bring a child into the world. Moreover, the sense of superiority and morality that is built into every system tends to keep its practitioners uninformed about alternate ways of giving birth, since any tampering with the 'correct' way is likely to be regarded as unethical and bad medicine (Jordan, 1980).

It is for the above reason that cross-cultural comparisons can be useful. Such comparisons can both increase our understanding of the process of childbirth and provide further information on the range of alternatives; information which is not otherwise available within any particular system (Mead and Newton, 1967). Given the recent controversy over various obstetric practices in western technologically sophisticated nations, cross-cultural information can offer a new perspective on the impact of modern obstetrics, both psychological and physiological. In fact, a comparison of childbirth across cultures lends itself to an evolutionary study of the impact of technology, since in all societies, some set of artifacts or material objects are used at the time of birth (Jordan, 1985).

For the purpose of comparison, three cultural settings will be considered that differ in regard to the complexity of the technology considered necessary for managing normal birth. The lowest level is illustrated

by traditional societies before they are substantially influenced by western medicine; an intermediate level is exemplified by homebirths in Holland; and the most complex level is seen in the sophisticated hospital obstetrics of the United States and similarly technologized societies.

The following aspects of childbirth will be considered in each case: (a) definition of childbirth and preparation for the event; (b) attendants and support systems; (c) the physical position adopted at delivery; and (d) the medication and technology used at birth.

1.2.1 Childbirth in Traditional Societies

1.2.1(a) Definition of Childbirth and Preparation for the Event

Childbirth in non-industrialized and preliterate societies is usually defined as a normal function and is regarded as an integral part of ordinary family life (Mead and Newton, 1967). This does not mean that pregnancy is greeted with indifference but rather that beliefs and practices related to reproduction are integrated with those characterizing social life generally. Childbirth in most primitive societies is not considered to be a medical affair and typically there is a clear boundary between illness, which is the affair of the 'medicine man' or 'Shaman' and childbearing which is the province of the female midwife (Ford, 1964).

Although childbearing is considered a normal phenomenon, it is nevertheless most often combined with a perception of its inherent danger. Recognition of the hazards is reflected in a whole agenda of prescribed and proscribed activities. In a Comparative

Study of Human Reproduction, Ford (1964) reported that thirty-five of sixty-five cultures surveyed recommended the performance or avoidance of certain acts as safeguards of an uncomplicated delivery and a healthy baby. Thirty eight of the cultures imposed dietary restrictions. Other common restrictions cover sexual intercourse during pregnancy (prohibited by twenty one cultures) and acts of aggression towards other people or animals, which are often discouraged in fathers as well. For example, the Hopi forbid the father to injure any living creature during the pregnancy lest the baby be stillborn or deformed (Mead and Newton, 1967).

These 'rules' governing pregnancy can be considered as the functional equivalent of modern antenatal care. Through them the society takes care of pregnant women and does its best (within the limits of available resources of knowledge and technology) to avoid complications during pregnancy and birth (Oakley, 1977).

1.2.1(b) Attendants and Support Systems

The most usual practice, cross-culturally, has been for women giving birth to be attended by people who are already known to them, for example, the village midwife, experienced neighbours, or female relatives. These are also the people who have cared for and advised the mother during her pregnancy and who will supervise the care of her newborn child and instruct her in baby care (Oakley, 1977).

In traditional societies it is customary to find men excluded from birth altogether. In those cultures in which the 'medicine man' or 'Shaman' has become institutionalized he may be consulted in the event of a

difficult birth. Even so, he is generally forbidden to enter the place where the birth is taking place and must give advice based only on the midwife's account (Mead and Newton, 1967).

The physical and emotional support of familiar people seems to be the most common cross-cultural resource for dealing with the experience of labour :

> ".... the woman sits on the floor of the hut upon a flat stone and is attended by one woman who sits behind her, supporting her by the hips, and by others at the sides, who keep her knees flexed and separated. When a pain comes they hold her tightly and she leans back on the woman behind her"
> (Ford, 1940, p.500).

Despite the widespread belief that primitive labours are casual, solo affairs, unattended birth is a rare event in most cultures (Newton and Newton, 1972). Most traditional births are collaborative events in which the woman is at all times surrounded by the voices and faces of people she knows intimately (Jordan, 1980). Her labour is physically experienced by those who hold her, and her pain and achievement are shared by those who attend her. In this way, the birth attendants provide a source of essential emotional support (Jordan, 1980).

1.2.1(c) Delivery Positions

The most usual position adopted for delivery is not supine but vertical. Naroll, Naroll and Howard (1961) who surveyed seventy-six non-European societies found that sixty-two used upright positions. Of these upright positions, the most common was kneeling, with twenty-one cultures represented. The next most common

position was sitting with nineteen cultures using this *method*. Fifteen cultures used squatting and five used standing positions.

Newton and Newton (1972) *note* that in most traditional societies the curved back is typical of most birth positions. Thus in the sitting, squatting and kneeling positions, the back *automatically curves forward unless* unusual effort is made. Bearing down in the standing position also automatically forces some curving of the back. Moreover, it is probable that even the *majority* of supine deliveries involve a curve in the back since most do not take place on a flat bed. For example, the hammock deliveries of the Yucatan generally take place with the back curved forward (Jordan, 1980).

1.2.1(d) Medication and Technology in Birth

Oakley (1977, p.28) states that: "The concept of fixed biological needs for intervention in, and the control of, childbirth receives no support from the cross-cultural evidence." It appears that the use of obstetrical interventions is related to the supply of available skill, and technological resources which in *turn is largely dependent* on cultural attitudes towards childbirth.

Mead and Newton (1967) *in their review* of the literature on childbirth in preliterate societies note that some cultures have a passive attitude towards labour, allowing it to take its own *course*, whilst others take the view that as soon as labour has begun, everything must be done to deliver the baby as fast as possible. Thus, for example, the Hottentots pull the baby out, taking it by the chin once the head has been delivered. If the baby is not delivered after strong labour contractions, attempts are made to stretch the

vagina. The Bahaya of Africa use a drug of powdered bark and dried leaves to speed up labour. This drug is so strong that it frequently causes rupture of the uterus. The treatment of the umbilical cord further reflects different attitudes of passivity and intervention but Ford (1940) notes that the usual practice is to wait for the delivery of the placenta before severing the cord. Mead and Newton (1967) point out that the weight of cross-cultural evidence and the available research suggests that the optimal time for cutting of the cord is fifteen to twenty minutes after the delivery of the placenta.

References to many of the obstetric procedures practised in western, industrialized countries today can be found in the ethnographic literature (Mead and Newton, 1967). For example, manual removal of the placenta is practiced by the Navaho Indians; episiotomy by the Chagga of Tanzania and external version by the Tuaxemala Indians. Oxytocic drugs are used by the Bahaya (mentioned above) and the Sierra Tarascans. Physiological releasers of oxytocin such as breast stimulation and orgasm are also used by a number of cultures. For example, the Siriono recommend intercourse with the husband to stimulate an intermittent labour as they appear to be aware of the fact that orgasm may stimulate uterine contractions (Mead and Newton, 1967).

The extent to which women expect, experience or express pain in labour also differs considerably between cultures. Although in some cultures the sensation of normal labour may not be thought of as pain, in other cultures pain may be quite definite, even among people who have had little contact with western cultures (Newton and Newton, 1972). In his survey of reproductive practice, Ford notes that the "popular

impression of childbirth in primitive societies as a painless and easy event is for the most part contradicted ...." (Ford, 1964, p.62). Thus many cultures anticipate pain in childbirth but their mechanisms for dealing with it vary considerably.

A number of societies offer the labouring woman pharmacological or nutritional support during labour to help her cope with pain. Thus the Amhara of Ethiopia offer a drink of mashed linseed to relax the birth tract and lessen the pain while the Ukranian midwife gives the mother a generous dose of whisky to ease her pains (Newton and Newton, 1972). On the nutritional level, the Hottentots feed soups to labouring women to strengthen them whereas the Bahaya permit drinking during labour but prohibit eating (Newton and Newton, 1972).

Massage of the abdomen and back are also widely used in the management of labour, as are the devices of providing a cord or a sash or some object to hold on to. The most common means, however, of assisting the woman in labour is to provide her with the physical and emotional support of familiar people (Newton and Newton, 1972). This aspect was dealt with, in greater detail, in section 1.2.1.(b) headed 'Attendants and Support Systems'.

In general, it is apparent that the technology used at birth tells us something about the local definition of the birth and about the degree of specialization of practitioners. Jordan (1985) notes that in societies where tools are simple, birth is more likely to remain within the realm of routine family life than if there is an extensive set of specialized, technological

objects. Furthermore, the more sophisticated the technology the more specialized and professionalized the birth attendants. Thus, for example, the application of forceps or the attachment and interpretation of a foetal heart monitor, are technical procedures that only a properly trained person is qualified to Consequently the technology associated with birth can be looked at not only in terms of its immediate impact but also with regard to the effects it has on the definition of the event and the relationships of the participants (Jordan, 1980).

1.2.2 The Dutch Syst. of Home Births

1.2.2(a) Definition of Childbirth and Preperation for the Event

An intermediate level of technology is illustrated by the Dutch system of home births. In Holland, as in traditional societies, childbirth does not fall strictly into the medical domain. Birth is considered to be a natural phenomenon which in most instances requires little or no intervention. As a result approximately 35 per cent of women still give birth at home while most hospital confinements are attended by a midwife or family doctor. Only those labours considered to be at high risk are attended by an obstetrician (Kloosterman, 1978).

Among Dutch birth attendants there is a shared conviction that women's bodies are inherently capable of giving birth and that in the large majority of cases only close observation and physical and emotional support are required. However, although pregnancy is not regarded as pathological, the risk of complications is recognized and this has led to the development of a prenatal care system unparalleled in any country (Kloosterman, 1978).

In Holland, prenatal care is free, comprehensive and universal. The average number of prenatal examinations is twelve and the great majority of all women see their family doctor or midwife in or before the third month of pregnancy for the first time. The person responsible for delivery care is also responsible for prenatal and postnatal care since it is considered *important* to establish a personal relationship between the expectant mother and the midwife or doctor during pregnancy (Kloosterman, 1984).

An important aspect of the prenatal care system is selection in order to distinguish between normal pregnancies and those with current or foreseeable complications. If a midwife or family doctor identifies some pathology during pregnancy the prenatal care is immediately taken over by an obstetrician and a hospital confinement is planned for. A precondition for home confinement is thus the absence of all indications of abnormality. In this way obstetricians are exempt from the responsibilities for routine and normal pregnancies and their medical expertise is utilized in the treatment of those cases which clearly fall into the medical domain (Jordan, 1980).

1.2.2(b) Attendants and Support Systems

In a home confinement, a Dutch woman will be attended by her husband, possibly her mother or another woman she knows well, and a 'home care team' consisting of a *midwife* and a *maternity aid nurse* (*Kloosterman*, 1978). Midwives in Holland are not nurses in the conventional sense in that they do not undergo a nursing training programme. They are considered to practise an independent profession and undergo a three year

training course in obstetrics in order to become registered as midwives. The maternity aid nurse, on the other hand, undergoes a sixteen month training course in housekeeping and the care of the mother and baby. Her role is to assist the midwife at the delivery and look after the mother and her household for ten days following the birth. In combination, the midwife and the maternity aid nurse form a home care team within which the midwife is considered to fulfil the role of the doctor and the maternity aid the role of nurse (Kloosterman, 1984).

In keeping with the Dutch philosophy of non-interference, the midwife's role is predominantly one of careful observation and support. In addition, she will perform the few technical tasks such as cutting the umbilical cord which the woman cannot do easily for herself. Since no medication is generally given during labour and birth, all discomfort is handled through breathing and relaxing techniques. In this, the woman will be assisted by the midwife as well as her husband who will provide her with encouragement and emotional support.

Jordan (1985) notes that in the Dutch home birth setting, as in the low technology environment, there tends to be little or no privileged information. The use of any instruments and their purpose is readily apparent to the non-specialist attendants and access to information about what is happening during the birth process is not restricted to the midwife. Thus, for example, when the midwife listens to the foetal heart tones, she will indicate the rhythm with her finger, so that all those present can immediately appreciate any dramatic slowing down or speeding up.

In general, it should be mentioned that this

comparatively low level of technology is safely possible because the Dutch homebirth system is organized in such a way that immediate access to the resources of hospital obstetrics is built in. A good road system, numerous hospitals and an emergency obstetrics ambulance service means that almost every woman can be transferred from her home to the nearest hospital within sixty minutes if necessary (Kloosterman, 1978).

1.2.2.(c) Delivery Position

In general, the sitting position in all its variations is the most commonly utilized delivery position in Holland (Brook, 1976). In a home delivery, the woman will be encouraged to walk around during early labour since this is regarded as physiologically and psychologically beneficial. During the delivery itself the woman will be encouraged to adopt a position which is comfortable to her. Most usually this will be a semi-sitting position on her own bed supported by pillows, her companion or the midwife (Jordan, 1980).

In Dutch maternity hospitals, obstetric beds are generally constructed with an adjustable backrest which allows the woman to assume a semi-sitting position. Her feet, with knees bent, are set flat on the bed, and for the final pushing stage she hooks her hands under her thighs in what might be termed a "lying-down-squatting position". The lower end of the bed is detachable so that should the lithotomy position be required for any reason, the foot-end is simply rolled away (Jordan, 1980).

1.2.2.(d) Medication and Technology in Birth

In keeping with the Dutch philosophy of

non-interference, obstetrical intervention during labour and birth is kept to an absolute minimum. In home births many of the artifacts necessary for birth are supplied by the woman, such as the bed on which she labours, the cloths and sheets which will be used, basins, teas, foods and so on. The midwife provides a delivery kit that contains the relatively simple obstetric tools that would not be available in the average household, such as a wooden stethescope and umbilical clamps. None of the sophisticated equipment found in the hospital setting is available for the home birth. Consequently, the majority of home births take place unaided and without any use of pain relief methods (Jordan, 1980).

The above point is well illustrated by an investigation conducted by the University of Amsterdam into home births (Kloosterman, 1978). This investigation comprised a group of 916 women who were pregnant with their second child and showed no abnormalities (in accordance with the Dutch list of medical indications for hospital confinements). From this group twenty four women (2,6 per cent) were transferred during labour to hospital. In this group of transferred women there was one artifical delivery (vacuum extraction) and one case of perinatal mortality (classed as unpreventable). The remainder of the group (892 women) delivered at home without any cases of perinatal mortality or serious morbidity. Among these women there were no artificial deliveries and analgesics were not used at all. Apgar scores of below 8 at 1 minute were found in less than 1 per cent. In all cases the father was present and assisted his wife during labour and delivery.

Statistics for interventions which require a hospital setting also suggest a reluctance to intervene. For

example, the caeserean section rate for Holland in 1977 was 3,3 per cent in contrast to the United States where it was 12,5 per cent for the same year (Kloosterman, 1984). This relatively low level of intervention does not appear to have adversely affected the Dutch infant and maternal mortality rates which are among the lowest in the western world (Arms, 1977).

Despite the apparent success of the home confinement system, there is an increasing move towards hospitalization. In 1967 the percentage of home confinements was 68 per cent; by 1979 it had dropped to 35 per cent and there are indications that it is continuing to decline (Kloosterman, 1984). What impact this trend will have on the use of technology in birth in the Netherlands remains to be seen.

1.2.3 Birth in Technologically Sophisticated Societies

1.2.3(a) Definition of Childbirth and Preparation for the Event

The most sophisticated and most complex level of technology is illustrated by hospital births in the United States and many western industrialized countries. Associated with this level is a pervasive, and culturally shared belief that the process of childbirth is, at least potentially, pathological and therefore has to be treated with all of the resources of modern obstetric technology (Jordan, 1985).

In keeping with the definition of pregnancy and birth as a medical event, antenatal care falls within the obstetrician's domain. Early in pregnancy, the woman will place herself under the obstetrician's care and visit him/her regularly throughout. During these

visits, her weight and blood pressure will be checked, blood and urine will be analysed and the adequate growth of the foetus will be assessed, often with the use of ultrasound. If any problems arise they will generally be dealt with by specialized procedures such as amniocentesis, stress tests and the like. In addition to these visits, the woman is likely to enrol in natural childbirth classes where she will be trained in breathing and relaxation techniques to handle the discomforts of labour (Oakley, 1977).

The description offered above is of an ideal situation but Jordan (1980) notes that in the United States, unlike Holland, the level of antenatal care is highly variable. It is highest among well-educated women of the upper socio-economic classes who have the resources to afford the services of a private obstetrician. It is lowest among indigent women delivering in large urban hospitals, 25 per cent of whom are estimated to have had no antenatal care at all (Hellman and Pritchard, 1971). A similar situation exists in South Africa, with its mix of first and third world populations. Whereas many white women probably receive the care described above, it is likely that a high percentage of the black population either experience sporadic antenatal care or none at all.

1.2.3(b) Attendants and Support Systems

In Britain, the United States and most western, industrialized countries the importance of hospital-located childbirth is emphasised for the safety of mother and child (Oakley, 1977). Within the hospital setting, the labouring mother will generally be attended by a medical team consisting of an obstetrician, one or two nurses/midwives and possibly a paediatrician. For those women cared for by a private

obstetrician during pregnancy, some continuity of care will be provided by the obstetrician himself. For those who attended antenatal clinics, continuity of care will be broken and their birth attendants will in *all probability be strangers to them.*

Unlike in traditional societies, female relatives of the woman are generally excluded from the hospital setting and the only non-specialist attendant present is likely to be the husband. Whereas in Britain the presence of the husband has become commonplace, Jordan (1980) notes that many American women still experience labour and delivery with nobody present except medical personnel. The emotional support of familiar figures is thus absent and the woman will have to rely on the medical personnel for support and assistance.

Given the medical orientation of the [illegible], uncertainty, stress, pain and [illegible] difficulties tend to be handled thro[illegible]al routines. Thus discomfort tends to be manag[illegible] by pharmacological pain relief and anxiety through sedatives (Oakley, 1977). Even when a non-specialist attendant *is present to support* the woman, the opportunity to interact actively with her is usually severely restricted. Generally, it is not possible to give the woman full body support as she is lying on a table and can no longer be held. *Moreover,* the delivery table is usually constructed in such a way as to effectively demarcate the lower part of the woman's body as the domain of the specialist attendants. Consequently information on the progress of the birth is privileged and the woman and her attendant are reliant on the specialists for information. Thus, unlike traditional societies where there is active involvement of all attendants and a shared distribution of knowledge, in high technology systems, active

support tends to be minimal and information pertaining to the birth tends to be privileged and restricted to the specialist attendants (Jordan, 1980).

1.2.3(c) Delivery Position

In the United States, the tendency has been to choose a reclining position for the delivery of the baby. Mead and Newton (1967) note that this follows from the concept of birth ...

> "as a surgical procedure. The position of the woman at birth is arranged as nearly as possible to conform to this concept. Her body is flat and her neck is straight without a pillow to support it, as is the custom on operating tables. Her arms are tied sideways so they will not stray into the sterile field. Her legs are mechanically spread wide apart with braces to allow the physician to have an unobstructed view of the perineum". (Mead and Newton, 1967, p.211).

Some maternity units in the United States today have moved towards a more flexible attitude found in Britain and other European countries. Stirrups are not used in Britain except for instrumental deliveries and for stitching (Oakley, 1977). In Europe, obstetric beds are constructed with an adjustable backrest which allows the woman to assume a semi-sitting position. In general, the lithotomy position, which until recently has been so firmly established in American practice, has not been used that extensively in other cultures.

Considerable research has been conducted on the problem of position in labour in relation to ease of delivery. Most of the findings of this research suggest that the

flat, supine position for delivery may make spontaneous delivery more difficult. For example, Mengert and Murphy (1933), in an extensive experimental study, found the sitting position to be the most advantageous in that it provided the greatest intra-abdominal pressure. In a similar vein, Vaughan cited in Mead and Newton (1967) established that squatting alters the pelvic shape in a way that makes it optimal for delivery. Newton and Newton (1972) in surveying this literature on birth position provide the following comment :

> "Had Mengert and Murphy and Vaughan advocated a new drug to speed labour, it is likely that culturally accepting attitudes would have resulted in adoption of their findings - even with far less scientifically controlled data. However, instead the proposition of improving labour efficiency through sitting and squatting conflicted with the strongly held cultural attitude that birth is an event experienced lying down. This extensive research, instead of becoming part of the fundamental knowledge required of obstetrics, was ignored".
>
> (Newton and Newton, 1972, p.167-168).

The fate of this particular research provides a good example of the importance of cultural attitudes in determining birth behaviour within any particular culture.

1.2.3.(d) Medication and Technology in Birth

The extent to which any system makes use of medication tends to be in accordance with the local definition of the birth event. In many industrialized societies, in keeping with the medical definition of birth, reliance

on pharmacology is pronounced and the use of sedatives, analgesics and anaesthetics constitutes an indispensable part of obstetric practice. In the United States, for example, Jordan (1980) notes that unmedicated births are a rare occurrence. She reports on a research team at a Boston hospital who were able to identify ony six unmedicated births in the span of two years. Similarly, in England, the use of analgesics in labour is widespread. Oakley (1977) reports on a research project in a London hospital which found that pethidine was given routinely early in the first stage of labour, irrespective of patient indication. Thus, unlike low technology societies where psychological methods of pain control are widely practised, high technology societies tend to emphasise pharmacological methods for controlling labour pain.

Despite the numerous pharmacological methods available for pain relief, research suggests that American women still suffer a great deal in labour. In a study designed to measure the intensity of pain during childbirth, Hardy and Javert (1949) found that almost all of the women who were still able to cooperate by the time of delivery, reached the maximum intensity of pain that can be experienced. Jordan (1980) believes this partly to be a result of the frequent absence of non-specialist attendants in the United States system, who in many other systems are a source of essential emotional support. Oakley (1977) believes the degree of pain women experience to be partly a consequence of the existing medical ideology which considers childbirth to be a painful illness requiring pain relief. This attitude affects the management of labour and additional care is not taken to avoid placing the labouring woman in extra discomfort. She notes that in cultures in which pharmacological methods of pain control are not widely used, the pain caused by

certain interventions is a cause for concern. In the U.S.S.R., for example, the vacuum extractor which is considered to be less painful to the mother is used instead of the traditional forceps. In the same way enemas in the first stage of labour are avoided as 'painful stimuli' whereas they are often used routinely in British and American hospitals (Mead and Newton, 1967).

Current patterns of intervention in many western countries tend to reflect the belief that the shorter the labour the better. Thus a slow first stage labour is often speeded with surgical rupture of the membranes, or administration of oxytocin, or both. During the second stage, women are generally urged to push hard and bear down in order to exert maximum force during contractions, thus speeding labour.

Prophylactic forceps and prophylactic episiotomies, which hasten the second stage of labour, are also extensively used while the rapid delivery of the placenta accomplished by manual manipulation is a widely practised obstetrical technique (Mead and Newton, 1967).

Mead and Newton (1967) note that the widespread use of labour-speeding devices suggests that labour speeding is a central problem in the philosophy of obstetrics. Cultures that emphasise the value of time seem to be particularly involved in developing methods of speeding up labour. In western cultures, labour acceleration and induction probably enable busy obstetricians and nurses to deliver more patients than would otherwise be possible.

A more comprehensive assessment of the technology used in hospital births will be presented in the following

chapter. In general, however, it is important to note that the extensive technology applied in hospital births in many western countries has important implications for the woman's experience of birth. The assimilation of childbirth into the medical realm subjects the birth event to medical decision-making criteria and the degree of self-management allowed to the woman is limited. Unlike home births, where the woman participates actively in decisions about the birth, in hospital based deliveries the decision-making authority and power are automatically transferred from the woman to the specialists attending the birth. This means that a woman in labour, regardless of whether it is normal or medically complicated, is relieved of responsibility for her state and is expected to submit to the professional competence of the obstetrician (Jordan, 1980). Consequently the woman may derive very little prestige or satisfaction from the birth and the feelings of achievement at birth may center around the actions of the obstetrician. Newton and Newton (1972) note that it is not uncommon in western cultures for the husband and family to thank the obstetrician for the delivery of the baby rather than to thank the wife for giving birth.

Conclusion

Cross-cultural comparisons serve to highlight the influence of cultural attitudes on birth practices and behaviour. Such comparisons offer a new perspective and understanding of current birth patterns in western technologically sophisticated cultures. Moreover, they serve to emphasize the point that any attempts to change current obstetrical practices may meet with unanticipated consequences unless cultural attitudes and beliefs are taken into consideration.

CHAPTER TWO

THE PSYCHOLOGICAL IMPACT OF TECHNOLOGY IN PREGNANCY AND CHILDBIRTH

The primary focus of obstetricians until well into this century has been the medical well-being of mother and child. Efforts have been directed primarily towards the reduction of maternal and perinatal mortality rates, with little interest being shown in the psychological and emotional aspects of childbirth management. While most writers are in agreement that medical advances have brought about enormous benefits in terms of a reduction in the incidence of death and damage to babies and mothers, critics of modern obstetric practice believe the pendulum may have swung too far, with the routine use of technological intervention having the effect of dehumanizing and depersonalizing the woman's experience of delivery (Reading, 1983).

The present chapter will examine some of the available literature relating to the psychological impact of those medical interventions in modern obstetrical management which are either routinely used or of a contentious nature. Given the overall paucity of research in this area, reference will also be made to research relating to the physiological effects of these medical interventions, since the psychological and physiological impact of medical procedures are often so closely intertwined that it is difficult at times to separate one from the other. In addition, a brief review of the research and literature relating to the psychological impact of the hospital environment on the mother and her infant will also be presented.

2.1 Commonly Used Obstetrical Interventions

2.1.1 Antenatal Procedures

2.1.1(a) Ultrasound

Discovered in the 1950's by Ian Donald, obstetric ultrasound has become one of the most popular and extensively used methods of foetal surveillance in prenatal care. A recent W.H.O. study of ultrasound in Europe found that ultrasound is performed in twenty-two European countries, and in three of these it is a routine part of antenatal care (Oakley, 1984). In most hospitals in the United Kingdom, routine scans are being conducted, generally at around sixteen to eighteen weeks of pregnancy, although in some instances two to three scans per pregnancy are being carried out (Kitzinger, 1983). Although information on the incidence of ultrasound in South Africa is unavailable, the routine use of ultrasound for white pregnant women appears to be widespread. The present study indicated that 91 per cent of a sample of 147 white women in Johannesburg maternity hospitals had undergone an ultrasound examination during their pregnancy.

Ultrasound consists of transmitting very sharp pulses of high frequency, low intensity soundwaves through the woman's abdomen. These soundwaves pass through maternal and foetal tissues where they are converted into electric signals which are then amplified and processed by cathode ray tube into visual signals (Oakley, 1984). Two basic ultrasound modalities are used in foetal visualization: static B scanning and real-time scanning. The former produces static pictures which allow for the construction of a three-dimensional image of the foetus while the latter provides two-dimensional pictures with movement visible

if the foetus is active at the time of recording (Reading, 1983). Although B scans are superior in making the diagnosis of foetal abnormality they are time-consuming, costly and require greater skill than real-time scans. Consequently real-time scanning is more extensively used, with many obstetricians currently using small portable machines in their consulting rooms.

Information obtained from ultrasound is predominantly used to: (1) enhance the safety and effectiveness of amniocentesis; (2) diagnose multiple pregnancy; (3) detect abnormalities in the foetal growth rate; (4) accurately define foetal age; (5) detect changes in amniotic fluid volume; and (6) directly detect foetal structural abnormalities (Campbell, 1980).

Although the diagnostic benefits of ultrasound have been well-documented, comparatively little attention has been given to the psychological impact of this new technology. While critics of the procedure view it as a further extension of the alienating effects of technology, most providers of antenatal care have tended to assume that scanning is an enjoyable experience for the mother. The few studies which have been conducted tend to support this assumption.

Reading (1983) reports on two nursing studies which examined the reactions of women to ultrasonography. The first study, carried out by Kohn et al (1980), assessed the reactions of one hundred primigravidae before and after ultrasound. Mothers were found to be uniformly positive in their response to scanning, with those mothers who had not experienced quickening finding it particularly exciting. The second study, conducted by Milne and Rich (1981), studied thirty women in the second and third trimesters. They too

reported positive reactions and suggested the possibility that ultrasound *increases the woman's* attachment to the foetus.

The most extensive and systematic study of the psychological effects of ultrasound involved the manipulation of the level of information supplied to two groups of women at the time of their first scan (Reading and Campbell, 1982). The first 'high feedback' group were allowed to view the foetus on the monitor screen and were provided with verbal feedback as to foetal size, shape and movement while the second 'low feedback' group recieved a comparable examination but were unable to view the monitor screen and received only global feedback of the form "all is well" (Reading and Campbell, 1982, p.371). Results indicated that women in the high feedback group displayed uniformly more positive attitudes toward the scan than the low *feedback group.* No support was obtained for the view that scanning causes distress, although the extent of the emotional impact was determined by the amount of feedback provided. *Reading and Campbell* (1982) thus concluded that scanning is an informative and emotionally rewarding experience for women, particularly when detailed feedback *is made available.* However, Oakley (1984) suggests that the results obtained may be due partly to the positive influence of receiving a supportive interview, rather than the specific feedback effects of ultrasound.

It is of interest to note that despite the increasingly widespread use of obstetric ultrasound, controversy still exists as to the safety of the procedure. Although to date no evidence has been adduced to suggest any subsequent problems in children who have been exposed to ultrasound in utero, some of the biological effects of ultrasound demonstrated in animal

studies and on in vitro human cells have been disturbing (Enkin and Chalmers, 1982). To date, no large scale, long term randomized controlled trial has been conducted to investigate the presence or absence of morbidity in children and adults exposed to ultrasound in utero. Oakley (1984) states that it is impossible to guarantee the safety of ultrasound until such a trial has been undertaken. She notes that it took the best part of half a century before the use of X-rays in pregnancy was discovered to have carcinogenic effects.

2.1.1(b) Amniocentesis

Amniocentesis was first used for prenatal diagnosis of chromosome disorders in 1967, and extended to the prenatal detection of neural tube defects in 1973 (Farrant, 1985). Since then there has been a rapid increase in the number of women undergoing diagnostic amniocentesis in pregnancy, particularly among high risk women aged thirty-five years and older (Ettner, 1977). In addition, in some western countries, such as Britain, the introduction of routine maternal serum alphafetoprotein (AFP) screening for neural tube defects has further extended the use of amniocentesis to include low risk women, since when the AFP level is found to be higher than normal an amniocentesis is automatically offered to them (Farrant, 1985).

Amniocentesis is usually performed between the sixteenth and eighteenth week of pregnancy. It involves inserting a needle through the abdominal wall into the uterus and drawing off a sample of amniotic fluid. Chromosome abnormalities are diagnosed by cytological and biochemical analysis of the amniotic fluid and neural tube defects by measuring the concentration of alphafetoprotein (Reading, 1983).

Since the procedure is invasive, it carries a risk of miscarriage estimated at between 0.5 per cent and 1.0 per cent (Enkin and Chalmers, 1982). Other possible hazards include damage to foetal limbs, eyes and other organs, neonatal respiratory problems and orthopaedic postural deformities. Accurate statistical probabilities of the occurrence of these problems is *not yet available (Dixson et al, 1981).*

Since amniocentesis carries a known risk it is recommended that the test not be given without the woman's informed consent. In practice, however, Farrant (1985) in a three year research study of women's experiences of prenatal screening, found that many women were not receiving the necessary information about the risks and limitations to make an informed decision about amniocentesis. Of a sample of 112 women, 24 per cent were unaware that amniocentesis carried a risk of miscarriage, while 96 per cent were unaware of any other possible hazards. The most extreme examples of lack of information concerned black and working class women of whom 50 per cent in the research study had undergone amniocentesis without having any idea about the purpose or potential hazards of the investigation.

With regard to the psychological impact of the procedure, comparatively little information is available on the reactions of women to amniocentesis as compared with the literature on rates of use and the nature of abnormalities found *(Reading, 1983).* Farrant (1985), in the study referred to above, found that most women were extremely positive in their attitude towards the general idea of prenatal screening. However, of the women who underwent an amniocentesis, a high proportion found the experience of waiting for the results of the test distressing. Many developed symptoms of high

anxiety which manifested in a number of ways, including, in some cases, increased tobacco and alcohol consumption. Similarly, Dixson, Richards, Reinsch, Edrich, Matson and Jones (1981) in a comparable study, identified the four week waiting period for the results of the amniocentesis as a time of particular strain. Moreover, they found that in 25 per cent of the women this raised anxiety was not reduced by a negative result and continued throughout the remainder of the pregnancy.

Reading (1983) notes that studies on psychological reactions to the procedure of amniocentesis suggest the need for detailed preparatory counselling to ensure an awareness of the delay period as well as the consequences of a negative result. In many British clinics it has become customary practice to resolve anxieties about harming the foetus by showing the woman her foetus via ultrasound upon completion of the tap. While this may allay anxiety, it has the disadvantage of potentially increasing the attachment to the foetus with negative psychological consequences if a subsequent therapeutic termination is required.

2.1.2 First Stage Interventions

2.1.2(a) Prepping and Enemas

It has long been established practice in most western maternity hospitals to shave the perineum and administer an enema to all women in early labour. In South Africa, these practices are also widespread with a recent National Childbirth and Parenting Association survey indicating that more than 80 per cent of the respondents were routinely shaved and given an enema when admitted to the labour ward (du Toit, 1987). Despite their extensive use, there is much controversy

surrounding the acceptability and medical usefulness of both these procedures.

i. Shaving

Shaving of the perinium was introduced at the turn of the century as a means of reducing infection and of enabling midwives who were not allowed to do internal examinations to see when the baby's head was ready to crown. The practice became an established part of hospital procedure, even after midwives were allowed to do internal examinations, and has continued into the present for reasons of hygiene and to provide the obstetrician with a bald area for episiotomy and suturing of the perineum. In recent years the area shaved has become smaller and a 'half-shave' of the perineum is now the one most commonly used (Kitzinger, 1983).

Despite the fact that most women accept shaving as a necessary part of childbirth, Kitzinger (1983) states that there is an increasing sense that it is a needless and often humiliating and degrading element in modern childbirth ritual. Moreover, the re-growth of hair after the birth tends to cause extreme discomfort and itching, particularly since it is over an area which may be bruised and tender. Available research tends to support critics who view shaving as an unnecessary medical procedure.

A recent study conducted at a London hospital by Romney (1981) found no significant difference in the incidence of infection between a group of women who were shaved and a control group who were left unshaved. They further found that of the women shaved, 90 per cent felt negatively about the procedure and complained of bruising and itching. A second study, conducted in

the United States on a sample of 600 women, found the incidence of infection to be slightly higher among those women who were shaved, probably as a result of minor nicks or cuts caused by the shaving (Burchell, 1964). Haire (1978) commenting on this research suggests that the alternative of clipping the perineal or pudendal hair closely with surgical scissors is far less disturbing to the mother and is less likely to result in infection caused by razor abrasions.

ii. Enemas

The administration of enemas became an established part of hospital routine in the nineteenth century, when it was thought that faecal contamination might be a cause of puerperal fever. Although this theory was later disproved, the practice has continued into the present in the belief that an empty bowel facilitates the descent of the baby, stimulates uterine activity and reduces faecal contamination (Romney and Gordon, 1981). Until recently, the validity of these claims has not been questioned and most women have accepted enemas as a necessary, and unavoidable, part of having a baby.

A recent study by Romney and Gordon (1981) investigated possible differences between a group of women who were given enemas routinely and a group of women who received no bowel treatment. Their results indicated that enemas did not reduce the incidence of faecal contamination or infection, nor did they appear to have any significant influence on the duration of labour. Although no evidence was found to suggest that enemas are harmful to women, the researchers did discover that the procedure caused distress to a few women and discomfort to many. They point out that it is not easy to challenge a procedure which has been an integral part of obstetric practice for over three

hundred years, but nevertheless advise that routine *enemas in labour* be discouraged. Since this study was carried out on a relatively small sample, however, further trials are required to confirm the results.

2.1.2(b) Pain Relief in Labour

Surveys of obstetric records *in western countries* indicate that the use of medication and anaesthetic techniques to control pain in labour is extensive and widespread (Reading, 1983). Although exceptions do exist with, for example, a Dutch survey indicating that analgesics are given in only 5 per cent of deliveries (MacFarlane, 1977), records for most other western countries suggest it has become the norm to administer pain relieving medication. The British Births Survey (Chamberlain et al, 1975), for example, revealed that nearly 70 per cent of women received pethidine during labour while estimates for the United States suggest that only 10 per cent of labours proceed without any form of pain relief (Parfitt, 1977).

i. Pain Relief Medication

Most recent research on pain relief medication has focussed on the physiological side-effects of such medication on the infant and the possible consequences of these *effects on the development of the mother-infant* relationship. The side-effects of analgesic drugs on the mother, although not uncommon, has been a neglected area of research (O'Driscoll, 1975).

The following discussion will examine the physiological and psychological effects of analgesic drugs on the mother and infant as well as their possible impact on the establishment of lactation and the mother-infant relationship. Since pethidine is the standard drug

used for relief of pain in labour in most maternity hospitals in South Afri. it will serve as a model for this discussion.

Pethidine : For many years it was believed that the placenta served as a protective barrier preventing the drugs administered to the mother from entering the foetal circulation in any significant quantity. It is now known that the placenta is not a barrier and that all medications readily cross the placenta and affect the infant. Moreover, the effects of these drugs persist much longer in the infant than the mother due to their immature enzyme systems and inefficient detoxification processes (MacFarlane, Smith and Garrow, 1978).

Several studies have demonstrated that pethidine given to mothers in labour results in a significant increase in neonatal depression as measured by Apgar scores and the onset of sustained breathing (Jordan 1980). While this may be of less significance to the full term baby, it may present more of a problem in the case of premature delivery (Reading, 1983). Behavioural impairments in drugged infants after birth have also been demonstrated. Brazelton (1970), for example, found the infant's normal sucking response to be significantly lessened for four days after delivery as a result of maternal medication. Similarly Conway and Brackbill (1970) have demonstrated that obstetrical analgesia has significant effects on the infant's muscular, visual, and neural development for at least four weeks after delivery. A further study cited by MacFarlane (1977) found that babies born to mothers who had received pethidine tended to be less responsive, less cuddly and less consolable when they cry.

Because pethidine and pethilorphan (a combination of pethidine and levallorphan) have a depressive effect on infant sucking, lactation may be harder to establish and the initial relationship of mother and baby may be made more difficult. Brazelton (1970) in a review of the effects of drugs on the neonate and mother states that many mothers become very upset by a drugged baby's unresponsiveness. He believes that the 'chemical separation' produced by a drugged mother and a depressed infant interferes with mother-infant interaction just as effectively as physical separation. This may result in the consequent possible abandonment of feeding and the close physical and emotional bond that is built up during that period.

The effects of pethidine on the mother may also create problems. Since pethidine is a morphia derivative it causes a change in consciousness and in the way the outside world is perceived. Many mothers describe the sensation as 'feeling drunk', 'being out of control' or 'feeling very drowsy and distant' (MacFarlane, 1977 p.42). Such effects may make it difficult for the mother to remain in control of her labour contractions and to actively participate in the birth process. In addition, it may interfere with the woman's perception of events and her emotional reaction towards the neonate following the birth (Reading, 1983).

Although it is difficult to measure the mother's perception of pain relief satisfactorily, most studies indicate that pethidine in doses of 50 to 100mg can hardly be distinguished from a placebo (Beazley and Lobb, 1983). However, when an intramuscular dose of 150mg of pethidine is used routinely, pain relief is judged satisfactorily by 50 to 60 per cent of women (Rosen, 1977). Pethidine does, however, have the disadvantage of providing poor pain relief for a

proportion of women, and it is not possible to distinguish such mothers in advance. Moreover, approximately 15 per cent of women will become nauseous or vomit after pethidine although this side effect can be reduced by administering a drug such as promethazine simultaneously (Rosen, 1977).

ii. Inhalation Analgesia

Inhalation anaesthetic drugs, such as nitrous oxide and oxygen, are available in a number of western countries including England, the United States and South Africa. They are believed to work by altering the state of consciousness of the mother for a short period so that the effect of the pain is markedly diminished. Rosen (1977) states that when used correctly under detailed supervision approximately 70 per cent of mothers experience complete or considerable pain relief.

The main disadvantage of inhalation analgesia is the need for continuous supervision and the concentration required on the timing of inhalations. Too much inhalation leads to drowsiness or even loss of consciousness, whereas incorrectly timed inhalations result in insufficint pain relief. This method is therefore inconvenient for use over long periods and is generally given in combination with pethidine (Beazley and Lobb, 1983).

Rosen (1977) notes that approximately 30 per cent of mothers refuse inhalation analgesia because they fear using the mask. Offering a choice between a face mask or a cardboard mouthpiece increases the acceptance of inhalation analgesic to approximately 96 per cent. When properly administered this method of pain relief is considered to be safe for the mother and to date has not been shown to have any significant effects on the

baby. However, Rosen (1977) notes that there are no studies on the effects of inhalational analgesia alone on foetal respiratory behaviour because it is so frequently combined with pethidine.

iii. Block Techniques

These involve blocking the nerve pathways which transmit painful stimuli during childbirth. The different blocks interfere with nerve pathways at different points between the site of pain (uterus, cervix, perineum) and the central nervous system. The most commonly used block techniques are the paracervical, pudendal and epidural blocks. Spinal blocks, commonly used in the 1940s and 1950s, are rarely used nowdays as a result of accumulating evidence of the problems attendant upon their use (Parfitt, 1977).

Epidural Block : The epidural block is one of the most popular pain relief methods utilized in England, South Africa, the United States and many European countries. It involves the administration of a local anesthetic into the space around the spinal cord, or dura, with a needle or a tube. The anesthetic is effective after approximately fifteen minutes, blocking pain from the cervix, uterus and perineum without reducing the level of consciousness of the mother. However, because some loss of sensory input and motor power in the legs is also common, the woman is generally less able to participate actively in the birth despite her awareness of the course of delivery.

As with pain relieving drugs taken during labour, local anesthetics also cross the placenta and are readily detectable in the blood-streams of the infant. Although Apgar scores at birth are usually

satisfactory, behavioural assessment has demonstrated that muscle tone and strength is lowered in the first hours of life and at three days (Scanlon et al, 1974). A study by Enkin reported by Parfitt (1977) found depression of the sucking response and of muscle reflexes several days after births conducted with epidural anesthetics. Long-term side-effects have not been reported but MacFarlane et al (1978) point out that 'congenital' differences in muscle tone, mobility, vigour of sucking, and the stability of the sleep-waking cycle may alter the early interaction of mother and infant and so affect the relationship in the long term.

With regard to its efficacy, epidural anaesthesia is considered to be the best method for ensuring total pain relief in a high proportion of women. Rosen (1977), reporting on a number of trials, states that 60 per cent of women have been shown to be completely satisfied with epidural anaesthesia while 20 to 30 per cent are reasonably satisfied with the method. Those who are not satisfied usually have a partial or failed block while a small percentage (2 per cent) are dissatisfied because of the sensory loss in the lower part of the body.

Despite its effectiveness, epidural analgesia carries the risk of major complications. These include total spinal analgesia with respiratory damage, temporary loss of bladder function, dural tap, and increased use of forceps. Beazley and Lobb (1983) state that such a formidable list of complications dictates that epidurals be inserted with great skill and care by personnel capable of instantly resuscitating the patient. O'Driscoll (1975) believes that epidural anaesthesia should be used selectively with due regard to the disadvantages and should not be presented to the

public as a harmless panacea for every problem in labour.

The psychological impact of epidural blocks has been explored in a recent study by Garel and Crost (1982). They compared a group of primiparae who requested an epidural during pregnancy with a group of primiparae who attended antenatal preparation classes and made no request for an epidural anesthetic. Results indicated that the women who had planned analgesia tended to belong to a higher social class and more often had a previous obstetric history of spontaneous miscarriages and more frequent stays in hospital for their present pregnancy. Besides the social and medical differences, all women in the epidural group expressed greater fear and anxiety about childbirth and indicated they preferred the medical risks associated with epidural analgesia to the imaginary risks emerging from their fantasies about labour.

Two days after delivery, the majority of these women indicated they were fully satisfied with their epidural and displayed far more enthusiasm about their experience of childbirth than the control group. However, further exploration of their feelings showed that many of them viewed themselves as "cowards" and felt guilty for not having submitted to the traditional model of motherhood. Many expressed a desire to have their next baby without analgesia. For a minority of these women the epidural was a failure, despite the lack of physical pain. These women underwent a negative experience in which they felt overwhelmed by the process of childbirth, despite the lack of physical sensation. The researchers found that these women felt deceived by the epidural which they believed would enable them to control the whole process.

In view of their findings, Garel and Crost (1982) conclude that a request for epidural analgesia during pregnancy reveals a psychological discomfort and sometimes an intense distress. Although offering an epidural is one possible answer to this problem, they believe that providing women with the opportunity to express their fears and anxiety in a trusting atmosphere may be a more appropriate way of dealing with their discomfort.

Paracervical Block : This block is sometimes used in place of epidural anaesthesia due to its ease of administration. It involves an injection of local anesthetic into the pelvic uterine plexus and serves to reduce pain during the first stage of labour. Although extensively used in the past, more recent research suggests that the paracervical block is dangerous to the infant. Rosen (1 77) reports that up to 30 per cent of babies born to mothers who receive paracervical blocks suffer from foetal bradycardia sometimes leading to foetal death. As a result of these findings the paracervical block is no longer recommended (Beazley and Lobb, 1983).

Pudendal Block : This block is widely used for analgesia in the second stage of labour to remove sensation when the baby is emerging and for the repair of episiotomy. Although considered to be relatively harmless if properly administered, Haire (1980) states that pudendal blocks have been shown to alter foetal heart rate as well as inhibit the mother's ability to give birth spontaneously. Parfitt (1977) questions the need for routine use of pudendal blocks since it is commonly accepted that the pressure of the baby's head on the perineum acts as a natural anesthetic during the second stage of labour. She states that most women experience the second, expulsive stage of labour as the

least painful and most satisfying part of the birth process and that *pudendal blocks are* therefore unnecessary except in the case of instrumental delivery. Haire (1980) recommends that pudendal blocks given for episiotomy repair be administered *after* the birth to protect the baby from any possible adverse effects caused by the anesthetic agent.

The preceding discussion suggests that while pharmacological approaches may provide effective pain control for many women, two provisos are indicated. Firstly, pain control may be at a psychological cost in terms of maternal awareness, sensitivity and control. Secondly, the adverse effects of pain relieving medication on the foetus needs to be considered. However, although drugs may affect the foetus adversely, these risks need to be balanced against those to the foetus in the absence of pain control. *Uncontrolled* levels of pain may endanger the foetus by causing hyperventilation resulting in foetal anoxia (Reading, 1983). Consequently the effects of severe pain have to be *weighed against* the effects of drugs, not only in terms of their relevance to the mother and her personal needs but also in terms of the possible consequences for the foetus (*Kitzinger*, 1983).

2.1.2(c) Induction and Acceleration of Labour

The induction and acceleration of labour has become a controversial issue in recent years. Existing medical literature provides examples of exhortations to restrict the use of induction to a carefully selected minority of cases and suggestions that an increased or routine use of induction pays perinatal dividends (Chalmers and Richards, 1977; Oakley, 1984). These differences in opinion are reflected in international and intranational data which suggest marked differences

in the proportion of labours that are induced. Available statistics for England and Wales, for example, indicate an induction rate of 38,9 per cent for 1974 as against Norway's induction rate of 14,2 per cent for the same year (Chalmers and Richards, 1977). On a regional level, the incidence of induction in British hospitals also varies considerably. Between 1972 and 1974, for example, the proportion of induced labours at the National Maternity Hospital in Dublin fell from 26 per cent to 21 per cent, while in the Watford Maternity Unit it rose from 28 per cent to 55 per cent (Chalmers and Richards, 1977). Similar variation in induction rates have also been noted in a large perinatal survey in the United States (Richards, 1978).

In addition to the variation in induction rates, studies in the United States and Britain have also raised questions concerning the efficiency with which cases are selected for inductions on medical indications. Women whose social, demographic and morbid characteristics might lead one to expect an increased requirement for induction, often do not appear to experience higher rates. Chalmers and Richards (1977), for example, report on a large American study which found that the induction rate among black women was only half that among whites. In a similar vein, Cartwright (1979) in a British study of induction discovered that private patients, though only 2 per cent of all obstetric patients, had a 44 per cent chance of induction as compared with a 24 per cent chance for N.H.S. patients. Of further interest is the finding that the proportion of infants born at 42 weeks gestation or later was the same in the 1970 British Perinatal Mortality Survey as it had been in the 1958 Survey, in spite of the fact that the incidence of induction rose from less than one in six

to more than one in four deliveries in the interim (Chalmers and Richards, 1977). Given that prolonged pregnancy is considered an important medical indication for induction, this is a surprising finding.

In 1977 Chalmers and Richards called the picture with respect to rates of induction in different units, regions and countries, 'chaotic' (1977, p.38). While more recent statistics suggest that the rate of inductions has begun to decrease in some centres as a result of consumer opposition and debate within the obstetrical profession, the situation is still variable. Chalmers and Richards believe that until appropriately designed research has clearly demonstrated the circumstances under which the benefits of induction outweigh the disadvantages, the controversy surrounding the induction of labour will continue.

The two methods most commonly used to induce or stimulate labour are amniotomy and oxytocic infusion. Amniotomy, or artificial rupture of the membranes (ARM), *is a mechanical means of inducing or stimulating* labour by rupturing the membranous sac whereas oxytocic infusion involves the administration of oxytocin via an infusion pump or i.v. drip to induce contractions of the uterus. Oxytocin may also be administered orally by means of a wafer put in the mother's mouth. A third method, less commonly used but increasing in popularity, is the use of prostaglandins which act by causing both uterine contractions and cervical dilation. Amniotomy and oxytocic infusion are used for both induction and acceleration of labour, frequently in combination with each other, whereas the prostaglandins are used predominantly to soften the cervix before other methods of induction are employed.

There are medical indications for inducing labour which are undoubtedly life-saving and it is therefore only possible to examine the disadvantages of this medical procedure in the knowledge that in some cases it saves the mother or infant from death or damage. The most commonly cited medical reasons for induction of labour are given as: (1) serious disease or condition of the mother such as diabetes, rhesus incompatability, pre-eclampsia and hypertension; and (2) prolonged pregnancy or placental insufficiency (Parfitt, 1977). Elective inductions are also carried out where no clear or absolute medical indication exists and the reasons given are more for the convenience of the patient, the doctor, or both. Elective inductions have drawn the most criticism in recent years with writers such as Arms (1977), Corea (1985) and Kitzinger (1983) stating that the potential hazards of induction far outweigh any benefits gained from a planned induction for social or 'convenience' reasons.

There are a number of medical complications which may accompany the use of induction, both for the mother and the baby. Possible medical complications following induced labour include iatrogenic prematurity, foetal distress (as a result of excessive oxytocic stimulation), prolapse of the umbilical cord, rupture of the uterus and placental separation, increased use of other interventions (e.g. epidural analgesia), and failure of induction leading to caesarean section (Chalmers and Richards, 1977; Oakley, 1984). Possible complications arising as a result of acceleration of labour are similar to those for induction of labour with the exception of iatrogenic prematurity which is not applicable in this situation.

In addition to the potential complications which can occur during induced labours, the medical after effects

of inductions and their psychological consequences have also received some attention. Several studies, for example, have shown that there is an increase in the incidence of neonatal jaundice after the induction of labour (MacFarlane, 1977). In an examination of the effects of jaundice on the behaviour of new-born infants, Prechtl (1973) cited in MacFarlane (1977) has demonstrated that jaundiced babies tend to sleep more and spend less time alert. These effects may make it harder to establish lactation and thereby have an impact on the developing relationship between mother and infant.

Further evidence suggests that the incidence of babies' admission to special-care units is increased when birth is induced. Kitzinger (1975) in a study done in England, found the rate of admission of induced babies to special-care units to be 24 per cent, whereas the admission rate for non-induced babies was 7 per cent. This increase appeared to be unrelated to whether the reason for the induction was medical or social. Although based on an unrepresentative group, since the data was obtained from mothers attending National Childbirth Trust classes, the results nevertheless suggest that induced babies may be at a disadvantage in terms of an increased possibility of early separation from the mother and the concomitant problems relating to bonding.

A limited number of studies have been conducted on the psychological impact of induction. Oakley (1984) states that the physical comfort and attitudes of pregnant women are rarely referred to in the literature describing the development of induction technologies. Those studies which have been conducted have tended to be based on women writing to the BBC or women attending National Childbirth Trust classes and are therefore

potentially biased towards the middle classes and women motivated towards natural childbirth. One such study conducted by Kitzinger (.975), for example, found that *for many women*, induction of labour was associated with extremely painful labour, exclusion of the husband from delivery, separation of mother and neonate, and distress, which was increased by a lack of information on the procedures. *Given the nature of the sample*, however, these results need to be interpreted with caution.

The most systematic and representative study on women's views of induction was conducted by Cartwright (1979) in England on a sample of 2,378 mothers. Her results indicated that the vast majority of women rejected induction as a preferred way of starting labour. More specifically, 78 per cent of the women who had induced labours did not wish to repeat the experience while 93 per cent of the mothers who had their babies spontaneously would choose to do so again. The most commonly given reason by women for the rejection of induction was that it was unnatural. Other results showed that the length of labour was reduced by induction although this did not necessarily make it a more pleasant experience for the woman. In contradiction to Kitzinger's results, induced labours *were not rated as more painful* by women even though those who were induced were given more pain relief. They also experienced assisted deliveries more often and felt restricted during labour more frequently. On the other hand, women who were induced, *more often* had their husbands with them in the early stages of labour and minded less if they were left alone at home stage. A final significant finding was that more of the women who were induced reported feeling nervous or depressed after the birth. This difference was small, however, and requires further verification.

Although not specifically related to women's experiences of induction it is interesting to note that in confirmation of previous statistics, Cartwright (1979) also found that induction rates varied widely between areas and between hospitals. In addition, there was an overall lack of any relationship between induction and risk factors associated with characteristics of the mothers. There was not, however, any evidence of the widescale use of induction simply for the sake of convenience, although there were situations in which inductions were carried out in order to ensure that expert staff would be available when the baby was born.

The development of induction techniques has been facilitated by methods of surveying the condition of the foetus in utero. New labour technologies, such as electronic foetal heart rate monitoring, increase the need for safe induction techniques since, as Oakley (1984) notes, there is no point in knowing the foetus is in trouble if there is no way of getting it out of the uterus safely. The last decade has seen increasing use being made of electronic foetal monitoring in modern labour management and the following section will discuss some of the literature relating to the use of this new technology.

2.1.2(d) Foetal Heart Monitor

The foetal heart monitor was designed in the late 1950s in California by Dr. Edwin Hon and represents a major obstetric advance. The machine (of which there are many kinds) allows for the electronic measurement of uterine contractions and foetal heart rate throughout labour. This permits early identification of foetal distress, which makes intervention possible before irredeemable brain damage or death has occurred.

Originally designed for use in labours associated with high risk to the foetus, in recent years a number of obstetric units in the United States, England and some European countries have begun using it routinely for all women, including those expected to have a normal labour and delivery (Jackson, Vaughan, Black and D'Souza, 1983). Although there is little dispute regarding the value of electronic foetal heart monitoring in high risk, induced and problem labours, the extension of its use to low risk labours has become the subject of deep controversy. This controversy relates both to the obstetrical and psychological implications of routine foetal monitoring in labour.

Howie (1986) in a review of research in this area, states that only one of five randomized trials reported improved foetal outcome with foetal monitoring as compared with intermittent auscultation. On the other hand, a recent and much larger randomized trial carried out at the National Maternity Hospital in Dublin on 12,964 women indicated more positive results for routine monitoring (MacDonald, Grant, Sheridan-Pereira, Boylan and Chalmers, 1985). In this study electronic foetal monitoring was compared with intermittent auscultation and although no difference in perinatal mortality was found between the two groups, the diagnosis of foetal asphyxia was increased by 83 per cent and the number of neonatal convulsions reduced by 55 per cent in the group who had electronic foetal monitoring. Further analysis indicated that these benefits occurred predominantly in women whose labours lasted for more than five hours, leading the researchers to conclude that routine monitoring is unnecessary in low risk mothers who progress to delivery in less than five hours (MacDonald et al, 1985).

On the obstetric level one of the main criticisms surrounding the increased use of foetal heart monitors relates to the twofold to threefold increase in the rate of caesarean section which has been reported in most of the randomized studies done (Howie, 1986). Explanations for this phenomenon vary but the most common one is that electronic foetal monitoring lacks precision and tends to lead to an over-diagnosis of foetal asphyxia (Howie, 1986). This problem can partly be overcome if use is made of foetal blood sampling to increase diagnostic accuracy. However, Howie (1986) notes that a national study in Britain found that half the maternity units did not have the facilities for such a test. A similar problem exists in South Africa where laboratory facilities for this test are also not widely available. A recent survey by the National Childbirth and Parenting Association however, suggests that electronic monitoring is not routine in South African maternity hospitals, with only 36 per cent of respondents being monitored by machine, thereby reducing the possibility of unnecessary caesareans being done as a result of inaccurate diagnosis (du Toit, 1987).

Other drawbacks to foetal heart monitoring have been noted. Monitoring during labour requires the mother to be supine, a position believed to lower blood pressure and reduce blood supply to the foetus (Arms, 1977). Internal monitoring requires premature artificial rupturing of the amniotic membranes resulting in an increased possibility of infection and excessive bleeding (Parfitt, 1977). Finally, scalp abscess and cellulitis has been noted as a result of electrodes attached to the baby's scalp during internal monitoring (Ettner, 1977).

The psychological impact of foetal heart monitoring has

been explored by a few researchers although Oakley (1984) notes that most medical articles written on the foetal monitor have failed to consider women's attitudes toward this innovation. An American study by Starkman (1976) indicated a wide variety of positive and negative responses to foetal monitoring in a sample of twenty five women. Positive responses included seeing the monitor as a protector of foetal well-being, as a provider of information to medical staff, and as an aid to preparing for contractions. Negative responses focussed on the physical discomfort associated with the placing of electrodes, enforced immobility, and anxiety concerning possible injury to the foetus. In more general terms, it was found that women who had experienced a previous loss of pregnancy were more likely to respond favourably to being monitored as compared with women with no previous delivery experience or with prior normal deliveries who tended to respond negatively (Starkman, 1976).

One of the problems associated with the routine use of electronic foetal monitoring is the extent to which it transforms the labour room into a setting reminiscent of an intensive care unit. The impact of this transformation is commented on by Starkman (1976, p.269) who notes that "...sensors, wires, recording equipment, and continuous mechanical sounds thus become prominent features in the environment and experience of both physician and patient". Given that childbirth is generally an anticipated and desired peak experience of life and not an illness, it is not surprising that some women, particularly those with prior, uncomplicated labours, feel some resentment towards this mechanization of their experience.

A further study conducted in Denmark and reported on by Howie (1976) found that the mother's source of

information on childbirth was related to the preferred choice of monitoring method. Those mothers who attended hospital birth preparation classes tended to choose electronic foetal monitoring while those attending natural childbirth classes preferred intermittent auscultation. Mothers who did not attend any classes were generally undecided about their choice. Although this finding probably reflects pre-existing differences between mothers in their attitudes towards natural childbirth, it also suggests the possibility that the source of information used by mothers is influential in determining their choice.

In summary, available research suggests that electronic foetal monitoring has the potential for producing both beneficial and detrimental psychological effects. These effects appear to be determined in part by the mother's obstetrical history as well as her pre-existing attitudes towards the nature of the childbirth experience. While most mothers seem to accept the necessity for electronic foetal monitoring in high risk labours, their acceptance of routine monitoring in low risk labours remains a controversial issue.

2.1.3 Second Stage Interventions

2.1.3(a) Episiotomy

Episiotomy, the surgical enlargement of the introitis vulvae, was first described as a medical procedure in 1742 (Kitzinger, 1983). Initially reserved for complicated deliveries to facilitate ease of delivery, it is only during this century that the procedure has been extensively used as an elective measure during uncomplicated childbirth. Although episiotomy rates vary widely between different countries, there has been

a consistent trend in many western countries toward routine use, particularly among primigravidas (Kitzinger, 1983). In the United Kingdom, for example, the incidence of episiotomy among primigravidas has risen from 21 per cent in 1958 to 91 per cent in 1978 (Hofmeyr and Sonnendecker, 1985) whereas in the United States the overall episiotomy rate has risen to more than 70 per cent of all births (Arms, 1977). This is in contrast to episiotomy rates in Holland (approximately 8 per cent) and Sweden (approximately 6 per cent) where routine use of this procedure is avoided unless clear medical evidence indicates it is necessary (Arms, 1977; Corea, 1985). Although statistics for South Africa are not available, a recent survey by the National Childbirth Education and Parenting Association, on a sample of over two thousand white women, indicated an episiotomy rate of 73 per cent (du Toit, 1987). Although based on a relatively small sample, this statistic suggests that the trend in this country is towards routine performance of this procedure.

A number of benefits have been claimed for elective episiotomy, the most common being: a decrease in the incidence of pelvic relaxation; a reduction in neurological impairment of the infant; and an improvement in the sexual responsiveness of women (Russell, 1982). In addition, it is generally believed that an episiotomy is more easily repaired than a ragged tear and will heal more quickly and effectively with less possibility of infection. Despite the benefits claimed for elective episiotomy, few have been subjected to proper scientific scrutiny (Hofmeyr and Sonnendecker 1985; Kitzinger, 1983; Russell, 1982).

The lack of objective data to support the routine performance of episiotomy has in recent years

engendered much debate between consumer-oriented groups on the one hand and the medical establishment on the other. Although the value of episiotomy to expedite delivery in the presence of foetal and maternal complications has not been seriously challenged, much concern has been expressed about the routine use of this procedure in uncomplicated births. This concern has been increased recently by surveys and research findings which suggest that elective episiotomy may not only be an unnecessary procedure but that it may well have harmful physical and psychological effects (Kitzinger, 1981; Reading, Sledmere, Cox and Campbell, 1982; Sleep, Grant, Garcia, Elbourne, Spencer and Chalmers, 1984).

A recently conducted controlled trial, termed the West Berkshire perineal management trial (Sleep et al, 1984), investigated a number of the benefits claimed for elective episiotomy by randomly allocating one thousand women to either a restricted policy group (in which episiotomy was performed for *foetal distress* only) or a liberal policy group (in which episiotomy was frequently performed to prevent anticipated perineal lacerations). The results three months after the births showed no differences between the two groups in terms of perineal pain, neonatal outcome and the incidence of stress incontinence. Further evidence suggested that second degree tears may be more easily repaired than episiotomies and that third degree tears were not significantly greater in the restricted policy groups. Finally, it was noted that significantly more women in the restricted policy group than in the liberal policy group had resumed intercourse one month after childbirth (Sleep et al, 1984).

A further study by Reading et al (1982) on the incidence of post-episiotomy pain found that many women

experienced severe pain after an episiotomy and that this pain was still present three months after delivery. They further found that nine out of ten women *who subsequently experienced* dyspareunia attributed this directly to the episiotomy scar. In the light of these findings, Reading (1982) recommends that women receive counselling for coping with post-episiotomy pain to *facilitate adjustment*. *Kitzinger* (1983) criticises this recommendation and states that it is the practice of routine episiotomy which requires further examination.

Possible psychological effects of post-episiotomy pain have also been referred to by Klaus and Kennell (1976) whose main concern has been the bonding between parents and infant. They suggest that consideration needs to be given to the effects of post- episiotomy pain on the mother's ability to care for her baby and establish lactation. Kitzinger (1981) has commented on the possible impact of episiotomy on the parents' long-term relationship as a result of uncomfortable and painful sexual intercourse.

To date, the status of elective episiotomy remains controversial. If the procedure confers any of the benefits conventionally ascribed to it, the necessary *evidence for such benefits is yet to emerge*. Hofmeyr and Sonnendecker (1985), state that in their experience many women have a greater fear of episiotomy than of labour and birth. In the light of this, they believe it is difficult to justify routine *elective episiotomy* without further evidence being provided as to the benefits of this procedure.

2.1.3.(b) Instrumental Delivery

As with a number of other obstetrical procedures, instrumental delivery rates also seem to have been increasing in recent years although once again there are considerable international differences in the level at which this intervention is taking place. Available statistics for 1975 indicate that the incidence of instrumental deliveries as a proportion of all deliveries was 33 per cent in the United States, 16 per cent in Canada and 5 per cent in Norway and the Netherlands respectively (Chalmers and Richards, 1977). As with induction of labour, however, the national rates conceal wide differences of practice intranationally. Niswander and Gordon (1972), for example, in a perinatal study in the United States recorded forceps delivery rates ranging from 10 to 90 per cent of all deliveries in the various collaborating institutions. Commenting on these international and intranational differences, Chalmers and Richards (1977) suggest that the situation once again reflects the need for appropriately designed research to outline the circumstances under which the benefits of instrumental delivery outweigh the disadvantages.

To further complicate the existing situation there are wide variations between countries in the choice of instrument for assisted vaginal delivery. Whereas the vacuum extractor is rarely used in most English-speaking countries, accounting for less than 1 per cent of instrumental deliveries in the United States and Canada, it is extensively used in Europe and Scandanavia, accounting for 70 per cent of instrumental deliveries in Holland and almost 100 per cent in Sweden (Garcia, Anderson, Vacca, Elbourne, Grant and Chalmers, 1985). Despite these wide variations, Garcia et al (1985) note that only one controlled trial has been

conducted to compare the relative merits and disadvantages of the two instruments, aside from the one which they recently carried out.

Although there is a lack of research in this area, Chalmers and Richards (1977) state that it is generally accepted that the vacuum extractor is associated with less physical trauma for the mother. The main reason for this seems to relate to the fact that, unlike the forceps blades, the vacuum extractor cap does not encroach on the upper genital tract, thereby reducing the likelihood of injury and infection to a minimum. Whereas no case of maternal death due to the vacuum extractor has been documented, serious maternal trauma at times leading to maternal death has been associated with forceps delivery (Chalmers and Richards, 1977).

The relative merits of forceps and vacuum extractor in terms of how they affect the infant has received scant attention. Although it is well recognised that both instruments can be lethal to the infant when ineptly used, it is not known which instrument is less likely to cause injury to the infant when skilfully used. In a recent exploratory study conducted in England by Garcia et al (1985), no significant differences in neonatal outcome were found between a group of babies delivered by vacuum extractor and a group delivered by forceps with the exception of mild neonatal jaundice which occurred more frequently in the vacuum extractor group. The researchers recommend that a larger comparitive trial be conducted to evaluate the significance of the differences in neonatal jaundice as well as answer questions about other possible adverse neonatal outcomes.

As with many other obstetrical procedures, there has been almost no research on women's attitudes to

assisted delivery. One of the few studies to address this issue was the aforementioned study by Garcia et al. In addition to evaluating neonatal outcome, this study attempted to assess both the staff's and women's views of the two instruments. Their findings indicated that delivery with the vacuum extractor involves less pain and less trauma for mothers. Women in the forceps group reported more pain at delivery in spite of receiving more powerful pain relief and also suffered a higher incidence of tears that extended to the upper vagina or into the anal sphincter. A further finding, however, indicated that mothers allocated to vacuum extraction had more minor problems and worries about their babies, particularly regarding the babies' appearance. This latter finding is probably due to the fact that the extractor leaves a large lump protruding from the baby's scalp immediately after birth which Parfitt (1977) states is often disconcerting to mothers. The researchers also noted that a possible further source of anxiety for mothers may have been their lack of familiarity with the vacuum extractor in contrast to forceps.

In terms of staff attitudes, Garcia et al (1985) found that most of the midwives and medical staff had very little previous experience of the vacuum extractor and that their views of the instrument changed during the course of the trial. In general, a reduction in maternal trauma was seen by the staff as a significant advantage of the vacuum extractor although many of them still expressed uncertainty about infant outcome, in particular in relation to short-term marking of the infant and worries about jaundice. The researchers speculate as to whether the staff's uncertainty and lack of familiarity with the instrument had an influence on the mothers' experience and suggest that this aspect receive attention in any further research done.

In general, it seems that a definite need exists for more research in the area of instrumental delivery. In addition to questions regarding neonatal outcome and the relative merits of the vacuum extractor and the obstetric forceps, research is needed on the impact of these procedures on womens' experiences. Prince and Adams (1978) state that many women experience an instrumental delivery as a great disappointment, feeling they have been cheated of a chance of achievement, while Jordan (1980) believes that the vacuum extractor allows the mother to participate more actively in the delivery than the use of forceps, thereby providing a more satisfactory experience. At present it is uncertain as to whether these statements accurately reflect the reality of women's experiences and only further research can provide an answer.

2.1.3.(c) Caesarean Section

Caesarean section - the delivery of a baby through incisions in the abdominal wall - has been practised for centuries. Until the nineteenth century, however, the death rate for both mother and baby who underwent caesarean section was extremely high. With the advent of sterile techniques, improved operating methods and anaesthesia, and the availability of blood and antibiotics, the risks of caesarean section have been greatly reduced (Young and Mahan, 1980).

Caesarean section has become an increasingly commonplace procedure in today's obstetrical care. Since 1973 in the United States the percentage of all deliveries by caesarean section has climbed steadily by over one percentage point a year. The predicted, although not officially confirmed, 1978 rate is 13,9

per cent (Young and Mahan, 1980) which is nearly three times the 1968 rate of 4,8 per cent (Chalmers and Richards, 1977). Similar increases have occurred in Canada. A recent survey of teaching hospitals in Canada showed an average rate of 14,3 per cent in 1976 as compared with a caesarean section rate of 4,8 per cent in 1968 (Hackett, 1978).

The increase in caesarean section appears to be an international phenomenon although once again marked differences in intervention rates are apparent. Statistics for [illegible] indicate a caesarean section rate of 10,2 per cent in the United States, 4,1 per cent in Norway and 3 per cent in the Netherlands (Chalmers and Richards, 1977). Although the difference in these statistics indicate a greater reluctance to resort to caesarean section in Western European nations, there is nevertheless still a clear trend towards more caesarean births with, for example, Norway's caesarean section rate doubling between 1968 and 1975 (Kitzinger, 1978). Although national statistics are not available for South Africa, the recent aforementioned survey by the NCEPA found a caesarean section rate of 22 per cent (du Toit, 1987). Although based on an unrepresentative form of sampling, this figure is suggestive of a high caesarean section rate among white, middle-class South African women.

The increasing number of caesarean sections being done has become a controversial issue in recent years, with some professionals praising the increasing rate as an improvement and others pointing out the additional maternal risks, disability and financial burden which abdominal surgery entails (Jones, 1976). Consumer groups have entered the debate, expressing particular concern about the greater adjustment required in the early post-partum period by women who have had

caesarean sections (Young and Mahan, 1980). Hibbard (1976) has drawn attention to the difficulties involved in making firm judgements on the issue :

> "The wisdom of a more liberal use of caesarean section is difficult to judge. A comparison of the results of different periods of time is *hampered by change in the patient population*, in prevalent obstetric risks, in newborn care, in the quality of obstetric anaesthesia, in prematurity rates, and in technologic advances. What is most needed, and least available, is an adequate long-term evaluation of delivery on the developing child". (Hibbard, 1976, p.[illegible]).

A number of reasons have been put forward to explain the rapid increase in caesarean section. Traditionally, the main medical indications for this operation were cephalopelvic disproportion, placenta praevia, severe diabetes or toxemia in the mother, abnormal placenta, difficult breech presentation, and cord prolapse. Over the past two decades this list has been expanded to include conditions such as prolonged labour, uterine inertia and severe foetal distress (Parfitt, 1977). In addition to this liberalization of indications for caesarean section, other factors have come into play. Firstly, while primary caesarean section rates continue to rise there has and will be an inevitable increase in the repeat caesarean section rate, since many obstetricians, particularly in the United States, are of the opinion that women who have had previous caesarean sections cannot safely have a vaginal birth (Doering, 1979). Secondly, the use of new techniques for intra-partum foetal monitoring has led to an increase in the diagnosis of foetal distress. As noted earlier, most of the randomized studies done on electronic foetal monitoring have shown a two fold to

three fold increase in the rate of caesarean section (Howie, 1986). Finally, although difficult breech presentations have in the past been delivered by caesarean section, in recent years there has been an increased tendency to perform elective caesarean section for all breech presentations (Parfitt, 1977). This is particularly true of North American practice, although Chalmers and Richards (1977) note that it is also a matter of considerable discussion elsewhere.

With the increase in the caesarean section rate, recent research has begun to focus on the impact of this procedure on the infant. Although it is generally accepted that a timely caesarean section done for clearly defined medical reasons can save the life of a newborn, in recent years some obstetricians have advocated the widespread use of 'prophylactic' caesarean section, believing it to be a safer and easier form of delivery for the foetus (Kroener, 1976). Available research on neonatal outcome does not, however, appear to support this claim.

Young and Mahan (1980) in a review of research studies in this area found that a caesarean newborn is more likely to suffer from premature birth caused by incorrectly timed caesarean section, from asphyxia, and from breathing disorders such as respiratory distress syndrome. Although it is possible that these observed complications are due to the original reason for which the caesarean section was performed and not a result of the surgical delivery itself, a study by Benson et al (1965) suggests that operative delivery may hold additional risks for the infant. To rule out the confounding effects of medical complications, Benson and his colleagues conducted their research on infants born to a group of mothers who all had repeat

caesareans with no labour first. Because of the possibility of miscalculation of foetal maturity, all premature babies were dropped from the sample. While no significant differences in neonatal mortality were found, significant differences were found in Apgar scores, with twice as many caesarean babies having dangerously low five minute Apgars (0-3 range). Long term effects were also evident at both the four month and one year pediatric-neurologic examinations. The researchers concluded that caesarean section holds definite risks to the infant which need to be taken into consideration whenever elective caesarean sections are performed.

Caesarean delivery also entails increased maternal risks, including pain and complications associated with major surgery, lengthy postsurgical disability and a small but definite risk of maternal death (Chalmers and Richards, 1977; Young and Mahan, 1980). In addition to the physical risks and after-effects of caesarean delivery, it is now well documented that, in terms of the birth experience and adjustment in the early post-partum period, women who have had caesarean sections have a more difficult time adjusting (Jones, 1976). The most commonly documented psychological effects of a caesarean birth are disappointment, anger, feelings of failure and sadness (Affonso and Stichler, 1978, Doering, 1979; Hausknecht, 1978).

The emotional impact of caesarean section may have an additional influence on the development of the maternal-infant relationship. Trowell (1978), in a study cited by Oakley (1983), compared a group of mothers who underwent emergency caesarean sections with a control group of spontaneously vaginally delivered women. At one month after birth the caesarean mothers more often remembered the birth as a bad experience,

expressed doubts about their capacity to care for their babies and were depressed or anxious. They expressed a feeling of failure as women and some anger towards both their babies and the hospital for 'depriving' them of a normal childbearing experience. Similar attitudes were present a year later, with caesarean mothers more likely to describe motherhood in negative terms and to report a later age at which they first felt their child responded to them as a person.

It is worth noting that the above study was conducted on women who had emergency caesareans under general anaesthetic. Hausknecht (1978) found that a caesarean birth that has been planned ahead carries far less emotional impact than a surgical birth performed in haste and tension, leaving the woman with no time to adjust, accept or prepare. The type of anaesthesia used will also influence t e woman's feelings. Oakley (1983) states that women who have experienced caesareans with both general and epidural anaesthesia express a preference for the latter, saying they feel more 'connected' to their babies if they are at least conscious during the operation.

Despite the emotional impact of caesarean section, it is of interest to note that a number of obstetricians have reported that some women actually prefer a caesarean delivery (Oakley, 1983). Although no systematic investigation of this observation has been carried out, Oakley believes that probable reasons for this response are a strong desire to avoid pain and a need to avoid having the vagina stretched by the passage of the baby. Kitzinger (1981) in her research on episiotomy, observed that unspoken fears about loss of sexual adequacy appeared to be common after vaginal delivery, particularly when an episiotomy was performed.

2.2 The Psychological Impact of the Hospital Environment

In recent years increasing recognition has been given to the role of the environment on the woman's experience of childbirth and the early post-partum period. Research has suggested that factors such as the woman's physical surroundings, the presence or absence of supportive persons and the movement of the woman in labour, may all have an effect on the woman's experience of labour and childbirth. In addition, a great deal of attention has been focused on the early post-partum period with special emphasis on the impact of early separation on the developing mother-infant relationship and the establishment of lactation. The following section briefly reviews some of the research and issues relating to these environmental effects.

2.2.1 The Effect of the Hospital Environment in Labour and Childbirth

Despite the increasing recognition given to the importance of the environment in labour and childbirth, Newton (1977) states that very little controlled or statistical work has been done in this area. What evidence is available has been derived predominantly from animal studies and observations of human labour and therefore needs to be interpreted with some caution.

Observations of animals in their natural habitat show that many species seek out quiet and familiar surroundings in which to have their babies (Newton, 1977). Similarly in humans, the time of day when the female is most likely to be in a quiet, sheltered environment appears to be most conducive to labour. In an analysis of 601,222 spontaneous deliveries, Kaiser

and Halbert (1962) cited in Newton (1977) found that the peak incidence for delivery was from 3:00 to 4:00 a.m. The onset of labour also peaked during night time hours, when the woman is most likely to be in peaceful and quiet surroundings.

Morris (1983) states that many labour wards perpetuate an atmosphere of tension, noise and constant anxiety which has a negative effect on mothers and their birth attendants. He believes that inadequate consideration has been given to the atmosphere of the labour ward which he asserts should be calm, reassuring and relaxed. Chalmers (1982) notes that an unfamiliar environment may increase anxiety during labour and that efforts should be made to reduce this anxiety by means of pre-delivery visits to the hospital or clinic where delivery will take place. In addition, it is now recognised that the presence of family members and even friends may be important in reducing the strangeness and anxiety which often accompanies childbirth (Haire, 1978). Naaktgeboren (1972) notes that a corresponding need for company during labour is also displayed by many species.

Closely related to the issue of familiarity of surroundings is the issue of movement of the labouring mother. Naaktgeboren (1972) has presented evidence which indicates that disturbance of animals during labour leads to a prolonged labour and a much higher perinatal mortality rate than would be found in animals left to labour undisturbed. In humans, the move from home to hospital or from labour room to delivery room has been found to inhibit uterine activity and increase the likelihood of a delay in labour and foetal distress (Prince and Adams, 1978). Observationally, Jordan (1980) reports that the often rushed and hectic transfer from labour to delivery room can "transform a

marginally tolerable situation into a scene of frightful panic" (p.48). She notes that the practice of moving the woman to a delivery room and then transferring her to a special delivery table is not followed in most European countries where it is recognised that disturbances in labour may have far-reaching consequences.

Because hospitals are large, complex, social structures they tend to have set routines which generally require patients to do the same things at the same time. Thus in maternity hospitals, mothers are required to wake, sleep and be fed at times determined by the hospital routine while the babies are often placed on four-hourly feeds. In addition, visitors are usually restricted to set times, regardless of individual needs of mothers and/or others (Richards, 1978). Although in recent years there has been a move towards making maternity hospitals more homelike, both by improving the physical surroundings and introducing more flexible routines and visiting hours, some critics nevertheless regard these changes as cosmetic and believe a more natural and relaxed approach to childbirth can only be achieved in the home environment (Kitzinger, 1984).

The home versus hospital debate is a complex one which involves issues regarding the physical and psychological welfare of mother and child as well as raising legal and ethical questions. While advocates of home birth believe that low risk women can safely and with a minimum of interference give birth at home (Tew, 1984; Zander, 1984) critics of domiciliary confinement believe the move to be retrogressive and anachronistic with the risks of home birth outweighing any possible benefits (Beazley and Lobb, 1983; Friedman, 1978). At present, hard scientific evidence

is difficult to come by and no large, randomized controlled trials comparing outcomes of home and hospital delivery in comparable groups of women have been done (Richards, 1978). Although the home birth system in the Netherlands is generally held up as an example of how domiciliary confinement can be successfully and safely achieved, it needs to be recognised that this system is based on a sophisticated selection process for risk cases and the provision of an obstetric flying squad, neither of which are offered on a wide scale in any other western country at present.

MacFarlane (1977) believes that, given that the issues in the home versus hospital controversy are so many and so complex, it is probable that the question as to whether mothers and babies experiencing home births are better or worse off than those experiencing hospital confinements will never be definitively answered. Nevertheless, the debate has served to highlight the problems associated with hospital confinement, resulting in improvements to existing hospital facilities as well as increasing the options open to women in terms of newly established facilities such as active birth units and family birthing centres.

2.2.2 The Effect of Support in Labour

2.2.2(a) The Presence of the Husband

One of the most notable changes to have affected obstetric practices in recent years has been the move towards allowing fathers to be present at the birth of their children. Whereas it was once traditional for expectant fathers to await the outcome of labour in the maternity hospital corridor, it has now become normal practice in many western countries for the husband of

the labouring woman to be with her throughout childbirth. The recent South African survey conducted by the NCEPA indicated that 71 per cent of husbands were present during their wive's labour and delivery suggesting that this practice is fairly widespread in white maternity hospitals in this country (du Toit, 1987).

While it is generally assumed that a husband's presence during labour improves the quality of the woman's experience in labour, research on this issue is inconclusive at present. Although a number of studies (e.g. Henneborn and Cogan, 1975; Tanzer and Block 1976) have found that the presence of the husband during labour is associated with an increase in the woman's satisfaction with birth and lower levels of reported labour pain other studies have not confirmed these results. A Swedish study by Nettelbladt and Ors (1976) cited in Zajicek (1981), for example, found no relationship between the husband's presence and reports of pain, while a Canadian study by Melzack (1984) found that participating women reported higher levels of affective pain during labour if their husbands were with them.

Cultural differences, variations in pain assessment techniques and the degree of involvement of the husband in his wife's labour have all been put forward as reasons for these variations in findings. In addition, it seems that the woman's perception of her husband's presence may be an important factor in determining her experience (Niven, 1985).

A recent study by Niven (1985), for example, found a great deal of variation in the woman's experience of her husband's presence. While the majority of women described the husband's presence as helpful, a number

of women reported that their husband's presence was of no *assistance to them*. Of these women, some expressed a preference for coping alone with the experience of childbirth while others were concerned about their husband's reaction to their pain and distress. Both these groups of women reported higher levels of labour pain than the group of women who experienced their husband's presence as helpful.

The results of this study suggest that it cannot be concluded that the mere presence of the husband will invariably be of benefit to the wife. Rather the nature of the woman's perception of the husband's presence is of importance. In addition, Morris (1983) notes that it cannot be assumed that *every husband is* necessarily suitable to be with his wife in labour since some may be unduly *upset and distressed* by the experience. Whereas it has sometimes been suggested that *all husbands should be present* at their wife's labour, these findings suggest that the decision to be *present should be* an individual one made by the couple in the light of their knowledge of one another and of the woman's coping style.

2.2.2(b) The Presence of a Female Attendant

In recent years it has been suggested that the constant presence and support by a midwife or a sympathetic woman may be important in the management of labour. In an anthropological study by Klaus, Kennel, Robertson and Sosa (1986), for example, it was found that the presence of a sympathetic woman, even though she may not be a trained medical attendant, has a significant influence on a woman's *behaviour in labour and* significantly reduces the length of labour as well as the need for *operative interference*. Similarly, Haire (1978) reports from her observations of birth in other

countries that the constant emotional support provided the labouring woman by the nurse-midwife appears to greatly improve the mother's tolerance for discomfort.

O'Driscoll (1975), an obstetrician at the National Maternity Hospital in Dublin, believes that the practice of leaving women in labour in hospital alone for long periods of time reflects a lack of insight into the impact of isolation on the woman's morale. At this hospital each patient is allocated one nurse who is required to be with the patient during the whole length of labour. In this way a personal relationship is established between nurse and patient which replaces the conventional arrangement by which a team of nurses care for a group of patients on a collective but largely impersonal basis. The allocation of one nurse to each patient is provided for even if the husband is present since it is believed that the additional support as well as expertise and information offered by the nurse is important in reducing stress and the need for drugs to relieve pain.

Although anthropological studies and observations of women in labour suggest that a supportive female attendant has a positive influence upon the quality of labour further research is required on the subject before a definite conclusion can be arrived at.

2.2.3 The Hospital Environment and the Issue of Bonding

The term 'bonding' is usually used to refer to a primarily unidirectional attachment of a mother to her infant which is thought to occur in the first hours or days after birth (MacFarlane, 1984). Attention was first focused on the process of bonding with the work of American paediatricians Klaus and Kennell conducted

during the early seventies. They were concerned about the possible consequences for mothers and babies of the separation that was (and often still is) brought about by hospital routines in some maternity wards and by the admission of small or sick infants to special care units. Based on a series of studies, Klaus and Kennell (1976) concluded that early separation carries the potential risk of damage to the mother-infant relationship. In its mildest form this damage may consist of an unusually wide psychological distance between mother and baby, while the extreme manifestations may include physical abuse and failure to thrive in the baby.

Klaus and Kennell (1976) suggested that all these negative effects of separation were a result of a failure of the mother to bond to the baby. They hypothesized that immediately after delivery a mother is in a state of heightened sensitivity during which she is more than usually ready to form a bond with her infant. If separated during the first hours or day, nding between mother and infant would be impaired or : prevented. On the other hand, if allowed close physical contact, particularly skin-to-skin contact, the process of bonding would be enhanced.

Klaus and Kennell's ideas have received wide publicity and resulted in changes in hospital routines in many maternity hospitals in western countries. Richards (1984) notes that the biggest changes have occurred in Special Care Baby Units whereby parents are today encouraged to visit their infants as often as possible and allowed physical contact with them. Delivery rooms and maternity wards have also introduced changes. In many hospitals it is now standard practice to hand the baby to the mother at delivery and on the maternity wards rooming-in facilities are more frequently

available. In South Africa, the recent NCEPA survey (du Toit, 1987) indicated that 75 per cent of mothers were handed their babies immediately after birth and most babies were examined in the delivery room in close proximity to their mothers. Rooming-in was more prevalent in provincial hospitals where 80 per cent of mothers had their babies with them as compared to 24 per cent of mothers in the private hospitals.

Despite the fact that changes in hospital policies and routines have been introduced as a result of Klaus and Kennel's work, it is of interest to note that more recent studies on the effects of early separation have produced mixed, and in some cases entirely negative, results (Richards, 1984). A study by Srejda, Campos and Emde (1980) cited by MacFarlane (1984), for example, found no significant differences in maternal behaviour at thirty-six hours after delivery despite the fact that the mothers in the extra contact group had their babies for an additional hour after delivery and for ninety rather than thirty minutes at each feeding. Other studies (e.g. Campbell and Taylor, 1980) have found an association between increased maternal affectionate behaviour and extra physical contact between mother and infant shortly after delivery but the effects of this additional contact appear to be of short duration, often not lasting beyond the hospital stay.

MacFarlane (1984) states that in view of these more recent studies, which are methodologically sounder than the earlier studies, it seems that the general phenomenon of bonding may have been overinterpreted. Similarly, Richards (1984) believes that the hypothesis of a specific event (early separation) leading to a specific outcome (damaged parent-child interaction) is an oversimplification and runs counter to the widely

held belief that development is well protected from disturbance by outside events. Nevertheless, both writers concur that most parents appear to need to feel in close contact with their infants after birth and that on this humanitarian basis alone changes in hospital policies to avoid separation are warranted.

2.2.4 The Hospital Environment and Breastfeeding

Despite the inconclusive findings in the research on bonding, most of these studies have consistently shown that where babies have been given to their mothers early, these mothers are likely to breastfeed for significantly longer than mothers who have not had early contact (MacFarlane, 1984). Whether this finding is due to psychological factors or purely due to the physiological advantages of putting the baby to the breast early, it nevertheless demonstrates the importance of early contact in the establishment and maintenance of lactation.

Rooming-in has also been found to help breastfeeding succeed. MacFarlane, Smith and Garrow (1978) report on a study at Duke Hospital which found that the breastfeeding rate rose from 35 per cent to 58 per cent when this practice was adopted. Whereas babies in nurseries are often placed on a four-hourly feeding schedule, rooming-in allows for feeding on demand which helps mothers build up their milk supply. In addition, babies in nurseries are more likely to be offered supplementary feeds which disturbs the fine balance between supply and demand and also confuses the baby's sucking reflex (Lothrop, 1982).

A further factor which can affect the breastfeeding rate and success is the attitudes of the doctors and nurses. Lothrop (1982) reports that in a survey of

German maternity hospitals those in which an extremely positive attitude prevailed had a breastfeeding rate of 79 per cent, whereas in hospitals with a predominantly negative attitude towards breastfeeding this was reduced to 21 per cent. In addition, efforts should be made to provide breastfeeding mothers with uniform information. Kitzinger (1983) in a survey of *maternity hospitals in England and that many mothers* received conflicting advice on methods and positions for breastfeeding which resulted in a great deal of confusion and insecurity.

Finally, it needs to be noted that despite the resurgence in the popularity of breastfeeding, not all mothers will wish to breastfeed. Mothers in Kitzinger's survey who had decided to bottle feed reported feeling pressurized by staff to breastfeed instead, resulting in feelings of guilt about their choice. Most mothers in this survey indicated that the important issue for them was to feel free to feed their baby as they wished without fear of disapproval.

Conclusion

This chapter has reviewed some of the literature relating to the physiological and psychological impact of many of the commonly used medical interventions applied during pregnancy and childbirth. In addition, contraversial issues relating to the use of these medical interventions and to the impact of *hospitalization were discussed.*

While many of the current debates about maternity care in western societies are concerned with these specific issues, MacIntyre (1977) suggests that they can all be regarded as part of the wider debate about the medicalization of pregnancy and childbirth. Several

authors have recently discussed what Comaroff (1977) has called the '*competing paradigms of pregnancy*'. The following chapter will examine the nature of these *differing views of pregnancy* and childbirth and the contribution of the feminist movement to these views.

CHAPTER THREE

CONFLICTING VIEWS OF PREGNANCY AND CHILDBIRTH IN WESTERN SOCIETIES

Chapter one outlined the historical antecedents which led to childbirth being defined as a medical event in the western world. This definition and perception of childbirth is not shared universally (Mead, 1967). As noted previously, pregnancy and childbirth lend themselves to contrasting definitions and styles of management in different cultural contexts. Even within western societies, recent debate over such issues as termination, place of confinement and elective induction of labour, indicate the existence of conflicting conceptions of the social and physiological nature of the process. Increasingly, in these societies, the medical definition is opposed by a cogent view which asserts that pregnancy and childbirth are 'natural' processes and, as such, are best managed by the woman herself, with assistance from, rather than control by, professional agents (Comaroff, 1977). This view has gained ground with the increase of medical intervention in childbirth on the one hand, and the relatively recent involvement of the feminist movement in women's health issues on the other.

This chapter will briefly examine the feminist viewpoint of reproduction as well as differences believed to exist in medical and maternal views of pregnancy and childbirth.

3.1 The Feminist Viewpoint

Although the controversy surrounding the management of childbirth in western societies has often been viewed as arising directly out of the feminist movement,

Oakley (1981) notes that the first complaints about the medicalisation of childbirth came not from feminists but from mothers and other sections of the 'lay' public. In fact, until quite recently, the feminist movement in Britain and the United States has not had much interest in child-bearing. Its main concerns during the 1960's and early 1970's were with freeing women from the responsibilities and burdens of child-bearing (through contraception, abortion and free state child care) and increasing their participation in the non-domestic world. Only in recent years have feminists extended their interest to the area of childbirth and begun to regard the ability to give birth as a valid and valuable aspect of being a woman.

Despite their relatively recent interest in the management of reproduction, the feminist viewpoint is of importance for two reasons. Firstly, it has added a political dimension to the childbirth debate by linking the management of reproduction in western societies to the social position of women. Secondly, unlike many other political and social issues raised by feminists, their concern with the management of reproduction has crossed many of the usual barriers of acceptance. Elkin (1980) notes that women of widely different political and personal persuasions have been interested in and sympathetic to the issues raised by feminists in this area. Thus while the feminist critique of reproduction did not initiate the debate on childbirth it has both extended and added impetus to the controversy.

Chapter one indicated that the main change in the social and medical management of childbirth and reproductive care in western societies over the last century has been the transition from a structure of control located in a community of untrained women, to

one based on a formally trained, predominantly male profession. Thus a process of professionalization has been accompanied by a transfer of control from women to men and it is this exchange of control between the sexes which is central to the feminist critique of modern reproductive management.

Most feminists regard birth as an essentially female affair and therefore believe it should be returned to female control. Dreifus (1978), for example, argues that the domination of men in obstetrics is inappropriate as their obvious lack of experience prevents them from operating in the best interests of the mother. Similarly Danaë Brook states :

> "I mistrust men as sole deliverers of my children. There are whole areas of female feeling that I doubt they understand." (Brook, 1976, p.43)

These feminists believe that male domination in the area of childbirth has led to the emergence of technological procedures which fail to place women at the centre of the birth process. They believe that technology, as presently used in the management of childbirth, frequently renders women unnecessarily passive thereby depriving them of the total experience of birth.

The lack of control which women have over the birth process has also been commented on by Rich (1978) in an article entitled The Theft of Childbirth. While acknowledging that there are certain valid reasons for the prevention of exertion by the mother - such as heart disease and tuberculosis - Rich questions what psychic effect a state of semihelplessness (anaesthesia) has on a healthy mother, who is "awake during the birth yet unable to participate actively,

her legs in stirrups, her wrists strapped down, her physical engagement with the birth process minimized by drugs and by her supine position" (Rich, 1978, p.150). Rich believes that 'freedom' from pain through these methods, like sexual 'liberation', places a woman physically at the disposal of men though still estranged from her body.

Other feminists have focused their attention on western hospital practices which they believe further increase the woman's sense of helplessness. Nancy Stoller Shaw (1974), in her study of American maternity care, notes that for a woman giving birth in hospital, childbirth involves "a continual inability to protect herself and control the access of others to her body" (p.62). Standard prepping procedures, which include the "systematic removal of all personal effects as well as parts of the body (hair, faeces) and its extensions (eyeglasses, false teeth)" (p.69) are similar to the admissions procedure of any total institution, and help to reinforce the idea that the woman loses control over her body and herself when she enters the hospital. Rothman (1979) commenting on the negative impact of many hospital practices on women, notes that most childbirth preparation classes spend a great deal of time preparing women, not for childbirth, but for the hospital experience itself.

From a somewhat different perspective, several feminists have focused their attention on the processes of medical education and professionalization which they believe have produced an ideological formula for the treatment of women which is different from that of men. Scully and Bart (1972), for example, noting that gynaecology textbooks are one of the primary socializing agents for practitioners in the field, undertook an analysis of all textbooks written between

1943 and 1972. They concluded that during this time period, gynaecological textbook

> "revealed a persistent bias toward greater concern with the patient's husband than with herself. Women are consistently described as anatomically destined to reproduce, nurture and keep their husbands happy. So, gynaecology appears to be another of the forces committed to maintaining traditional sex-role stereotypes, in the interests of men and from a male perspective."
>
> (Scully and Bart, 1972, p.283)

A similar identification with masculine interests is said to be evident in obstetrics where, according to Oakley (1980), concern with the role of the husband in labour is associated with the promotion of types of analgesia that make the husband's experience of childbirth more pleasant.

The merging of doctor and husband roles through the identification of doctors with husbands can, according to Oakley (1980), be regarded as one device used to 'desexualize' the intimacy of the obstetrical encounter. She, and a number of other feminists, have commented on the link between a woman's sexuality and childbirth. Kitzinger (1978a), for example, has stressed that birth is a psychosexual event and that having a baby is part of a woman's total sexual experience. These feminists believe that control over the event of birth by the doctor is, in fact, control over a woman's sexual experience. Rossi (1973) commenting on this issue, claims that physicians sense the linkage between childbirth and sexuality and treat women in childbirth as they have in sex thereby cheating women of a full, controlling role in the childbirth experience. She believes that :

> "The whole paraphernalia of medicine - anaesthesia, the abyss below the delivery table, - serve the function of retaining the dominant status of the attending physician, and thus prevent women from seeing that a physician is her 'aide' in giving birth, and not her lordly 'deliverer'".
>
> (Rossi, 1973, p.169-170).

While all feminists agree that change in the management of reproduction is necessary, they differ in their opinions as to what strategies are necessary for change. At the one extreme, Shulamith Firestone (1972) a radical feminist, believes that women's general oppression in society is rooted in and legitimized by their childbearing capacity, and that the only way to challenge patriarchy is to remove the need for such biological functions. She therefore advocates that women organise for more research into and implementation of the methods of artificial reproduction so that this may become normal practice and pregnancy and childbirth be avoided altogether.

This radical view has received little notable support from other feminists. Evans (1985) states that Firestone's analysis fails to take into account the issue of who controls technology. She believes that as a political strategy, Firestone's approach promises to increase, rather than decrease the power of male technologists over reproduction. Rich (1978) from a somewhat different perspective, criticises Firestone's point of view for failing to take into account what biological pregnancy and birth could mean to women in a different political and emotional setting. She states further :

> "Firestone is so eager to move onto artificial reproduction that she fails to examine the

> important relationship between maternity and sensuality, pain & female alienation".
> (Rich, 1978, p.153)

On the other end of the continuum, some feminists (e.g. Hazell, 1974) believing that modern birthing practices have so dehumanised the experience of giving birth, advocate the wholesale rejection of all technological advances and a return to traditional birthing practices. While most feminists (Oakley, 1981; Rich, 1978) agree that a move toward more natural birthing practices is an important aspect of the woman's health care movement, they criticise the tendency of these more extreme proponents to over-romanticise childbirth in its natural state. Jordan (1980), for example, states that childbirth in traditional cultures is neither primitive, nor painless, nor natural, and that attempts to simulate such birthing practices are unrealistic and doomed to failure in modern industrial societies.

A more middle of the road approach has been advocated by feminists such as Arms (1977), Evans (1985) and Oakley (1981) who are in agreement with Jordan that there was no golden age in which women gave birth both safely and effortlessly and that it would therefore be a backward step to condemn the whole of modern obstetrics. Evans (1985) for example, argues that there is a danger of forgetting technology's benefits because "we cannot stomach the ideological wrapping" (p.126). Similarly, Oakley (1981) believes that the quality of medical care depends not on the elimination of technology but on "the extent to which interventions of proven effectiveness are properly applied to those who can benefit from them" (p.23).

These feminists believe that it is misleading to see

the central problem as whether or not technology is used, and that instead control over medical knowledge and how it is used is the crucial issue. They call for a return to woman-controlled childbirth in order to give back women the power and control over their reproductive experiences. This means allowing women the choice to decide not only whether to have children, but also when, where and how they may do it. It also means counting the costs of technology, not only in terms of physical trauma and discomfort, but in terms of emotional and social distress. Childbirth needs to be seen as a momentous time in a woman's life and not as an isolated medical event. This requires a redefinition of the prevailing view of childbirth as an illness and its reinstatement as a normal, healthy and potentially fulfilling experience.

3.1.1 Criticisms of the Feminist Viewpoint

The feminist critique of reproduction in western societies has in itself been criticised from several standpoints. These criticisms can be briefly summarised as follows.

Firstly, because of the political context out of which it has emerged, the feminist argument at present exists essentially on a hypothetical level and few studies have tested its scientific validity. Of the research which has been conducted, MacIntyre (1977) believes there has been a tendency for investigators to be committed to a particular viewpoint leading them at times to produce partial, over-simplified or uncritical analyses. While such analyses may be stimulating and thought-provoking they may also serve to polarise investigators in a way that is fruitful neither to the development of a theoretical framework nor for the provision of better maternity care.

Secondly, Cartwright (1979) notes that in the United States, the feminist critique of current obstetric practices has helped to create a myth of a golden age of childbirth in earlier times or primitive societies which is quite unrealistic. While, as noted earlier, not all feminists have promoted this myth, Cartwright believes that those who have, run the danger of creating movements for 'do-it-yourself' obstetrics in unsuitable conditions. Furthermore, she believes that such myths are likely to alienate obstetricians and midwives, since by implication they deride their profession and achievements. While acknowledging that change is necessary, she believes that there should be greater emphasis on co-operation and more energy directed towards changing existing maternity services.

Finally, members of the medical establishment have countered feminist criticisms of current maternity care by contending that their viewpoint is unrepresentative and that most women are satisfied with the care they receive (Chalmers, 1978). While the extensive role played by consumer organizations in initiating and promoting the childbirth debate suggests this criticism is not altogether warranted, it is difficult to evaluate the extent to which the current childbirth debate reflects the views of women in general. Recently, Graham and Oakley (1981) have suggested that mothers and obstetricians approach reproduction with radically different frames of reference and that conflict rather than being a peripheral issue is in fact a fundamental feature of their relationship. The following section will examine what has been called 'the conflicting paradigms of pregnancy' (Comaroff, 1977) and the extent to which available research supports the idea of these different medical and maternal views of pregnancy and childbirth.

3.2 Medical and Maternal Perspectives of Childbearing

Several authors have recently suggested that the present childbirth debate does not simply reflect a difference of opinion about approach and procedures but rather reflects a fundamental difference in medical and maternal *perspectives on* childbearing. Graham and Oakley (1981), for example, believe that obstetricians and mothers have a qualitatively different way of looking at the nature, context and management of reproduction which influences their interactions as well as their respective experiences and perceptions. Similarly, Comaroff (1977) has described what she refers to as the 'conflicting paradigms of pregnancy' which she believes exist between medical personnel on the one hand and childbirth educators and many women on the other. These competing views of the nature of reproduction are believed to have arisen as a result of the medicalization of childbirth in western societies and centre around the question of *whether pregnancy* can be regarded as an illness or a natural process.

Within the one paradigm, described by MacIntyre (1977) as the 'normal' model, pregnancy and childbirth are regarded as natural *processes, embedded in a* social and psychological context, undergone by healthy women largely under their own control, and as positive and fulfilling experiences. From this perspective, medical assistance is seen as minimally necessary and only as *an insurance against* complications. Unless such complications occur, the woman is not regarded as being in a sick role or patient role, and her relationship with the medical profession is a relatively equalitarian one of active participation in, and full knowledge of, the process of childbearing.

Within the second paradigm, described by MacIntyre (1977) as the 'illness' model, pregnancy and childbirth are regarded as states and processes akin to illness, relatively divorced from a social and psychological context. From this perspective it is seen as appropriate for the woman to hand over control of the process to medical experts and to remain relatively *ignorant of the basis of professional decisions*. Childbearing is regarded as highly hazardous, with medical assistance and intervention being uniformly necessary. The physical experiences of childbirth are perceived negatively and therefore to be alleviated or removed from consciousness, when possible (Comaroff, 1977; Graham and Oakley, 1981; MacIntyre, 1977).

The two competing paradigms as described above can probably best be viewed as ideal-type models toward which medical and maternal perspectives are believed to approximate. However, the extent to which mother's and obstetrician's views actually coincide with the models of pregnancy and childbirth outlined above has not been extensively researched. Graham and Oakley's description of the differences in medical and maternal perspectives was based on two independent research projects conducted at two different hospitals in Britain and therefore lends some support for this viewpoint. Comaroff's observations, however, were based on a series of personal encounters at one ante-natal clinic and therefore lack generality. Oakley (1980) notes that while this type of subjective account offers *important insights into the experience* of reproductive management it cannot serve as a substitute for the researching of the collective experiences of women.

One area of research in which differences in lay and medical perspectives have been identified has been that

concerned with women's attitudes to antenatal care. Garcia (1982) in a review of British studies conducted during the 1970's, states that this research consistently reveals a discrepancy between women's expectations of antenatal care and their experience of it. While many of the complaints made by women have to do with practical considerations (for example, clinic timing, siting and organisation, rapid examinations and a lack of privacy), Garcia believes that much of the dissatisfaction relates to underlying differences in medical and maternal perspectives toward antenatal care.

One feature of the medical perspective identified by Graham and Oakley in their research, is an assumption that doctors are the experts on reproduction and women relatively ignorant on the subject. Thus, while most antenatal studies have shown that women have a desire for information about their pregnancies and the medical procedures used as well as a need to contribute to their own care, these needs are often unmet since they do not conform to what most doctors and midwives feel to be appropriate (Garcia, 1982). This attitude is evident in a quote cited in Garcia taken from an information booklet written for pregnant mothers by the British Medical Association :

> "You decide when to see your doctor and let him confirm the fact of your pregnancy. From then onwards you are going to have to answer a lot of questions and be the subject of a lot of examinations. Never worry your head about any of these. They are necessary, they are in the interests of your baby and yourself, and none of them will ever hurt you". (Garcia, 1982, p.89)

One further feature of the medical perspective which

has consistently been revealed in antenatal studies is the low regard for women's time and outside *commitments* which appears to arise from a rather narrow view of a woman's responsibility. Garcia (1982) notes that there is a definite tendency on the part of doctors to ignore a woman's social circumstances and commitments, and to focus on her status as a 'case' and on her pregnancy as a 'medical episode'. In order to act responsibly, pregnant women are expected to attend antenatal clinics and follow instructions and little or no attention is paid to the psychological and social context within which their pregnancy has occurred. Similarly, Graham and Oakley (1981) found that from the obstetrician's perspective, being a patient is the *woman's* key status, whereas from the mother's perspective the effects of having a baby on her *occupational standing*, financial position, housing situation and marital status were all important concerns. Garcia comments that in order for antenatal care to improve, care-givers need to take into account that women exist in a *social world* of conflicting demands and responsibilities.

Whereas most studies have focused on antenatal care, few have investigated possible *differences* in medical and maternal perspectives of medical care during labour and childbirth. If mothers and doctors do *indeed* differ in their views of reproduction as suggested, one would, for example, expect differences between maternal experiences of obstetrical interventions and obstetricians' perceptions of their experiences. In chapter two reference was made to the paucity of research relating to women's experiences of obstetrical interventions. Even fewer studies have attempted to examine possible differences which may exist between *women's* experiences of medical technology and obstetricians' perceptions of these experiences. One

exception to this was Cartwright's (1979) British study of childbearing and induction. Although Cartwright's study focused on the induction of labour it did also explore obstetricians' views of epidurals and home births and compared these with mothers' experiences of these interventions. A summary of her findings appear in tabular form for clarity :

PROCEDURE	INDUCTIONS	EPIDURALS	HOME BIRTHS
* Obstetricians' estimated average proportion of women who would prefer the procedure if given a choice.	36%	36%	9%
Proportion of mothers in the study who had the procedure and would choose to have it again at a future birth.	17%	63%	91%
Proportion of all mothers (including those who had not had the procedure) who would choose to have the procedure at a future birth.	8%	16%	18%

* Obstetricians were asked what proportions of women would prefer to have *an induction, an epidural,* or home birth if they were given a choice.

(Cartwright, 1979, p.136-137)

These results suggest that women's views of these procedures do differ from obstetricians' perceptions of their views. In particular, Cartwright notes that obstetricians appear to be unaware of the extent of antipathy towards induction among childbearing women, and do not realise the extent of the 'demand' for home births.

Aside from Cartwright's study, the researcher is unaware of any other studies which have examined obstetricians' views of women's experiences of medical technology. Few studies (for example, Evans, 1985; Hartman, Nielson and Reynolds, 1979; Woollett, Lyon and White, 1983) have examined the reactions of women to a limited range of medical interventions occurring during labour and childbirth but these studies did not incorporate the obstetrician's viewpoint. MacIntyre (1977) states that there is a general need for research which takes into account not only the user's perspective of maternity care but also the perspective of the providers of this care. Such an approach will result in a more complete and balanced view of the issues involved in the debate surrounding the use of technology in the management of childbirth in western societies.

The present study then hopes to shed some light on possible differences which may exist between mothers' experiences of medical interventions and obstetricians' perceptions of these. The preceding discussion has suggested that differences in their perceptions may exist and that these may be due to differences in medical and maternal perspectives of reproduction with the maternal view represented by the normal model of pregnancy and childbirth and the medical view by the illness model.

CHAPTER FOUR

THE PRESENT STUDY

The preceding literature review indicated that a number of trends over the last fifty years or so have significantly altered the experience of childbirth for many women in modern western societies. Most important among these are the actual and potential increase in the use of technology in pregnancy and birth; the change in the usual place of confinement from home to hospital; and the transferal of control from the hands of midwives into those of a predominantly male medical profession. While many of these developments have undoubtedly contributed to the increased safety of mother and child, there have been few systematic attempts to discover how women view these changes and the psychological impact these have had on them.

In the research which has been conducted, a number of limitations are apparent. Firstly, many of the studies relating to mothers' experiences of technology have been carried out by consumer groups such as the National Childbirth Trust (NCT) and the Association for Improvements in Maternity Services (AIMS). This research has, on the whole, found that women feel very negatively about their experiences in hospital and in particular about inductions and the use of epidural anaesthetics (e.g. Beels, 1978; Kitzinger, 1975). However, these findings have been based on the responses of women who are members of these organizations and involved in their causes. While the responses of such a self-selected group are obviously valid for that group, they may be quite unrepresentative of the attitudes of mothers in general.

Secondly, and related to the above point, generalized statements regarding the impact of obstetrical procedures are often made on the basis of only a few interventions under study. In chapter two it was noted that relatively few obstetric procedures have been assessed with regard to their psychological impact on women. Nevertheless, many lay publications have used this research to suggest that most women view the medicalisation of pregnancy and birth negatively. This statement is not presently backed by a large body of research.

Finally, as noted in the previous chapter, there is a dearth of research relating to obstetricians' views of mothers' experiences of obstetrical procedures. Whilst a number of authors have suggested that fundamental differences exist between medical and maternal views of reproduction as well as the medical technology used during pregnancy and childbirth, no study has provided an extensive comparison between mothers' experiences of obstetrical interventions and obstetricians' views of their experiences.

In the light of these limitations in current obstetrical research, the aims of the present study will therefore be :

(i) To explore mothers' reactions to the various medical interventions and procedures (hereafter referred to simply as interventions) employed during pregnancy and birth.

(ii) To explore obstetricians' perceptions of mothers' reactions to these same medical interventions.

(iii) To compare mothers' reactions and obstetricians' perceptions of their reactions to these same medical interventions.

CHAPTER FIVE

METHODOLOGY

5.1 Subjects

Two groups of subjects were selected for the present study :

(i) Group one consisted of a sample of 147 married, white, English-speaking mothers who were patients in the maternity wards of four hospitals in the Johannesburg area. These hospitals included the Johannesburg General Hospital, a state-owned, teaching hospital and three privately owned clinics, namely: the Marymount Maternity Home; the Park Lane Clinic and the Sandton Clinic. One hundred and sixty subjects were initially recruited for the study. However, due to incorrect questionnaire completion, thirteen were excluded, rendering a final sample size of 147.

(ii) Group two consisted of a sample of forty-six obstetricians in the Johannesburg area. This sample was obtained by administering a postal questionnaire to all obstetricians listed in the Johannesburg telephone directory.

5.1.1 Selection Criteria

5.1.1.(a) Selection Criteria for Maternal Sample

In order to obtain a normal representative sample, criteria for the selection of the group of mothers were established as follows :

(i) Only married women were included in the sample. Unmarried women were excluded due to the possible effects which added stresses such as inadequate support, social non-acceptance and the question of adoption may have on the woman's perception of medical experiences during pregnancy and childbirth.

(ii) Only white, English-speaking women were included in order to obtain a relatively homogeneous cultural sample. Cultural factors are recognized as being important in determining how a woman will anticipate, prepare for and experience her childbirth (Mead and Newton, 1967). In an Israeli study conducted by Lunenfeld et al (1984), ethnic origin was found to have a significant influence on women's perceptions of their childbirth experience. Although all women delivered at the same hospital and therefore were subject to similar medical treatment, 43,7 per cent of the North African and Asian women perceived childbirth as a negative experience whilst only 17,1 per cent of European-American women looked at childbirth in negative terms. In the context of South African society it was felt that differences in cultural traditions as well as possible differences in hospital facilities and treatment were all factors which could influence women's experiences of medical interventions during pregnancy and birth.

(iii) Both primiparous and multiparous women were included in the study in order to obtain as wide and representative view of mothers' reactions to obstetrical interventions as possible. It was decided that the effect of

parity on the woman's experience of obstetrical interventions would be examined statistically rather than controlling for it by sampling techniques.

(iv) Mothers of infants with congenital anomalies were excluded from the sample to avoid the confounding effect of this experience on their perceptions of medical interventions.

(v) In order to increase the representativeness of the sample, subjects were drawn from three private clinics and one state-owned hospital. The different geographic locations of the hospitals, together with the fact that women attending the state-owned hospital tend to belong to a lower socio-economic bracket, ensured a wider range of educational and socio-economic levels. Of the final sample of 147 women, 33 per cent were drawn from the Johannesburg General Hospital, 23 per cent from the Marymount Maternity Home and 22 per cent each from the Park Lane and Sandton Clinics.

Subjects were recruited for the study on the basis of the above criteria in their order of entry to the maternity wards of the above-mentioned hospitals over a period of three months.

5.1.1.(b) Selection Criteria for Sample of Obstetricians

All obstetricians listed in the Johannesburg telephone directory were sent a postal questionnaire and covering letter inviting them to participate in the study.

Since the intention was to obtain as wide and representative sample of the subject population as possible, and given the difficulties encountered in obtaining a satisfactory response rate to mail surveys, no further selection criteria were applied to this group. Of the 107 questionnaires sent, fifty three were returned rendering a response rate of 50 per cent. Further details regarding the response rates are given in Section 5.3.2.

5.1.2 Biographical Description of the Samples

A biographical description of the maternal sample and the sample of obstetricians is given in Table 1 and Table 2 respectively.

As can be seen from Table 1 the average age in the maternal sample was 28 years. The majority of the women were South African and married rather than remarried. Most had at least twelve years of schooling and were predominantly involved in clerical or professional occupations. Seventy per cent had planned their pregnancies and 28 per cent had experienced a previous stillbirth or miscarriage. Approximately half of the women had attended childbirth preparation classes while over three-quarters of them felt they were well prepared for the event.

With regard to the obstetricians, Table 2 indicates that most of them were over forty years of age. Ninety-three per cent were male and 7 per cent were female. The majority were South African and English-speaking. Most of the obstetricians were either Protestant or Jewish with a very small percentage (2 per cent) being Catholic. Approximately three quarters of them had between eleven and forty years of experience in the field of obstetrics.

TABLE 1 Biographical description of the maternal sample

Age Distribution of Mothers

Age Categories	f	%
17 - 20	9	6
21 - 25	33	23
26 - 30	65	44
31 - 35	29	20
36 - 40	9	6
40	2	1
Total :	147	100

Mean Age = 28 SD = 4,87

Percentage Breakdowns

Nationality		Religion	
South African	84%	Protestant	62%
British	14%	Catholic	21%
Other	2%	Jewish	11%
		Other	6%

Parity		Marital Status	
Primiparae	43%	Married	90%
Multiparae	57%	Remarried	10%

Educational Standard of Mother		Mother's Occupation	
Up to Standard 8 (10 years schooling)	18%	Housewife	7%
Standard 10 (12 years schooling)	49%	Clerical	46%
Tertiary (Other than University degree)	18%	Technical	8%
University degree	15%	Managerial	10%
		Professional	25%
		Other	4%

TABLE 1 (continued)

Family Income :

Less than R10 00 per annum	4%
Between 10 001 and R20 000 per annum	27%
Between R20 001 and R30 000 per annum	22%
Between R30 001 and R40 000 per annum	19%
Between R40 001 and R50 000 per annum	12%
More than R50 001 per annum	16%
Percentage of planned pregnancies	70%
Percentage of unplanned pregnancies	30%
Percentage of women who had experienced a previous stillbirth or miscarriage	28%
Percentage attending childbirth preparation classes	48%
Percentage not attending childbirth preparation classes	52%
Percentage of women who felt they were well prepared for childbirth	87%
Percentage of women who felt they were not well prepared for childbirth	10%
(Missing data	3%)

TABLE 2 Biographical description of sample of obstetricians

Age Distribution of Obstetricians

Age Categories	f	%
31 - 40	7	15
41 - 50	18	39
51 - 60	10	22
60	11	24
Total :	46	100

Percentage Breakdowns

Sex		Nationality	
Male	93%	South African	98%
Female	7%	British	1%
		Other	1%

Home language		Religion	
English	78%	Protestant	51%
Afrikaans	21%	Jewish	47%
Other	1%	Catholic	2%

Years of experience

Less than 11 years of experience	22%
Between 11 and 20 years of experience	33%
Between 21 and 30 years of experience	27%
Between 31 and 40 years of experience	13%
More than 40 years of experience	5%

5.2 Measuring Instruments

No measuring instrument exists within the field of psychology and obstetrics for the assessment of women's reactions to obstetrical interventions. Similarly, no instrument for the measurement of obstetricians' perceptions of women's reactions to obstetrical interventions is presently available. Thus for the purposes of the present study two parallel questionnaires were developed: one to measure mothers' reactions to obstetrical interventions and the other to measure obstetricians' perceptions of these same experiences.

5.2.1 The Maternal Questionnaire

5.2.1(a) Development of the Maternal Questionnaire

The initial step in the development of the questionnaire involved the identification of appropriate items to be included. This was done by consulting obstetricians and obstetric textbooks (Beazley and Lobb, 1983; Benson, 1984) and by reviewing the recent literature in the fields of psychology and sociology relating to the psychological impact of obstetric procedures. Based on this, a preliminary questionnaire was developed comprising items relating to antenatal, natal and postnatal obstetric interventions. In addition, items relating to standard hospital routines and commonly occurring psycho-social procedures were included, since the literature review suggested that these are of importance to the mother's experience of childbirth. Some of the rarer obstetric procedures were excluded unless current literature had indicated they were of a contentious nature.

Since one of the aims of the present study was to compare mothers' reactions to obstetric interventions with obstetricians' perceptions of these, a quantifiable measure of these variables was required. For this purpose a 1 to 10 rating scale was devised, similar to that used by Chalmers (1979) in the development of a life event inventory for pregnant, white South African women. Although the items being rated in the present study were not life events but pregnancy and birth-related events, it was deemed appropriate to make use of some aspects of life event methodology since the underlying concept of rating perceptions of events was similar.

On the above rating scale subjects were asked to rate their experience of the psycho-social procedures and medical interventions along a negative-positive continuum, with 1 indicating an extremely negative experience and 10 indicating an extremely positive experience. Whereas most life event inventories require subjects to rate events in terms of the degree of stress experienced, it was decided that for the purpose of the present study the scale needed to allow for the possibility of a positive rating of any particular medical intervention or procedure. The rationale for this was based on feedback obtained from the pilot study in which a number of subjects indicated that many of the psycho-social procedures (for example presence of the husband during childbirth) were experienced by them as extremely positive events and not merely as events which were easy to adjust to. Thus, to allow subjects to indicate both positive and negative associations, and not merely the absence or presence of stress in their ratings of medical interventions and procedures, the two end points of the scale were labelled as extremely positive and extremely negative.

Two further decisions relating to mothers' ratings of medical interventions and psycho-social procedures were found to be necessary in the present study.

Firstly, subjects were instructed to rate only those medical interventions and psycho-social procedures which they had personally experienced during pregnancy and childbirth. Current research into life events suggests that a subject's perception and rating of an event is affected by whether or not the event has been experienced by the subject (Masuda and Holmes, 1978; Chalmers, 1979). Similarly, it was felt that in the area of obstetrical interventions, differences would probably exist between the ratings of mothers who had experienced a particular intervention or procedure and the ratings of mothers who had not. This view is supported by the aforementioned study by Cartwright (1979) in which notable differences were found between the attitudes of mothers who had experienced inductions, epidurals and home births and those mothers who had not experienced these interventions. On the basis of this it was decided that only mothers' ratings of interventions personally experienced would be used in the present study.

Secondly, multiparae mothers were asked to rate only those obstetrical interventions and procedures experienced during their current pregnancy and childbirth. This was done to avoid the obvious confusion which could occur if they were required to rate both past and present medical experiences. In addition, this distinction meant that a subsequent statistical comparison could be made between the experiences of multiparae and primiparae in terms of their reactions to obstetrical interventions.

5.2.1.(b) The Pilot Study

Following the initial development of the maternal questionnaire, a small pilot study was conducted, using a sample of convenience of ten mothers. The preliminary questionnaire was administered to the subjects by the author and was followed by a detailed discussion.

Since the questionnaire was to be a self-administered one, one of the main aims of the pilot study was to ascertain whether the instructions were clear and whether the terminology used to describe the various interventions and procedures was easily understood by the subjects. A further aim was to establish the degree of ease or difficulty with which subjects were able to rate their reactions to the various interventions/procedures on the 1 to 10 rating scale. In addition, the use of a positive-negative continuum as opposed to a stressful-non-stressful continuum was evaluated.

On the basis of the pilot study, certain changes were instituted. While all subjects indicated that a 1 to 10 rating scale was satisfactory, most subjects found it preferable to rate the interventions and procedures along a negative-positive continuum. In particular, they expressed the opinion that many of the psycho-social procedures were experienced by them not only as easy to adjust to but as contributing positively to their birth experience. Consequently, in the final form of the questionnaire a 1 to 10 rating scale was used with 1 indicating an extremely negative, unpleasant and difficult to adjust to experience and 10 indicating an extremely positive, pleasant and easy to adjust to experience. In addition to this change, certain ambiguous instructions were amended and the

wording describing some of the procedures was simplified further to ensure that no ambiguity existed as to which procedures and medical interventions were being referred to.

5.2.1.(c) The Final Questionnaire

After modifying the preliminary questionnaire the revised questionnaire was administered to three more mothers. No further difficulties were encountered and therefore this questionnaire was adopted for the present study.

The final form of the maternal questionnaire consisted of 42 items pertaining to various obstetric interventions and procedures. The questionnaire was broadly structured in 6 sections, viz.

- Ante-natal procedures
- First stage interventions
- Second stage interventions
- Third stage interventions
- Psycho-social procedures
- Hospital procedures

with two sub-sections for those women who had had inductions and caesarean sections. Items included in the final questionnaire referred to both obstetric interventions and psycho-social procedures as well as certain hospital routines. The final form of the questionnaire used in the present study is given in Appendix 3.

5.2.2 The Obstetrician's Questionnaire

A second, parallel questionnaire designed to measure obstetricians' perceptions of mothers' experiences of

obstetrical interventions was also developed. Since this questionnaire was designed for the purpose of comparison, identical items to those used on the maternal questionnaire were included, with the exception of two items deemed inappropriate for doctors to respond to. The essential difference between the two questionnaires was that obstetricians were required to rate all the items on the 1 to 10 scale according to their perceptions of mothers' reactions. As a result of this difference, the ordering of some of the items was changed to allow for a more logical sequence and lay-out. The format used for the questionnaire was similar to that of an obstetric interventions checklist developed by Cooke (1985) and enabled obstetricians to complete the questionnaire in a relatively short time period. The final form of the questionnaire included six sections, viz.

- Ante-natal procedures
- First stage interventions
- Second stage interventions
- Third stage interventions
- Psycho-social procedures
- Hospital procedures

Since the items and the rating scale used in this questionnaire were evaluated in the pilot study done on the maternal questionnaire no formal pilot study was conducted. However, the questionnaire was administered to two obstetricians and, based on their comments, a few minor amendments were made to the instructions and the lay-out. The final form of this questionnaire can be seen in Appendix 6.

5.2.3 Reliability and Validity of the Questionnaires

As used in the present study, reliability and validity estimates for the maternal and obstetricians questionnaires were not required. At no stage were responses to the individual obstetrical interventions and procedures summed or combined to indicate that these responses were drawn from scales measuring such concepts as maternal attitude to medical technology or obstetrician's perception of maternal attitudes to medical technology. Instead, responses to individual medical interventions and procedures were analysed in isolation.

It thus remains for further research to evaluate whether the numerous items included in these questionnaires do in fact comprise a conceptually coherent assessment of these concepts.

5.2.4 Biographical Questionnaires

Biographical information on both samples was obtained by means of two questionnaires.

For the maternal sample a detailed biographical questionnaire based on that of Chalmers (1979) was drawn up. This questionnaire explored a range of personal information concerning such matters as nationality, age, religious affiliation, educational level, socio-economic status and occupational activities. In addition, relevant questions relating to number of children, previous stillbirths/ miscarriages, attendance at childbirth preparation classes, preparation for the birth and whether the baby was planned or not, were included. This questionnaire can be seen in Appendix 2.

A second, less-detailed biographical information sheet was compiled to accompany the main questionnaire sent to obstetricians. Pertinent questions relating to information such as age, sex, religious affiliation, language group and years of experience were included. This questionnaire can be seen in Appendix 5.

5.3 Procedure

5.3.1 Procedure for Maternal Sample

The one state and three private hospitals in the Johannesburg area were contacted and permission obtained from the relevant authorities to conduct the research. Testing took place over a period of three months, during which time one hundred and sixty early post-partum mothers who met with the criteria discussed in Section 5.1.1. were approached to participate in the study. All subjects were tested in the maternity wards of the various hospitals between the second and seventh day after birth.

Prior to administration of the questionnaires, subjects were told that research was being carried out by the School of Psychology of the University of the Witwatersrand, in order to assess how women feel about their medical experiences during pregnancy and childbirth. Assurance as to the confidentiality of answers was given. All women who agreed to participate in the study signed consent forms (Appendix 1). Only two mothers refused to participate in the study.

The maternal and biographical questionnaires were distributed by the tester to each subject for self-administration. Distribution, completion and collection of questionnaires was carried out on the

same day for each woman. Subjects were asked not to obtain help with the completion of questionnaires but to discuss any queries or difficulties encountered during their completion with the tester. On collection of the questionnaires difficulties were discussed after which subjects were thanked and informed that the outcome of the study could be obtained from the researcher if desired.

5.3.2 Procedure for Obstetricians' Sample

The obstetricians' questionnaire with the biographical information sheet attached was sent to all obstetricians listed in the Johannesburg telephone directory. The questionnaire was accompanied by a stamped return addressed envelope and a letter of introduction (Appendix 4) explaining the purpose of the study and stressing confidentiality. Respondents could choose whether or not to remain anonymous by omitting their names from the questionnaire.

Since non-response is a common difficulty encountered with postal surveys, the following steps were taken both to maximize the response rate and to obtain information from potential non-respondents:

(i) A reminder card was sent to all non-respondents ten days after the initial mailing of the questionnaires.

(ii) Approximately ten days after the reminder card was mailed, a further letter emphasising the importance of a high rate of return was sent, accompanied by a copy of the questionnaire for those subjects who may have disposed of the first one.

(iii) A general request was made to all subjects to complete and return the biographical information sheet, whether or not they completed the main questionnaire. This was done in an attempt to obtain information regarding non-responders since according to MacMahon and Pugh (1970) such information is particularly valuable when a postal method of testing is used and the expected response rate is, generally speaking, fairly low.

In the present study 107 obstetricians were sent questionnaires. Of these, biographical information only was returned by seven, while usable questionnaires were obtained from forty-six. The total response rate was therefore 50 per cent, while the response rate for usable questionnaires was 43 per cent. Of the seven obstetricians who returned the biographical information, two indicated they had retired while the remaining five stated that the questionnaire required too much time to complete.

Although an acceptable response rate was obtained in the postal survey, the extent to which the sample obtained is representative of the targeted population is difficult to evaluate and therefore constitutes a possible source of bias in the present study. Goode and Hatt (1952) state that the direction of bias in postal surveys is generally toward those who are interested in the subject matter, those who are higher in socioeconomic status, and those who have had more education. Since the group of obstetricians are relatively homogeneous in respect of socioeconomic status and education it is probable that the difference between respondents and non-respondents in the sample obtained relates to the degree of interest in the psychological impact of obstetrical interventions on women.

5.4 Statistical Analysis

In terms of the aims of the study stated in Chapter 4, the following steps were taken in the data analysis :

(i) Mothers' median and modal ratings for each of the medical interventions and procedures included in the maternal questionnaire were calculated to provide a summary description of their reactions to obstetrical interventions.

(ii) Obstetricians' median and modal ratings for each of the medical interventions and procedures included in the obstetricians' questionnaire were calculated to provide a summary description of obstetricians' perceptions of mothers' reactions to these same interventions and procedures.

(iii) Using the Median test, a comparison per procedure/intervention *between mothers' and* obstetricians' ratings was conducted to examine differences in the central tendencies of the two groups. Thereafter, Fisher's exact probability test was used to determine the significance of any differences found.

(iv) For the purpose of statistical control additional comparisons between various *subgroups* of mothers were done in terms of the following variables: parity, income, age and attendance at childbirth preparation classes. As in the above-mentioned comparison, the Median test and Fisher's exact probability test were used to examine differences between these subgroups and the significance thereof.

5.4.1 Rationale for the Selection of the Median Test and Fisher's Exact Probability Test

A non-parametric test was selected as the most appropriate technique to employ to examine differences in maternal and obstetricians' ratings since the ratings obtained on the 1 to 10 scale used could not be regarded as *constituting interval measures*. Of the non-parametric tests available, the Median test was considered the most applicable for the type of data obtained. Alternative tests based on ordinal measures, e.g. the Mann-Whitney U test were unsuitable since the 1 to 10 rating scale used results in multiple tied ranks (Siegel, 1956).

In testing the significance of the proportions above and below the median, Fisher's exact probability test was selected as the most appropriate statistic. Alternative tests of significance, e.g. the Chi-Square test, could not be used due to the low cell frequencies obtained for some of the medical interventions in the maternal sample (Siegel, 1956). To reduce the possibility of Type I errors through the use of multiple statistical tests, the 1 per cent level of significance was used throughout.

The results of the statistical analysis are presented in Chapter 6.

CHAPTER SIX

RESULTS

This chapter presents the results of the statistical analysis as outlined in Section 5.4. For ease of comprehension, a brief discussion will accompany the presentation of the results in each section. This will be followed by an integrated discussion of the findings and implications of the present study in Chapter 7.

6.1 Mothers' Ratings of Obstetrical Interventions and Psycho-Social Procedures

This section provides a summary description of mothers reactions to the obstetrical interventions and psycho-social procedures included in the maternal questionnaire. For the sake of clarity, mothers' median and modal ratings for each of the interventions and procedures are shown in Table 3 p.124 to 132 while the discussion of these results is presented according to the major headings used in the questionnaire. These headings comprise :

- Antenatal Procedures
- First Stage Interventions
- Second Stage Interventions
- Third Stage Interventions
- Psycho-Social Procedures
- Hospital Procedures

Details regarding the percentage intervention rates for all the interventions and procedures are also presented in Table 3. Where relevant, reference will be made to these intervention rates in the discussion of the results.

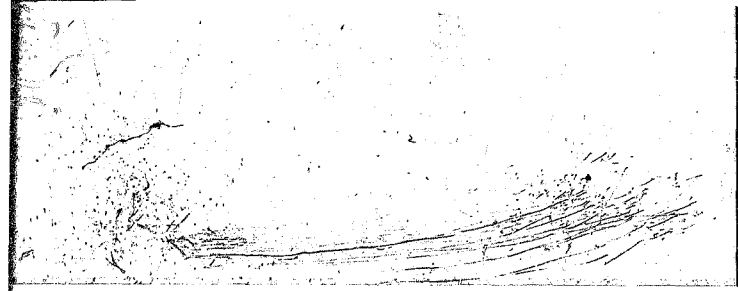


TABLE 3 : MOTHERS' AND OBSTETRICIANS' MEDIAN AND MODAL RATINGS

FOR OBSTETRICAL INTERVENTIONS AND PROCEDURES

INTERVENTION/PROCEDURE	MOTHERS				OBSTETRICIANS		
	N	Median	Mode	% Intervention Rate	N	Median	Mode
A. Ante-natal (147)*							
Scan	134	9	10	91	46	10	10
X-ray	11	7	2 & 8	7	44	4	1
External cephallic version	7	5	1 & 5	5	45	5	5
Non-stress test	84	9	10	57	46	5,5	5
Oxytocin challange test	13	7	7	9	39	4	5
Amniocentesis	7	6	10	5	46	4,5	1
B. First Stage (147)*							
Type of Shave							
- perineal	93	6	5	63	43	4	3 & 5
- perineal and pubic	14	5	3 & 8	10	44	4	1
- umbilicus to pubis	33	5	5	22	43	4	1
Enema	105	5	5	71	45	3	1

TABLE 3 (continued)

INTERVENTION/PROCEDURE	MOTHERS				OBSTETRICIANS		
	N	Median	Mode	% Intervention Rate	N	Median	Mode
B. First Stage (continued)							
Analgesics	59	8	10	40	46	6	5 & 8
Catheterization	86	5	5	59	45	3	3
Dextrose drip	75	6	7 & 10	51		5	5
Per vaginum examination	114	5	1	78		5	5
Surgical induction of labour (A.R.O.M.)	70	6	5	48	45	5	4
Pharmacological induction of labour							
- intravenous oxytocin	50	5	10	34	45	5	5
- oral oxytocin	5	8	8	3	39	6	8
- vaginal prostaglandins	8	5,5	5	5	42	6	5

TABLE 3 (continued)

INTERVENTION/PROCEDURE	MOTHERS				OBSTETRICIANS		
	N	Median	Mode	% Intervention Rate	N	Median	Mode
C. Second Stage : Vaginal Delivery (96)*							
Maternal position							
- stirrups	33	7	10	34	45	4	4
- leaning back, semi-supported	54	7	7	55	46	7	7
- side lying	4	10	10	4	38	4	5
- squatting	1	10	N/A	1	34	4	5
Episiotomy	75	5	1 & 5	77	46	4	2
Forceps	18	5	5	18	46	3	2 & 5
Vacuum Extraction	3	6	6	3	39	3	1
Local anaesthetic							
- epidural	30	9	10	31	45	8	8
- pudendal block	27	7	10	28	45	5	4 & 7
- no local anaesthesia	38	8	10	39	43	2	1
Nitrous oxide	15	0	10	15	43	5	5
Foetal heart monitor	45	8	10	46	46	6	6

TABLE 3 (continued)

INTERVENTION/PROCEDURE	MOTHERS				OBSTETRICIANS		
	N	Median	Mode	% Intervention Rate	N	Median	Mode
C. Second Stage : Caesarean Section (49)*							
Emergency Caesarean Section							
- with local (epidural) anaesthetic	9	8	10	18	45	6	8
- with general anaesthetic	10	5	5	20	46	5	4 & 8
Planned caesarean section							
- with epidural anaesthetic	19	8	8 & 10	39	46	8	8
- with general anaesthetic	11	7	7	22	46	6	8
Foetal heart monitor	21	8	10	43	45	6	5
Duration of catheterization							
- less than 12 hours	18	5	5	37	44	5,5	5
- more than 12 hours	31	6	1 & 8	63	44	3,5	4
D. Third Stage (98)*							
Delivery of placenta							
- natural	56	8	10	57	45	8	10
- manual	37	7	5	38	46	2	1

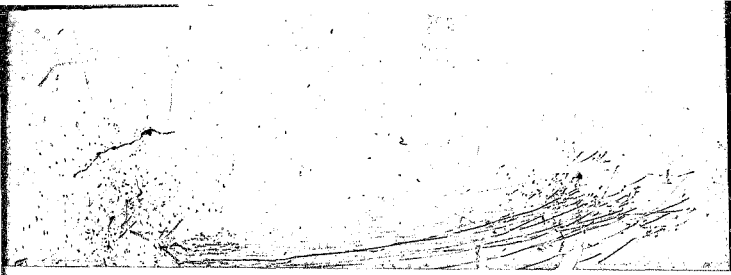
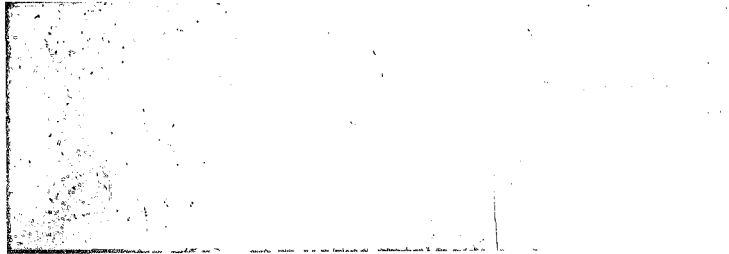


TABLE 3 (continued)

INTERVENTION/PROCEDURE	MOTHERS				OBSTETRICIANS		
	N	Median	Mode	% Intervention Rate	N	Median	Mode
D. Third Stage (continued)							
- operative	1	5	N/A	1	43	2	1
Suturing of episiotomy/tear	92	5	5	94	45	5	5
E. Psycho-Social : Vaginal Delivery (98)*							
Husband							
- present during labour	91	10	10	93	45	9	10
- absent during labour	6	5	5	6	43	2	2
- present during delivery	85	10	10	87	45	9	8 & 10
- absent during delivery	11	5	5	11	44	2	2
Placement of infant							
- mother's breast	66	10	10	67	46	9	10
- table	8	7,5	10	8	46	5	5
- cot	4	4	2	4	45	4	5
- father	11	10	10	11	44	7	7
- emergency medical attention	5	5	1 & 5	5	45	2	1



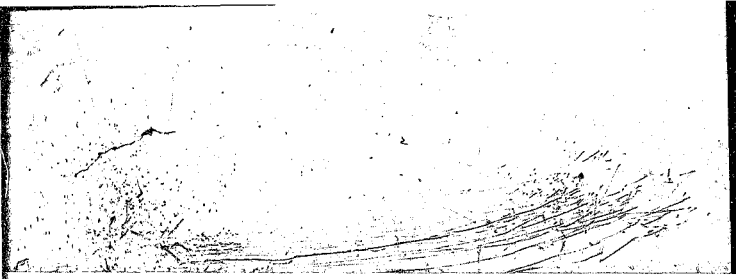


TABLE 3 (continued)

INTERVENTION/PROCEDURE	MOTHERS				OBSTETRICIANS		
	N	Median	Mode	% Intervention Rate	N	Median	Mode
B. Psycho-Social : Vaginal Delivery (continued)							
Mother-infant contact							
- prior to wrapping	49	10	10	50	46	9	10
- after wrapping	42	10	10	43	45	8	8
- no contact	4	2,5	1	4	46	2	1
Timing of breast feeding							
- immediately after birth	15	10	10	15	This item not included in		
- within the first hour	21	10	10	21	obstetrician's		
- between 1 and 4 hours	20	9,5	10	20	questionnaire		
- between 4 and 12 hours	21	8	7	21			
- after 12 hours	12	9,5	10	12			
- not breast feeding	9	5	4 & 6	9			
Psycho-Social : Caesarean Section (49)*							
Husband							
- present pre-operatively	46	10	10	94	46	9	10
- absent pre-operatively	3	1	1	6	44	2	-

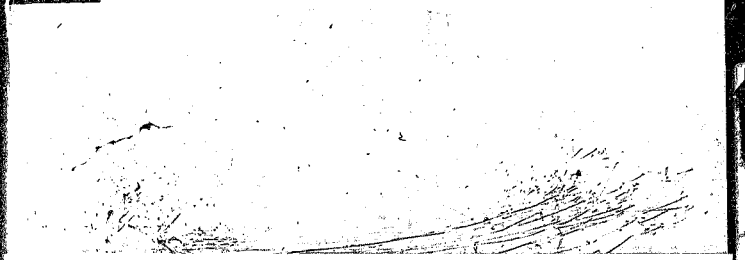


TABLE 3 (continued)

INTERVENTION/PROCEDURE	MOTHERS				OBSTETRICIANS		
	N	Median	Mode	% Intervention Rate	N	Median	Mode
Psycho-Social : Caesarean Section (continued)							
- present during operation	19	10	10	39	43	8	10
- absent during operation	28	6	1	57	43	3	1
Placement of infant after epidural caesar							
- alongside mother	12	9	10	43	44	8	10
- cot	3	6	No mode	11	43	5	5
- father	5	8	8	18	43	7	6 & 8
- emergency medical attention	6	5	5	21	43	2	2
Mother-infant contact a: epidural caesar							
- prior to wrapping	2	9	No mode	7	44	8	10
- after wrapping	23	9	10	82	44	8	8
- no contact	2	6	No mode	7	44	2	2

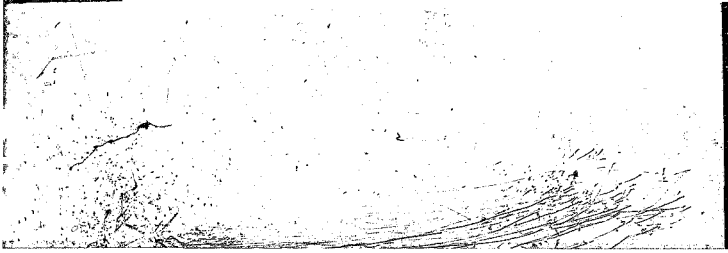


TABLE 3 (continued)

INTERVENTION/PROCEDURE	MOTHERS				OBSTETRICIANS		
	N	Median	Mode	% Intervention Rate	N	Median	Mode
B. Psycho-Social : Caesarean Section (continued)							
Timing of mother-infant contact after general anaesthetic							
- 1-12 hours after anaesthetic	15	7	5 & 10	71	46	8	8
- more than 12 hours after anaesthetic	4	3	1	19	44	2	2
Timing of breast feeding							
- immediately	2	9	No mode	4	Not included in		
- within the first hour	6	10	10	12	obstetricians questionnaire		
- between 1 and 4 hours	7	8	8 & 10	14			
- between 4 and 12 hours	14	10	10	29			
- after 12 hours	9	8	8	18			
- not breast feeding	7	5	1 & 7	14			

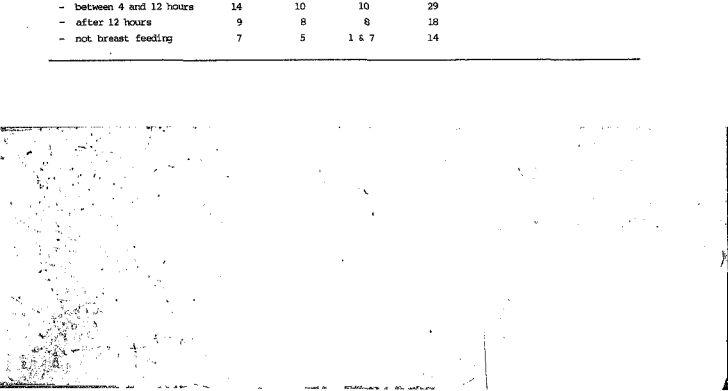


TABLE 3 (continued)

INTERVENTION/PROCEDURE	MOTHERS				OBSTETRICIANS		
	N	Median	Mode	% Intervention Rate	N	Median	Mode
F. Hospital (98)*							
Presence of nurses during labour							
- most of the time	79	9	10	81	46	9	10
- ± half of the time	16	8	6 & 10	16	45	5	5
- almost no time at all	3	2	no mode	3	44	1	1
Presence of obstetrician during labour							
- most of the time	18	10	10	23	44	9	10
- ± half of the time	23	9	10	29	45	6	5
- almost no time at all	38	5,5	1	48	45	2	1
Transfer to delivery unit	83	8	10	85	45	6	5

* Maximum potential number exposed to intervention, namely :

a. Total sample size 147

b. Caesarean sections 49

c. Vaginal deliveries 98

The percentage intervention rates are based on these sample sizes

6.1.1 Obstetrical Interventions

(i) Antenatal Procedures

Mothers' median and modal ratings for the antenatal procedures are shown in Table 3.

From Table 3 it is evident that mothers' reactions to antenatal procedures were predominantly positive. The most positive ratings were obtained for ultrasound (Median = 9) and the non-stress test (Median = 9) which were also the two most commonly occurring antenatal procedures experienced by 91 per cent and 57 per cent of the sample respectively. The most negative rating was obtained for external cephallic version (Median = 5) which was experienced by 5 per cent of the sample. In general, these results suggest that the mothers in this study tended to view the antenatal procedures which provided them with an indication of the baby's well-being in a positive light.

(ii) First Stage Interventions

Mothers' median and modal ratings of the first stage interventions are shown in Table 3.

In keeping with expectations, mothers' reactions to first stage interventions were generally more negative than their reactions to antenatal procedures. Thus, a relatively low median rating of 5 was obtained for the following interventions: full shaves, caesarean shaves, enemas, catheterization and per vaginum examinations. A high positive rating was obtained for analgesics such as pethidine (Median = 8) and for oral oxytocin (Median = 8).

Of interest in these results is the *indication* that mothers do prefer a perineal or half-shave (Median = 6) to the other two types of shaves given and that oral oxytocin seems to be a preferred method of induction, although the small sample size reduces the significance of this finding.

With regard to *intervention* rates, it is of interest to see that prepping procedures were a feature of most mother's births with 95 *per cent of* mothers being shaved and 71 per cent being administered enemas. A high induction rate was also obtained with 48 per cent of the sample having their waters broken, 34 per cent being given *intravenous* oxytocin, 3 per cent oral oxytocin and 5 per cent vaginal prostaglandins. Also occurring frequently were *per vaginum* examinations experienced by 78 per cent of mothers and catheterization which occurred in 59 *per cent of* cases.

(iii) Second Stage Interventions

Mothers' median and modal ratings for second stage interventions are shown in Table 3.

Of the mothers who had a vaginal delivery, the most positive ratings were obtained for the *side-lying* position for delivery (Median = 10) and for epidural anaesthesia (Median = 9). The squatting position for delivery also received a rating of 10 but this was experienced by only one woman. The *most negative* ratings were reserved for forceps delivery (Median = 5) and episiotomy (Median = 5). Of interest is the fact that vacuum extraction (Median = 6) was rated more positively than forceps delivery although the small percentage of *women* who

had a vacuum extraction (3 per cent) means that this finding cannot be generalized.

For those mothers who had a caesarean section, the most positive ratings were obtained for both planned and emergency caesareans with an epidural anaesthetic (Medians = 8) while the lowest rating was obtained for an emergency caesarean with general anaesthetic (Median = 5). The foetal heart monitor, experienced by 43 per cent of mothers who had caesarean section, received a median rating of 8 indicating a favourable response to this intervention.

The caesarean section rate for the total sample of 147 women was 33 per cent suggesting that this major intervention has become a relatively common procedure in Johannesburg maternity hospitals. Of the forty-nine women who had a caesarean section, 57 per cent had an epidural anaesthetic while 43 per cent had a general anaesthetic.

(iv) Third Stage Interventions

Mothers' median and modal ratings for third stage interventions are shown in Table 3.

In accordance with expectations, mothers rated natural removal of the placenta (Median = 8) more positively than manual (Median = 7) or operative (Median = 5) removal of the placenta. Suturing of the episiotomy or tear was rated negatively with a median of 5. Of interest is the fact that 77 per cent of women who had a vaginal delivery were given an episiotomy suggesting that this procedure is fairly routine in Johannesburg maternity hospitals.

6.1.2 Psycho-Social Procedures

Mothers' median and modal ratings for psycho-social procedures are shown in Table 3.

The importance of procedures which can be regarded as supportive in nature or as facilitating bonding with the infant was evident in the very high positive ratings given these procedures by mothers. Conversely, the absence of these procedures received more negative ratings than many of the preceding medical interventions.

(i) Vaginal Delivery

The majority of mothers who had a vaginal delivery had their husbands present both during labour (93 per cent) and at delivery (87 per cent) indicating that this has become common practice in Johannesburg maternity hospitals. The very high median rating of 10 shows that most mothers experienced the presence of the husband very positively while the relatively low median rating of 5 for husbands not present at labour and delivery suggests that absence of the husband for these mothers was a fairly negative experience.

Procedures facilitating contact with the infant after birth were also very positively rated. Thus placement of the infant on the mother's stomach and handing of the infant to the father both received median ratings of 10 while placement of the infant in a cot was given a negative median rating of 4. Mother-infant contact both prior to and after wrapping received a median rating of 10 indicating that both were experienced very positively and that mothers did not seem to have a preference for

either one of these procedures. In contrast, no mother-infant contact after delivery obtained one of the lowest median ratings (Median = 2,5) given to any procedure in the questionnaire indicating that this experience was extremely negative for mothers.

Timing of breastfeeding following the birth appeared to have little impact on mothers ratings. Thus while mothers who breastfed their infants immediately or within the first hour after birth assigned a very high rating of 10 to their experience, this rating did not drop significantly for mothers who breastfed twelve hours after the birth (Median = 9,5). Only mothers who did not breastfeed at all rated their experience negatively (Median = 5) suggesting that perhaps this decision was not a matter of choice or that alternatively they had received negative feedback about it. Of general interest is the fact that 89 per cent of mothers who had a vaginal delivery were breastfeeding their babies during their hospital stay.

(ii) Caesarean Section

Of mothers who had a caesarean section 94 per cent had their husbands present pre-operatively while 39 per cent had their husbands present during the operation. Both received a very positive median rating of 10 while absence of the husband pre-operatively was experienced very negatively (Median = 1). Mothers who had an epidural caesar rated placement of the infant alongside the mother very positively (Median = 9) as they did mother-infant contact both prior to and after the baby being wrapped (Medians = 9). In contrast to mothers who had a vaginal delivery, immediate lack of

contact with the infant was not rated negatively (Median = 6) possibly because mothers who have a caesarean section have lower expectations in this regard. However, mothers who had a general anaesthetic experienced lack of contact with their infants until twelve hours after their anaesthetic very negatively (Median = 3) indicating this was an unpleasant and difficult experience for them.

With regard to breastfeeding, mothers who had a caesarean section rated their experiences very similarly to mothers who had a vaginal delivery. Once again the timing of breastfeeding appeared to have little impact on the ratings (Range 8-10) with only mothers who were not breastfeeding rating their experience negatively (Median = 5). The breastfeeding rate of 77 per cent although lower than for mothers who had a vaginal delivery indicates that the majority of mothers who had a caesarean section were breastfeeding their babies during their hospital stay.

6.1.3 Hospital Procedures

Of mothers who had a vaginal delivery, 81 per cent had a nurse or nurses present for most of their labour, 16 per cent for approximately half their labour and 3 per cent for a very limited part of their labour. The median ratings assigned to these three time periods, namely 9, 8 and 2 respectively, demonstrate the importance to mothers of having a nurse/midwife present during their labour. Ratings of the presence of the obstetrician during labour followed a similar trend with a rating of 10 being obtained for most of the time, 9 for approximately half the time and 5,5 for almost no time at all. The percentage of obstetricians present for these three time periods were

however very different to the percentage of nurses present, with 23 per cent of women having their obstetrician present most of the time, 29 per cent for approximately half the time and 48 per cent for almost no time at all. Movement of the mother from the labour ward obtained a median rating of 8 and a modal rating of 10 indicating that this procedure was experienced positively by most of the women.

6.2 Obstetricians' Ratings of Mothers' Reactions to Obstetrical Interventions and Psycho-Social Procedures

To avoid repetition of information this section will provide only a brief overview of obstetricians' ratings of mothers' reactions to obstetrical interventions and procedures. More detailed information will be provided in section 6.3 which deals with the comparison between obstetricians' and mothers' ratings.

6.2.1 Obstetrical Interventions

Obstetricians' median and modal ratings for mothers' experiences of obstetrical interventions are shown in Table 3.

From Table 3 it is apparent that on the whole obstetricians viewed mothers' experiences of obstetrical interventions to be negative. This negative view included the antenatal procedures which, with the exception of sonar (Median = 10), were all given ratings in the negative range (Range = 4 - 5,5).

The most negatively perceived medical interventions included the following: manual removal of the placenta (Median = 2); operative removal of the placenta (Median = 2); catheterization of more than 12 hours (Median =

3,5); forceps delivery (Median = 3); and vacuum extraction (Median = 3).

In contrast, the most positivoly perceived medical interventions were generally seen to be those involving some form of pain relief. Thus analgesics given during the first stage obtained a median rating of 6 and *epidural anaesthesia* a median rating of 8. Of interest in this regard was the very low rating given to an absence of local anaesthesia during the second stage (Median = 2) which was obviously perceived by obstetricians as an extremely negative experience for *women.* Other positively perceived interventions included: oral oxytocin (Median = 6); vaginal prostaglandins (Median = 6); foetal heart monitor (Median = 6); and the semi-supported position for delivery (Median = 7).

With regard to caesarean section, obstetricians generally tended to view mothers' experiences of this major intervention as reasonably *positive* with the highest rating being assigned to a planned caesarean section with epidural anaesthesia (Median = 8) and the lowest to an emergency caesarean section with general anaesthetic (Median = 5).

6.2.2 Psycho-Social and Hospital Procedures

In general, obstetricians viewed mothers' reactions to psycho-social procedures to be positive while the *absence* of *these* procedures was viewed as a very negative experience. Thus for mothers who had a vaginal delivery the absence of the husband at labour and delivery was rated as a very negative experience for the women (Medians = 2) as was lack of contact with the infant immediately after birth (Median = 2). Conversely, presence of the husband during labour and

birth were rated as very positive experiences (Medians = 9) as were all those procedures which facilitated contact between mother and *infant after* birth e.g. placement of infant on mother's stomach (Median = 9).

A similar picture emerged with respect to obstetricians' views of mothers' reactions to psycho-*social procedures following* a caesarean section. Thus presence of the husband both pre-operatively and during the operation were rated as extremely positive experiences for women (Medians = 9 and 8 respectively) while absence of the husband was regarded as a negative *experience.* Similarly, procedures facilitating mother-infant contact were seen to be very positive for women e.g. holding of infant both prior to and after wrapping each received ratings of 8, while absence of contact with the infant was viewed as a very negative experience (Median = 2).

With regard to the presence of medical personnel during labour, obstetricians perceived *women as experiencing* the presence of nurses and doctors for most of their labour time as a very positive experience (Medians = 9). Conversely, the presence of nurses and doctors for only a very limited part of labour was viewed as very negative for women (Medians = 1 and 2 respectively).

6.3 Comparison between Mothers' and Obstetricians' Ratings of Obstetrical Interventions and Psycho-Social Procedures

This section focuses on the comparison per intervention/procedure between mothers and obstetricians and notes differences between the two groups. The results of the Median test and Fishers exact probability test for each intervention and

procedure will be presented in a series of tables each accompanied by a graph depicting the general trend of the data. As in the previous sections, the discussion and presentation of these results will be in accordance wth the major headings used in the two questionnaires.

6.3.1 Antenatal Procedures

TABLE 4 : Comparison of frequencies (and percentages) of obstetricians' and mothers' ratings of antenatal procedures.

Procedure	Obstetricians Rating		Mothers Rating		**Significance
	*neg. f (%)	pos. f (%)	neg. f (%)	pos. f (%)	
Sonar	19(41)	27(59)	77(57)	57(43)	n.s.
X-rays	30(68)	14(32)	4(36)	7(64)	n.s.
External cephallic version	32(71)	13(29)	4(57)	3(43)	n.s.
Non-stress test	39(85)	7(15)	39(46)	45(54)	$p < 0,001$
Oxytocin challenge test	31(79)	8(21)	2(15)	11(85)	$p < 0,001$
Amniocentesis	29(63)	17(37)	3(43)	4(57)	n.s.

* *negative* is defined as below the joint median and positive as above the joint median

** determined by Fishers exact probability test, two-tailed, applied to the median test, $p = 0,01$

Table 4 provides a comparison between mothers' and obstetricians' ratings of antenatal procedures. From this table it is evident that mothers and obstetricians differed significantly in their ratings of two antenatal procedures, namely: the non-stress test and

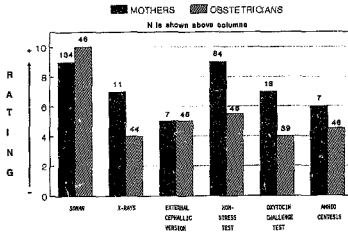


FIGURE 1. MOTHERS AND OBSTETRICIANS MEDIAN RATINGS FOR ANTENATAL PROCEDURES

the oxytocin challenge test. In both instances a significant proportion of mothers experienced the procedures more positively than obstetricians perceived them to.

Although the remaining comparisons were non-significant a general trend was evident in these results in that, with the exception of ultrasound, mothers generally reacted more positively to antenatal procedures than obstetricians perceived them to. This trend is depicted in Figure 1 which provides a comparison of the medians for the two groups with regard to antenatal procedures.

6.3.2 First Stage Interventions

TABLE 5 : *Comparison of frequencies* (and percentages) of mothers' and obstetricians' ratings of first stage interventions.

Procedure	Obstetricians Rating		Mothers Rating		**Significance
	*neg. f (%)	pos. f (%)	neg. f (%)	pos. f (%)	
Half shave	34(79)	9(21)	46(49)	47(51)	$p < 0,01$
Full shave	26(59)	18(41)	6(43)	8(57)	n.s.
Caesar shave	25(58)	18(42)	14(42)	19(58)	n.s.
Enema	39(87)	6(13)	59(57)	45(43)	$p < 0,001$
Analgesics	31(67)	15(33)	29(49)	30(51)	n.s.
Catheterization	38(84)	7(16)	46(53)	40(47)	$p < 0,001$
Dextrose drip	34(74)	12(26)	37(49)	38(51)	$p < 0,01$
Per vaginum examination	28(62)	17(38)	69(61)	45(39)	n.s.
Surgical induction (A.R.O.M.)	28(62)	17(38)	34(49)	36(51)	n.s.
Pharmacological induction					
- intravenous oxytocin	28(62)	17(38)	20(40)	30(60)	n.s.
- oral oxytocin	26(67)	13(33)	0(-)	5(100)	$p < 0,01$
- vaginal prostaglandins	28(67)	14(33)	5(62)	3(38)	n.s.

* negative is defined as below the joint median and positive as above the joint median

** determined by Fishers exact probability test, two-tailed, applied to the median test, $p = 0,01$

Table 5 indicates that the following comparisons between mothers' and obstetricians' ratings were significant: perineal (half) shave, enema, catheterization, dextrose drip and oral oxytocin. In all cases the direction of significance was the same,

with a significant proportion of mothers experiencing these interventions less negatively than obstetricians perceived them to. This trend was continued in the non-significant results and is evident in Figure 2 which provides a summary of the medians and sample numbers for the two groups on first stage interventions. The only exceptions to this trend were vaginal prostaglandins, rated somewhat more negatively by mothers than obstetricians, and per vaginum examinations which obtained the same median rating from mothers and obstetricians.

Thus although mothers generally experienced first stage interventions more negatively than the antenatal procedures their experiences of these interventions were not as negative as obstetricians perceived them to be.

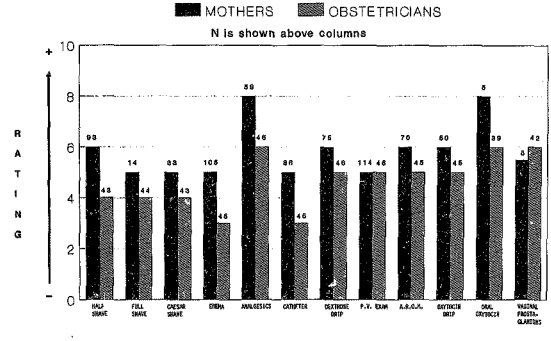


FIGURE 2. MOTHERS AND OBSTETRICIANS MEDIAN RATING FOR FIRST STAGE INTERVENTIONS

6.3.3 Second Stage Interventions

(i) Vaginal Delivery

TABLE 6 : Comparison of frequencies (and percentages) of mothers' and obstetricians' ratings of second stage interventions : vaginal delivery

Intervention	Obstetricians Rating		Mothers Rating		**Significance
	*neg. f (%)	pos. f (%)	neg. f (%)	pos. f (%)	
Maternal position					
- stirrups	33(73)	12(27)	11(33)	22(67)	$p < 0,01$
- leaning back, semi-supported	30(65)	16(35)	33(61)	21(39)	n.s.
- side lying	21(55)	17(45)	1(25)	3(75)	n.s.
- squatting	19(56)	15(44)	0(-)	1(100)	n.s.
Episiotomy	34(74)	12(26)	40(53)	35(47)	n.s.
Forceps	31(67)	15(33)	6(33)	12(67)	n.s.
Vacuum extraction	27(69)	12(31)	0(-)	3(100)	n.s.
Local anaesthetic :					
- epidural	34(76)	11(24)	13(43)	17(57)	$p < 0,01$
- pudendal block	30(67)	15(33)	11(41)	16(59)	n.s.
- no anaesthetic	35(81)	8(19)	9(24)	29(76)	$p < 0,001$
Nitrous oxide	31(72)	12(28)	6(40)	9(60)	n.s.
Foetal monitor	30(65)	16(35)	18(40)	27(60)	n.s.

* negative is defined as below the joint median and positive as above the joint median.

** determined by Fishers exact probability test, two-tailed, applied to the median test, $p = 0,01$

From Table 6 it is evident that mothers and obstetricians differed significantly in their ratings of two second stage interventions, namely stirrups and epidural anaesthesia. These results are in accordance with the general trend and indicate that mothers' experiences of these interventions were more positive than obstetricians perceived them to be.

A further significant result was obtained for mothers' and obstetricians' ratings of no local anaesthesia during the second stage. This result is of interest in that it demonstrates that a significant proportion of mothers reacted positively to the absence of an intervention while obstetricians perceived their reactions to be very negative. Figure 3, which summarizes the two groups median ratings for second stage interventions, shows that the obstetricians median rating of 2 for no local anaesthesia was lower than their median rating for any other medical intervention during the second stage.

In this context, mothers' ratings for side-lying and squatting are also of interest. Although these comparisons were non-significant due to extremely small numbers in the maternal sample, Figure 3 shows that the few maternal ratings obtained for these two procedures were extremely positive. This suggests the possibility that these alternative positions for delivery may be a more positive experience for mothers than obstetricians perceive them to be.

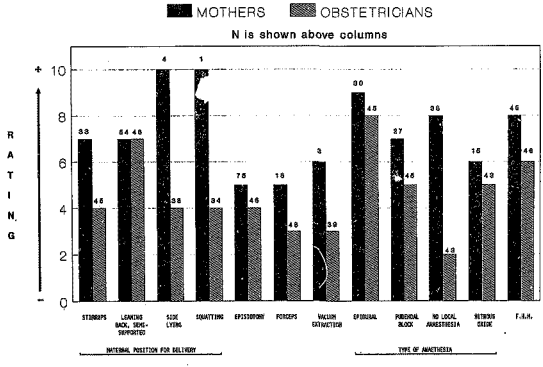


FIGURE 3. MOTHERS AND OBSTETRICIANS MEDIAN RATINGS FOR SECOND STAGE INTERVENTIONS : VAGINAL DELIVERY

(ii) Caesarean Section

TABLE 7 : Comparison of frequencies (and percentages) of mothers' and obstetricians' ratings of second stage interventions : caesarean section

Intervention	Obstetricians Rating		Mothers Rating		**Significance
	*neg. f (%)	pos. f (%)	neg. f (%)	pos. f (%)	
Emergency caesarean section					
- with epidural anaesthetic	28(62)	17(38)	2(22)	7(78)	n.s.
- with general anaesthetic	24(52)	22(48)	7(70)	3(30)	n.s.
Planned caesarean section					
- with epidural anaesthetic	36(78)	10(22)	10(53)	9(47)	n.s.
- with general anaesthetic	24(52)	22(48)	5(45)	6(55)	n.s.
Foetal heart monitor	32(71)	13(29)	6(29)	15(71)	$p < 0,01$
Catheterization					
- less than 12 hours	22(50)	22(50)	12(67)	6(33)	n.s.
- more than 12 hours	36(82)	8(18)	11(35)	20(65)	$p < 0,001$

* negative is defined as below the joint median and positive as above the joint median.

** determined by Fishers exact probability test, two-tailed, applied to the median test, $p = 0,01$

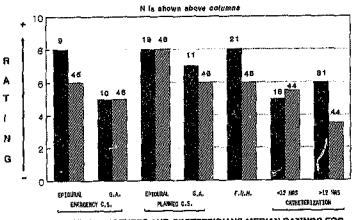


FIGURE 4. MOTHERS AND OBSTETRICIANS MEDIAN RATINGS FOR SECOND STAGE INTERVENTIONS : CAESAREAN SECTION

Table 7 shows that no *significant* differences were found between mothers' and obstetricians' ratings of emergency and planned caesarean sections with either epidural or general anaesthetics. The *similarities* in the two groups mean ratings (see Figure 4) for these procedures suggests a concurrence in mothers reactions to caesarean sections and obstetricians *perceptions of these.*

With regard to the remaining second *stage* interventions, *significant* results were obtained for the foetal heart monitor and catheterization with a duration of more than 12 hours. In both instances mothers experienced these interventions more positively

than obstetricians perceived them to. The high median rating obtained for the foetal heart monitor is in line with the high ratings which mothers generally assigned to those procedures and interventions which can be viewed as performing a preventative function (see antenatal procedures).

6.3.4. Third Stage Interventions

TABLE 8 : Comparison of frequencies (and percentages) of mothers' and obstetricians' ratings of third stage interventions.

Intervention	Obstetricians Rating		Mothers Rating		**Significance
	*neg. f (%)	pos. f (%)	neg. f (%)	pos. f (%)	
Delivery of placenta					
- natural	29(64)	16(36)	34(61)	22(39)	n.s.
- manual	40(87)	6(13)	7(19)	30(81)	$p < 0{,}001$
- operative	31(72)	12(28)	0(-)	1(100)	n.s.
Surturing of episiotomy or tear	31(69)	14(31)	53(58)	39(42)	n.s.

* negative is defined as below the joint median and positive as above the joint median.

** determined by Fishers exact probability test, two-tailed, applied to the median test, $p = 0{,}01$

From Table 8 it is evident that the only significant result was for manual delivery of the placenta. As with many other medical interventions this result

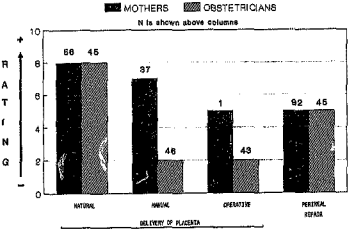


FIGURE 5. MOTHERS AND OBSTETRICIANS MEDIAN RATINGS FOR THIRD STAGE INTERVENTIONS

indicates that a significant proportion of mothers did not experience this intervention negatively whereas a significant proportion of obstetricians perceived their reactions to be extremely negative.

Figure 5 provides a summary of mothers' and obstetricians' median ratings of third stage interventions. From this it is apparent that mothers' reactions to natural removal of the placenta and to perineal repair were very similar to obstetricians perceptions of their reactions. Only one mother experienced operative removal of the placenta and therefore no conclusions can be drawn from this result.

6.3.5 Psycho-Social Procedures

(i) Vaginal Delivery

TABLE 9 : Comparison of frequencies (and percentages) of mothers' and obstetricians' ratings of psycho-social procedures : vaginal delivery.

Procedure	Obstetricians Rating		Mothers Rating		**Significance
	*neg. f (%)	pos. f (%)	neg. f (%)	pos. f (%)	
Husband					
- present during labour	27(60)	18(40)	14(15)	77(85)	$p < 0,001$
- absent during labour	29(67)	14(33)	1(17)	5(83)	n.s.
- present during delivery	30(67)	15(33)	10(12)	75(88)	$p < 0,001$
- absent during delivery	30(68)	14(32)	1(9)	10(91)	$p < 0,01$
Placement of infant					
- mother's stomach	25(54)	21(46)	16(24)	50(76)	$p < 0,01$
- table	32(70)	14(30)	2(25)	6(75)	n.s.
- cot	25(56)	20(44)	2(50)	2(50)	n.s.
- father	38(86)	6(14)	3(27)	8(73)	$p < 0,001$
- emergency medical attention	30(67)	15(33)	2(40)	3(60)	n.s.
Mother-infant contact					
- prior to wrapping	31(67)	15(33)	9(18)	40(82)	$p < 0,001$
- after wrapping	32(71)	13(29)	13(31)	29(69)	$p < 0,001$
- no contact	34(74)	12(26)	2(50)	2(50)	n.s.

* negative is defined as below the joint median and positive as above the joint median.

** determined by Fishers exact probability test, two-tailed, applied to the median test, $p = 0,01$

Table 9 indicates that a number of significant results were obtained in the comparison between mothers' and obstetricians' ratings of psycho-social procedures. In general, these results seem to suggest that mothers' reactions to supportive procedures and procedures which facilitate bonding with the infant are even more positive than obstetricians perceive them to be. Thus a significant proportion of mothers experienced the presence of the husband during labour and delivery even more positively than obstetricians perceived them to. Similarly, placement of the infant on the mothers' stomach, handing of the infant to the father and mother-infant contact both prior to and after wrapping were all rated significantly more positively by mothers than by obstetricians. The only remaining significant result was for absence of the husband during delivery. In this instance mothers rated their experience of this less negatively (Median = 5) than obstetricians did (Median = 2).

The general trend in the results for psycho-social procedures are presented in Figure 6 which provides a summary of the two groups median ratings and sample sizes.

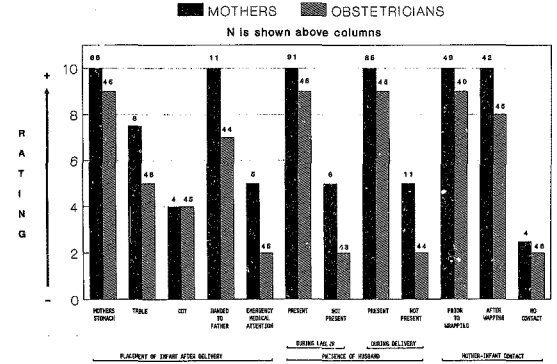


FIGURE 6. MOTHERS AND OBSTETRICIANS MEDIAN RATINGS FOR PSYCHO-SOCIAL PROCEDURES : VAGINAL DELIVERY

(ii) Caesarean Section

TABLE 10 : Comparison of frequencies (and percentages) of mothers' and obstetricians' ratings of psycho-social procedures : caesarean section

Intervention	Obstetricians Rating		Mothers Rating		**Significance
	*neg. f (%)	pos. f (%)	neg. f (%)	pos. f (%)	
Husband					
- present pre-operatively	24(52)	22(48)	7(15)	39(85)	$p < 0,001$
- absent pre-opreatively	32(73)	12(27)	2(67)	1(33)	n.s.
- present during operation	27(63)	16(37)	1(5)	18(95)	$p < 0,001$
- absent during operation	26(60)	17(40)	11(39)	17(61)	n.s.
Infant placement after E.A. ***					
- alongside mother	23(52)	21(48)	6(50)	6(50)	n.s.
- cot	34(79)	9(21)	1(33)	2(67)	n.s.
- father	26(60)	17(40)	1(20)	4(80)	n.s.
- emergency medical attention	35(81)	8(19)	0(-)	6(100)	$p < 0,001$
Mother-infant contact after E.A.					
- prior to wrapping	24(55)	20(45)	0(-)	2(100)	n.s.
- after wrapping	30(68)	14(32)	10(43)	13(57)	n.s.
- no contact	31(70)	13(30)	0(-)	2(100)	n.s.
Timing of mother-infant contact after general anaesthetic					
- 1-12 hours	34(74)	12(26)	11(73)	4(27)	n.s.
- more than 12 hours	26(59)	18(41)	2(50)	2(50)	n.s.

* negative is defined as below the joint median and positive as above the joint median.

** determined by Fishers exact probability test, two-tailed, applied to the median test, p = 0,01

*** Epidural Anaesthetic.

Table 10 indicates that three significant results were obtained in the comparison between mothers' and obstetricians' ratings of psycho-social procedures for caesarean section. Two of these results, namely, presence of the husband pre-operatively and presence of the husband during the operation are in line with those for mothers who had a vaginal delivery and indicate that a significant proportion of mothers who had a caesarean section experienced the presence of the husband even more positively than obstetricians perceived them to. The remaining significant result was for emergency medical attention for the infant following an epidural caesar. This result indicates that mothers who had this experience did not react as negatively to it as obstetricians perceived them to. Figure 7, for example, shows that the mothers median rating for this experience was 5 whereas that of the obstetricians was 2. One possible explanation for this discrepancy is that mothers experienced immediate medical attention for their infant as a reassuring experience rather than as a very negative one.

The general trend of the results obtained for caesarean section can be seen in Figure 7 which provides a summary of the two groups median ratings and sample sizes for psycho-social procedures.

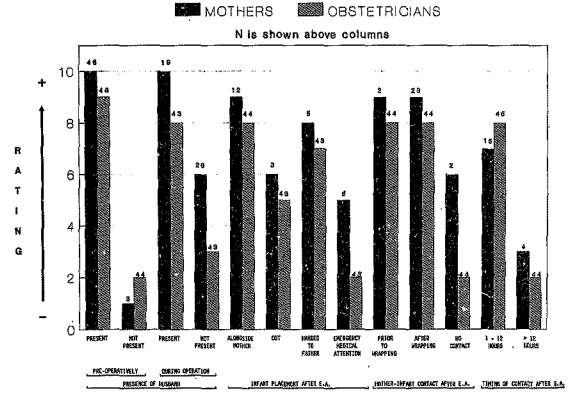


FIGURE 7. MOTHERS AND OBSTETRICIANS MEDIAN RATINGS FOR PSYCH-SOCIAL PROCEDURES : CAESARE/AN SECTION

6.3.6 Hospital Procedures

TABLE 11 : Comparison of frequencies (and percentages) of *mothers'* and obstetricians' median ratings of hospital routines.

Procedure	Obstetricians Rating		Mothers Rating		**Significance
	*neg. f (%)	pos. f (%)	neg. f (%)	pos. f (%)	
Presence of nurses					
- most of the time	25(54)	21(46)	47(60)	32(40)	n.s.
- approx. half the time	34(76)	11(24)	4(25)	12(75)	$p < 0,01$
- almost no time at all	28(64)	16(36)	1(33)	2(67)	n.s.
Presence of obstetrician					
- most of the time	27(61)	17(39)	8(43)	10(57)	n.s.
- approx. half the time	34(76)	11(24)	4(17)	19(83)	$p < 0,001$
- almost no time at all	36(80)	9(20)	11(29)	27(71)	$p < 0,001$
Transfer of mother from labour ward to delivery unit	30(67)	15(33)	37(45)	46(55)	n.s.

* *negative is defined as below the joint median and positive as above the joint median.*

** determined by Fishers exact probability test, two tailed, applied to the *median test*, $p = 0,01$

Table 11 shows that *three significant results* were obtained in the comparison between mothers' and obstetricians' ratings of hospital *procedures*. These results suggest that while mothers experienced the limited presence of nurses during labour very negatively (see Figure 8) their experience of nurses being present for approximately half the time was far more positive than obstetricians perceived it to be. Similarly mothers reacted more positively to the

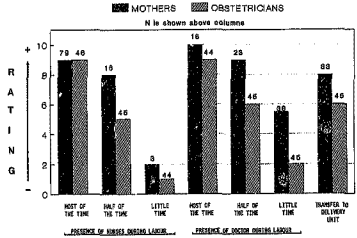


FIGURE 8. MOTHERS AND OBSTETRICIANS MEDIAN RATINGS FOR HOSPITAL PROCEDURES

presence of the obstetrician for approximately half the labour time as well as for a very limited time than obstetricians viewed them to.

This apparent satisfaction on the part of mothers with the fairly limited time their obstetricians spent with them during labour is probably related to expectations. It is rare in the present South African maternity system for an obstetrician to spend a high percentage of a women's labour time with her.

6.4 Subgroup Comparisons of Mothers' Ratings of Obstetrical Interventions and Psycho-Social Procedures

For the purpose of statistical control a comparison per procedure between various subgroups of mothers was conducted. Mothers were sub-divided according to the following variables: parity (primiparae and multiparae); income (high income and low income); age (under thirty and over thirty); and attendance at childbirth preparation classes (attended and did not attend.) The results were analysed by means of the Median test and Fishers exact probability test. No significant differences between these subgroups emerged. However, given the very small sample sizes in many of these subgroups no firm conclusions can be drawn from this analysis.

CHAPTER SEVEN

DISCUSSION AND CONCLUSIONS

Chapter six provided a summary of the results of the data analysis for the present study. The following discussion will :

a) integrate the findings of the previously mentioned results with available research in the area; and

b) explore the general trends evident in the results and possible implications of these.

Whilst reference will be made to most of the interventions and procedures included in the two questionnaires, the main focus will be on those procedures which have received some research attention in terms of their psychological impact and/or for which results were significant in the comparison between mothers' and obstetricians' ratings. The lack of research on obstetricians' perceptions means that most of the references to other research findings will tend to be on women's experiences of the various interventions and procedures.

PART ONE : SPECIFIC FINDINGS AND THEIR IMPLICATIONS

7.1 Antenatal Procedures

The results of the present study indicate that in general mothers responded positively to the antenatal procedures. In particular, procedures such as sonar

and the non-stress test, which provide the mother with feedback regarding the well-being of the foetus without involving a high degree of discomfort, obtained very positive ratings (Medians = 9). In comparison, obstetricians generally rated mothers' reactions to antenatal procedures less favourably, with two of them, namely the non-stress test and the oxytocin challenge test, being rated significantly less positively by obstetricians than by mothers ($p < 0,001$).

Comparisons between the present findings and other research findings are limited since research in the area of antenatal care has been mainly confined to the atmosphere and communication networks in the clinics and to the manner in which the procedures are carried out (Fraser, 1983). Few studies have focused on how women feel about the procedures themselves and none (as far as the researcher is aware) have examined obstetricians' perceptions of women's experiences.

The only antenatal procedures which have received detailed attention in terms of their psychological impact on women are amniocentesis and ultrasound. As noted in Chapter 2.1.1, studies on ultrasound have tended to confirm the generally held assumption that scanning is a positive experience for the mother. Thus Milne and Rich (1983) found mothers to be uniformly positive in their response to scanning, while Reading and Campbell (1982) concluded that scanning is an emotionally rewarding experience for women, particularly when detailed feedback is made available to them. The results of this study are therefore in accordance with these findings, with most mothers rating their experience of scanning extremely positively (Median = 9; Mode = 10).

Research on mothers' experiences of amniocentesis are

less consensual, with responses varying between women and according to when the procedure is carried out. Two studies (Astbury and Walters, 1979; Farrant, 1985) found that while some women's fears are alleviated immediately after the test has been carried out, others found the time spent waiting for the results to be particularly anxiety provoking. Once the results were known, however, anxiety was relieved in most women; although for a small proportion of them it continued for the remainder of the pregnancy.

Whilst the sample of women who had an amniocentesis in the present study was small (7), the results are of interest since these women were rating their experience of the procedure during the early post-partum period. Although the median rating of 6 indicates a fairly positive response overall, the wide range of ratings (3-10) suggests a diversity in women's responses to this procedure even after they have given birth. Further research is needed to establish why some women retain negative feelings about this procedure after birth.

More generally, Farrant (1985) found in her research on women's experiences of prenatal technology, that most women are extremely positive in their attitude towards prenatal screening. Similarly, Evans (1985) found that most mothers in her survey believed that prenatal technology should be available as a routine service to detect foetal abnormality. The results of the present study concur with these findings, suggesting that in general mothers are positive about their experiences of most antenatal procedures, particularly those which involve minimal risks and discomfort and provide them with feedback as to the foetus's wellbeing.

7.2 First and Second Stage Interventions

The results in Chapter 6.1 (Table 3) indicate that in general mothers' reactions to the medical interventions occurring during labour and delivery were less positive than their reactions to the antenatal procedures. Given that many of these interventions involve additional risks, pain and physical discomfort for mothers, these lower ratings are in accordance with expectations.

Of interest, however, is the fact that obstetricians generally rated mothers' experiences of these interventions even more negatively than did mothers. Thus in the comparison (Tables 4, 5 and 6) all of the significant findings were in the same direction, with obstetricians rating mothers experiences of those interventions significantly more negatively than *mothers themselves did.*

While this general trend is evident in the results, it is important to note that with a few exceptions, many of the significant *differences* in *mothers'* and obstetricians' ratings relate to the more minor interventions and not to what can be considered the major interventions. Interventions such as perineal shaves, enemas, catheterization, dextrose drips and the foetal heart monitor were all rated significantly more negatively by obstetricians than by mothers, but there was greater concurrence in mothers' and obstetricians' views with regard to the major interventions (such as caesarean section and instrumental delivery) where the differences in the ratings between the two groups were non-significant.

7.2.1 Preparation for Labour and Delivery

i) Shaving

Maternal ratings for the three different kinds of shaves indicate that mothers who had a perineal shave (Median = 6) were more positive about their experience than mothers who had a perineal and pubic shave (Median = 5) or an umbilicus to pubis shave (Median = 5). In contrast, obstetricians assigned a median rating of 4 to all three types of shaves and therefore did not discriminate between mothers' experiences of these. The only significant result was for the perineal shave which was rated more positively by mothers than by obstetricians ($p < 0,01$).

As previously noted in Chapter [illegible], available research (Burchell, 1964; Romney, 1981) has failed to demonstrate that shaving has any beneficial effects. Moreover, these studies noted that this procedure causes much discomfort, with shaven women complaining of burning and itching of the vulva. In view of these research findings and given that, with the exception of perineal shaves, mothers in this study experienced the procedure fairly negatively, it is suggested that consideration be given to reducing the incidence of this procedure and that where unavoidable the alternative of clipping the perineal hair be used. It is notable that although a number of obstetricians commented on their questionnaires that shaving is no longer considered a necessary medical procedure, the practice is still widespread in Johannesburg maternity hospitals, with 95 per cent of the sample being shaved.

ii) Enemas

As with shaving, the use of enemas was also widespread, 71 per cent of the sample being given one. While obstetricians in this study rated mothers' experiences of this procedure significantly more negatively than mothers did ($p < 0,001$) the median rating of 5 assigned to this procedure by mothers nevertheless indicates that this is not a particularly pleasant experience for them.

For comparative purposes, only one study has examined the need for enemas and mothers' reactions to them. The results of this study (Romney and Gordon, 1981) indicated no significant difference in the infection rate or incidence of faecal contamination between women assigned randomly to enema and non-enema regimes. Moreover, the researchers found that the procedure caused distress to a few women and discomfort to many. While further research is required to confirm these findings, the evidence available to date suggests that this procedure is inflicting unnecessary discomfort on labouring women. It is therefore suggested that efforts be made to reduce the usage of this procedure to when absolutely necessary. Romney and Gordon (1981), for instance, recommend that enemas be used only with women who have not been able to open their bowels in the past twenty-four hours and who have a loaded rectum.

7.2.2. Induction of Labour

In general, mothers' ratings of their experiences of both surgical and pharmacological methods of induction were fairly positive. In particular, the few mothers who received oral oxytocin were very positive about their experience, suggesting that when offered as an

alternative this may be a preferred method of induction by mothers. By way of contrast, obstetricians rated oral oxytocin significantly more negatively ($p < 0,01$), suggesting that they are unaware of mothers' positive reactions to this method of induction.

Comparisons between the present study and other research findings are difficult to make since most studies of mothers' reactions to induction have not examined their relative responses to the different types of induction. One exception is a study by Stewart (1977) which compared women's reactions to amniotomy and intravenous oxytocin. The results of this study indicated that 53 per cent of women found amniotomy uncomfortable and 20 per cent found it painful, compared to 54 per cent who found the setting up of an intravenous drip uncomfortable and 11 per cent who found it painful. Stewart concluded that both *these commonly used methods of* induction may be sources of considerable pain and anxiety to many women.

Whilst the results of the present study do not confirm Stewart's findings in so far as *mothers did not rate* their experiences of amniotomy and intravenous oxytocin negatively (Medians = 6), the very positive rating given to oral oxytocin (Median = 8) suggests the possibility that more extensive use of this method could improve mothers' experiences of induction. Further comparative research is needed on the different methods of induction to evaluate their relative merits both from a psychological and medical point of view.

As noted in Chapter 4, the only study to have compared obstetricians' views of induction with womens' experiences, is Cartwright's study of childbearing and induction. In her study, Cartwright (1979) found that while obstetricians estimated that 36 per cent of women

would opt for an induction if offered a choice prior to their delivery date, only 8 per cent of mothers *said* they would prefer an induction if offered a choice, although this proportion rose to 17 per cent for mothers who had had an induction for their last labour. Cartwright concluded that obstetricians are unaware of the extent of the antipathy towards induction among childbearing women.

With the exception of oral oxytocin, the comparison between mothers' and obstetricians' perceptions of induction in the present study were non-significant and therefore do not provide confirmation of Cartwright's findings. However, the results of the two studies are not directly comparable since Cartwright's comparison *was based on asking* women how they would feel about having an induction at some future birth if offered a choice, whereas the women in the present study rated *their reactions toward* n induction they had already been given and about which they may not have been offered a choice. It seems probable that both the type of question asked and whether *women are offered* a choice or not will have an influence on their perceptions of their experiences of medical interventions and therefore need to be *taken into* account when researching womens' reactions to obstetrical interventions.

7.2.3 Obstetric Anaesthesia and Analgesia

In general, the results of this study indicated that mothers reacted positively towards the various types of analgesics and anaesthetics used during labour and delivery. Similarly, obstetricians tended to perceive mothers' reactions to be positive although their ratings tended to be slightly lower than the mothers' ratings. The only significant difference in the

comparison was for epidural anaesthesia which was rated more positively by mothers than by obstetricians ($p < 0,01$).

While most women in the present study reacted extremely positively to their experience of epidural anaesthesia (Median = 9; Mode = 10) the findings of other studies have been less consensual. Studies by Cartwright (1979), Caseby (1974) and Kirke (1980) all report that women are divided in their response to epidurals, with some women finding the relief an epidural provides them most welcome and others finding the numbness and sudden drop in blood pressure disturbing.

On a more psychological level, further studies have indicated that many women feel ambivalent about their experience of epidurals. Garel and Crost (1982) found that, while the majority of women in their study indicated they were fully satisfied with their epidural, many simultaneously expressed a desire to have their next baby without regional anaesthesia. Similarly Woollett, Lyon and White (1983) noted that while most women were pleased with their experience they all expressed concern about having taken the easy way out. Both these studies used interviews to explore women's reactions to epidural anaesthesia which would allow for greater expression of ambivalent feelings than the self-administered questionnaire used in the present study. Thus while only four of the thirty women who had an epidural in the present study rated their experience negatively it is possible that this was partly a function of the methodology used. Nevertheless, the ratings of most women were extremely high, suggesting that for these women the overriding feeling was a positive one.

The only research to have examined obstetricians' views

of epidural anaesthesia is the aforementioned study by Cartwright (1979). She found that 89 per cent of obstetricians thought that epidurals had made the experience of childbearing more pleasant for women. The results of the present study concur with this finding, most obstetricians perceiving the mothers' experience of epidurals to be very positive (Median = 8; Mode = 8).

7.2.4 Maternal Position for Delivery

The majority of women in this study gave birth either leaning back in a semi-supported position (55 per cent) or lying flat with their legs in stirrups (34 per cent). Both these positions were rated fairly positively by women (Medians = 7), whilst the four women who lay on their side and the one woman who squatted rated their experiences extremely positively (Medians = 10). The only significant result was for the lithotomy position with stirrups which mothers rated more positively than obstetricians did ($p < 0,01$).

The latter finding is somewhat suprising and not in accordance with the generally held viewpoint of critics such as Arms (1977) Jordan (1980) and Rich (1978) that the lithotomy position with the legs in stirrups is an extremely negative experience for most women. Comparisons with research in the area are limited since most studies have focused on the physiological effects of maternal posture in labour and delivery and not on the woman's experience. Mendez-Bauer et al (1975) found that women are more comfortable and have shorter labours if they adopt the upright position in labour but this finding was not confirmed by McManus and Calder (1978) who found that many women, particularly primigravidas, preferred the recumbent position. Further comparative research is required on women's

reactions to the *various positions* for labour and delivery before any firm conclusions can be drawn.

7.2.5 Foetal Heart Monitor

The results of this study indicate that both mothers who had a vaginal delivery and mothers who had a *caesarean section* responded positively to the use of the foetal heart monitor. In contrast, obstetricians were somewhat *less positive* in their ratings of mothers' experiences and in the case of mothers who had a caesarean section significantly less positive ($p < 0,01$).

Available research on womens' reactions to this intervention suggests that while some women complain of *increased physical* discomfort and [illegible] and others are disturbed by variations in [illegible] heart rate or are fearful of *injury to the infant*, almost all women feel that the positive aspects outweigh the disadvantages (Beck, 1980; Jackson et al, 1983; Starkman, 1976). In particular, older women (Beck, 1980) and those with previous foetal loss (Starkman, 1976) tend to have very positive attitudes to monitoring.

Whilst the present study found no significant difference between older *and younger* women in their response to foetal monitoring, the general finding that most women (Median = 8; Mode = 10) are *favourable* in their response to this intervention is in accordance with the above-mentioned research.

No research is available on obstetricians' views of women's *experiences* of the foetal heart monitor and therefore no comparisons in this regard can be made. However, the finding that *obstetricians* were less

positive about mothers' experiences of this intervention is of interest and requires further investigation.

7.2.6 Episiotomy

The relatively low rating assigned to this procedure by mothers indicates that for most of them this was a fairly negative experience (Median = 5) and for a few an extremely negative experience (Modes = 1 and 5). Similarly the low rating assigned to this procedure by obstetricians (Median = 4) indicates that they perceive mothers' experiences to be negative. The comparison between obstetricians' and mothers' ratings of episiotomy found no significant difference.

The 77 per cent intervention rate obtained for this procedure in the present study suggests that the use of episiotomy in Johannesburg maternity hospitals is fairly routine. In Chapter 2.1.3 it was noted that available research findings have failed to justify the widespread use of episiotomy in reducing the incidence of lacerations or pelvic relaxation. On the psycho-social level, the few studies (Buchan and Nicholls, 1980; Kitzinger and Walters, 1991; Reading et al 1982) which have been done have all found that episiotomies are one of the most unpleasant aspects of labour and delivery for women, often resulting in long-term discomfort.

Given these findings, and given that the present study shows that mothers and obstetricians view the experience of episiotomy negatively, it seems there is much to suggest that a more cautious approach should be adopted to the use of this procedure than is currently the case.

7.2.7 Instrumental Deliveries

Mothers rated their experience of vacuum extraction (Median = 6) more positively than they did their experience of forceps delivery (Median = 5). The low incidence of vacuum extraction (3 per cent) indicates this is the less favoured type of instrumental delivery in Johannesburg maternity hospitals and also therefore limits the significance of this finding. Obstetricians viewed mothers' experiences of both interventions equally negatively (Medians = 3) with no significant difference emerging in the comparison with mothers' ratings.

Comparisons with other research findings are extremely limited since there has been almost no research on women's attitudes to instrumental delivery. In the only study to have compared women's experiences of vacuum extraction and forceps deliveries, Garcia et al (1985) found that both staff and mothers identified vacuum extraction deliveries as preferable. Forceps deliveries were associated with greater pain and trauma for mothers. The ratings obtained in the present study reflect a similar preference, although the small maternal sample for vacuum extraction limits the interpretation of this result.

In general a definite need exists for more research in the area of instrumental delivery, both with respect to medical outcome and the psychological impact on women (Chalmers and Richards, 1977; Fraser, 1983). The fairly negative rating assigned to forceps delivery in this study, combined with the Garcia et al (1985) finding that more than 75 per cent of the women wanted a different delivery next time, suggests that many women may well experience instrumental delivery as an unpleasant experience.

7.2.8 Caesarean Section

The results of the present study indicate that mothers who had a caesarean section with epidural anaesthesia were more *positive about their experience* than mothers who had a general anaesthetic. The highest ratings were assigned to both emergency and elective caesarean sections with epidural anaesthesia (Medians = 8) whilst the lowest rating was assigned to an emergency *caesarean section* with a general anaesthetic (Median = 5). Obstetricians ratings' showed a similar trend, with no significant differences emerging in the comparison with mothers' ratings.

A number of studies (Affonso and Stichler, 1978; Jones 1976; Marut and Mercer, 1979) have shown that women undergoing a caesarean birth experience emotional stress with fear for the safety of *themselves and their* infants, as well as feelings of guilt, failure and disappointment. However, much of this research has failed to examine possible differences in women's reactions to the type of caesarean section done (emergency or elective) and *the anaesthetic technique* used (epidural or general). Hausknecht (1978) found that a planned caesarean birth carries far less emotional impact than an emergency caesarean section whilst Milne (1979) has noted a very favourable response among *women who have the operation* with an epidural anaesthetic. Oakley (1983) has observed that many women express a preference for epidural anaesthesia, saying they feel more connected to their babies if they are conscious during the operation. The *results of the present* study are in accordance with these observations and suggest that the emotional impact of caesarean section can be reduced if the operation is planned or, if it is an emergency, an epidural anaesthetic is used when a choice exists. Further research is required to confirm these findings.

7.3 Third Stage Interventions

7.3.1 Perineal Repair

The results of the present study indicate that most women experienced suturing of their episiotomy or tear fairly negatively (Median = 5; Mode = 5). Similarly, obstetricians viewed mothers' experiences of this procedure to be fairly negative (Median = 5; Mode = 5) with no significant difference between their ratings.

The only research to have examined women's reactions to suturing is a study by Kitzinger and Walters' (1981). Their results indicated that whereas 40 per cent of women found suturing painless, 37 per cent found it 'just bearable' and 23 per cent found it 'painful' or 'very painful'. House (1981) observes that the pain and discomfort of suturing can be reduced if the repair is done immediately by a birth attendant with expertise in the area. There is also evidence to suggest that the type of material used to repair an episiotomy or tear influences the degree of post-partum discomfort sustained. Buchan and Nicholls (1980), for example, found that 'dexon' as opposed to catgut or silk inflicts less discomfort up to five days post partum.

The results of the present study are essentially in accordance with Kitzinger and Walters' findings, suggesting that many women find suturing of their episiotomy or tear a fairly negative and unpleasant experience. Further research is needed on women's experiences of perineal repair as well as on the medical conditions and techniques used which reduce or increase the women's discomfort when the repair is being done.

7.4 Psycho-Social Procedures

7.4.1 Presence of the Husband

The results of the present study indicate that mothers were uniformly positive about their experience of having their husbands present, both during labour and delivery for mothers who had a vaginal delivery (Medians = 10; Modes = 10; Range : 6-10), and pre-operatively and during the operation for mothers who had a caesarean section (Medians = 10; Modes = 10; Range : 6-10). This finding is in agreement with a number of studies (Henneborn and Cogan, 1975, Tanzer and Block, 1976) and consumer reports (Kitzinger, 1975; Oakley, 1980) all of which found that most mothers appreciated the opportunity for the husband to be present and that the more stages the husband was present for, the higher the rate of satisfaction.

Mothers whose husbands where absent were more diverse in their reactions to the experience, although in general their ratings tended to be more negative. Thus most mothers whose husbands were absent during labour and delivery were fairly negative about their experience (Medians = 5; Modes = 5; Range : 1-10) while those who had a caesarean section tended to be very negative about the absence of their husbands pre-operatively (Median = 1; Mode = 1; Range : 1-8) but more diverse in their response to the absence of their husbands during the operation (Median = 6; Mode = 1; Range : 1-10). The latter finding may reflect the fact that a proportion of these women had a general anaesthetic and therefore did not expect their husbands to be present. The overall findings relating to absence of the husband are more difficult to interpret since it is unknown whether the husband's absence was due to hospital policy, the mother's choice or some

other circumstance.

Obstetrician's ratings of the husband's presence and absence followed a similar trend to mothers' ratings although obstetricians consistently underestimated the extent to which mothers experienced the presence of the husband positively. These results suggest that while most of the obstetricians appear to be aware of the importance of the emotional support that is provided by the husband's presence they are perhaps not fully aware of the extent to which this is a satisfying experience for the mother. No other studies are available for comparative purposes although a study by Shu (1973) did find a great deal of variation in obstetricians' views toward the policy of allowing the husband to be *present*.

7.4.2. Early Mother-Infant Contact

The results of the present study indicated that all those procedures which facilitate early contact between mother and infant were experienced very positively by mothers while lack of contact was generally experienced negatively. Obstetricians' perceptions were similar to those of the mothers in this regard, although once again they tended to underestimate the extent to which these procedures were experienced positively by mothers. This applied particularly to mothers who had a vaginal delivery who, for instance, experienced placement of the infant on their stomach and holding of the infant both prior to and after wrapping significantly more positively than obstetricians perceived them to (see Table 8).

In Chapter 2.2.3 it was noted that the importance of a "sensitive period" during which bonding between mother and infant is meant to occur has not been adequately

demonstrated. Nevertheless a number of studies (e.g. Campbell and Taylor, 1980; de Chateau et al, 1977) have *shown that early contact* has benefits in promoting breastfeeding and affectionate behaviour in the mother, although the results can be explained in terms of physiological advantage and/or increased familiarity, rather than to a particular sensitive period.

Given that these beneficial effects have been demonstrated, and that mothers in this study were extremely positive about all those procedures which facilitate this contact with their infants, it would seem that these practices should be actively encouraged and promoted. For even if no short or long term gains for these practices had been noted, the fact that most mothers (and many fathers) seem to want close contact with their infants after birth should be *sufficient* reason in itself to avoid separation unless absolutely necessary.

7.4.3 Presence of Medical Personnel

There is a paucity of research on how mothers experience the presence of medical personnel during labour. However, as noted in Chapter 2.2.2 *observations by Haire* (1978) and O'Driscoll (1975) suggest that the presence of a midwife or trained nurse during labour provides the mother with emotional and practical support and may also increase her tolerance for discomfort. Moreover it is generally recognised that leaving a woman alone for long periods during labour can sometimes precipitate a breakdown in morale (Morris, 1983). Cartwright (1979) for example, found that the 7 per cent of mothers in her study who were left alone in labour and experienced difficulty contacting a doctor or nurse when they needed one, became very panicky and anxious.

The results of the present study tend to confirm these observations, in that the longer the time period nurses and obstetricians were present during a mother's labour the more positive the experience for the mother. While mothers did not discriminate sharply between the presence of nurses or obstetricians for most of their labour time (Medians = 9 and 10 respectively) as opposed to half their labour time (Medians = 8 and 9 respectively) the three mothers who were left alone for most of their labour time by nurses rated their experience extremely negatively (Median = 2) while the 38 mothers left alone for most of their labour time by their obstetricians were fairly negative about their experience (Median = 5,5).

Obstetricians' perceptions of mothers' experiences of the presence of medical personnel followed a similar trend although the presence of nurses and the obstetrician for half the labour time as well as the presence of the obstetrician for almost no time at all were rated significantly more negatively by obstetricians than by mothers. Certainly the obstetricians in this study seem to be very aware of the potentially negative effects on the mother of being left unattended by medical personnel during labour. Nevertheless many of them commented on their questionnaires that it is rare for the obstetrician to spend a high percentage of a woman's labour time with her. In practice, therefore, it is the nurses or midwives who fulfill this function in Johannesburg maternity hospitals.

PART TWO : GENERAL TRENDS IN THE RESEARCH FINDINGS

The preceding discussion of the research findings indicated several general trends with regard to mothers' reactions to obstetrical interventions and psycho-social procedures and obstetrician's perceptions of these. Those trends can be summarized as follows:

(i) Mothers were generally very positive in their reactions to pre-natal screening procedures and the monitoring techniques used in labour. In contrast, obstetricians generally underestimated the extent to which mothers experienced these procedures positively.

(ii) Mothers were generally less positive in their reactions to the medical interventions *occurring during* labour and delivery than they were toward the pre-natal screening procedures and monitoring technologies. Nevertheless, they once again tended to be more positive about their experiences than obstetricians perceived them to be, particularly with regard to the less major medical interventions.

(iii) Mothers tended to be both more positive in their reactions to the psycho-social procedures and more negative in their reactions to the absence of these procedures than they were toward many of the medical interventions. While obstetricians' perceptions of mothers' reactions to the psycho-social procedures followed a similar trend, they generally tended to underestimate the extent to which mothers experienced these procedures positively.

7.5 Implications of the General Trends in Women's Reactions

7.5.1 Theoretical Issues

The findings of the present study, as they relate to women's reactions, suggest that while women seem to *very much* welcome and appreciate attempts to humanise the birth process, they simultaneously seem to be predominantly *positive about* the medical technology used during pregnancy and labour, particularly the monitoring and pre-natal screening *procedures*. *These* findings run counter to the views expressed by many feminist and lay publications which, as noted previously, have generally assumed that most women do not want technological intervention and that more *natural childbirth* techniques should be promoted. They furthermore fail to support the findings of consumer groups *such as the NCT and* h_MS, whose surveys have generally reported that their members feel very negatively about the increased use of medical interventions, particularly inductions and epidurals (e.g. Beels, 1978; Kitzinger, 1975; MacIntyre, 1977).

One possible reason for this discrepancy in the *findings is* that these consumer groups have generally relied on the responses of their own members for their surveys. While the *responses of* such a self-selected group are obviously valid for that group, they might not be representative of the *attitudes of mothers* in general. Several relatively recent studies (Evans, 1985; Hartman et al, 1979; Woollett et al, 1983) which have attempted to tap other women's attitudes towards medical technology suggest that this may in fact be the *case*. All three of these studies, based on random samples, have found women to have a more positive attitude towards *the medical technology* encountered in

pregnancy and childbirth than was anticipated.

Evans (1985), for example, in interviews of 200 British women, found that most of them expressed a desire for an increase in the use of technology, seeing it as a basic right of pregnant and labouring women. Similarly Woollett et al (1983), in a study of fifty working class East London women, found women to be very positive in their reactions to medical interventions, particularly epidurals and inductions. Finally, a study by Hartman et al (1979) on 94 women in the Denver Metropolitan area found that most mothers were moderately or highly satisfied with their labour, delivery room and post-partum experiences and that less than a quarter of them were bothered by their experiences of the medical and surgical procedures they underwent.

Thus, while the overall findings of the present study have failed to confirm the views expressed by many feminist and lay publications, as well as the findings of a number of consumer surveys, they are in accordance with the findings of the above-mentioned studies, all of which were conducted on samples of women not necessarily committed to natural childbirth or the feminist viewpoint. Evans, herself a feminist, comments that the attitudes of these women have not been adequately taken into account by the Women's Liberation Movement or by many of the parental lobby groups. She comments further that the women in her study seemed far more disturbed by the social relations within which the technology is organised than by its use per se. This observation is supported by the finding in this study that women reacted more strongly to the psycho-social procedures than they did to the medical interventions they experienced. Certainly, the general trend in the results for psycho-social

procedures suggests that efforts to humanise birth are appreciated and welcomed by women.

Despite the fact that mothers seem to very much welcome efforts to humanise birth, the question arises as to why they have simultaneously remained positive in their response to much of the medical technology used. For as Eichholz (1980) points out, present day maternity services do, to an increasing extent, offer a choice to women. Yet, in large numbers, women continue to *choose the neonatal* facilities with the most technological support. As Wertz and Wertz (1977) comment:

> "Women are *largely eager and passive consumers of* medicine, depending upon doctors, drugs and hospitals to produce health for themselves and their children rather than depending on themselves and on the innate strength of natural processes".
>
> (Wertz and Wertz, 1977, p. 235-236)

It thus seems that despite the hypothesized clash between medical and maternal perspectives of reproduction, most women acquiesce in the view of birth as a potential disease. Wertz and Wertz believe this to be due to the medicalisation of western societies as a whole which has conditioned women to trust a medicated, hospitalised birth rather than themselves and natural processes. They point out that while in the 17th and 18th centuries there was much less physiological knowledge about the birth process, most people, especially women, had more actual experience of *the event, having witnessed* other women's labours and deliveries. In contrast, women today, take childbirth classes, tour hospitals and read books in order to gain some personal experience for their first pregnancy.

Studies (e.g. Zax, Sameroff and Farnum, 1975) have shown that while women who have had childbirth education have more positive feelings about birth than women without such an education they are nevertheless no less anxious. Much of this anxiety and the resultant willingness among women to become passively dependent upon medicine can be seen to be the result of the removal of birth from direct human experience.

7.5.2 Methodological and Research Issues

While the above discussion has examined some of the most likely reasons for the findings of the present study, consideration needs to be given to research and methodological issues which may have contributed to these findings. Although it is probable that the views of feminists and members of consumer organisations are unrepresentative of the views of women not committed to their ideals, cognisance needs to be taken of research studies such as Cartwright's (1979) which, based on a random sample of 2000 women, did find the majority of women to be negative in their views of induction. The remainder of this discussion on women's reactions to obstetrical interventions, will focus on research and methodological issues which could account for the discrepancies in the findings of the various research studies in the area.

i) Changes in Responses over Time

The possibility exists that women's reactions to their experiences of medical interventions may change with the passage of time. Research into life event ratings, for example, has found that the more recently an event has been experienced, the lower the seriousness rating assigned to it (Masuda and Holmes, 1978; Theorell, 1974). Similarly MacIntyre and

Jandial (1979) have suggested that women's attitudes towards their birth experiences may become reorganised after a lapse of time.

To explore this hypothesis, Woollett et al (1983) assessed women's reactions to medical intervention on three separate occasions, i.e. in hospital during labour, shortly after delivery and at home four to six weeks afterwards. While their overall findings indicated that women in their study viewed medical intervention positively, they did find that the timing of the interviews produced some changes, with women interviewed four to six weeks later being somewhat more critical (48% to 66%) of medical procedures and less positive about inductions (100% to 85%) and epidurals (88% to 70%).

Cartwright's (1979) finding, that women were predominantly negative in their attitude towards induction, was based on interviews conducted three to five months after delivery, whereas the findings of the present study were based on ratings obtained during the early post-partum period in hospital. The suggestion that mothers' attitudes towards their experiences become more critical over time may partially account for the discrepancy in findings. To obtain a comprehensive view of women's reactions to medical interventions, future research will therefore have to focus on both the immediate and the longer term view.

ii) *The Research Setting*

The data for the present study was collected in the hospital setting, whereas in some of the studies (e.g. Cartwright, 1979; Kitzinger, 1975) the data was obtained from women after they had left the hospital.

Research (e.g. Nehring and Geach, 1973) aimed at evaluating nursing care has found patients in hospital reluctant to make negative or complaining statements due to a fear of reprisal from the nursing staff. While the women in the present study were assured of anonymity and confidentiality, the researcher was required to wear a white laboratory coat which may have led some women to associate the researcher with the medical personnel and thereby exert some influence on their ratings of medical interventions. Nevertheless, the results of the aforementioned studies by Evans (1985) and Hartman et al (1979) which were based on data collected in the home setting, suggests that the research setting is probably not a major factor in accounting for the discrepancies in research findings.

iii) Interviews versus Questionnaires

It has been suggested that the research tool used will influence patients' evaluation of their nursing or medical care (Nehring and Geach, 1973). A study by Moore and Cooke-Hubbard (1975), however, which explored women's attitudes to pre-natal care by means of a questionnaire and an interview, found no significant differences in negative response rates to justify using one method over another.

Similarly, an evaluation by Chalmers (1979) on methods used to obtain life event data, found that both the interview and questionnaire method yielded similar results with respect to life event seriousness ratings and the reporting of events experienced by subjects.

Although, as noted earlier in the discussion, it is possible that the interview method may allow for greater expression of ambivalent feelings, it would seem that the method used does not greatly influence

the woman's overall evaluation of medical intervention. This view is supported by the fact that Evans (1985), who used an interview technique, and Hartman et al (1979), who used a self-administered questionnaire, obtained similar results in terms of women's evaluations of medical technology.

iv) The Question Asked

While the method used may not yield different results, obviously the type of question asked will have an influence on the nature of the data obtained. Fraser (1983) points out that the questions used in many questionnaires are often too general, as for example when a woman is asked if she was pleased to have had a particular procedure. The response elicited will be ambiguous if the woman believes the procedure was necessary for her own wellbeing or that of her child. Riley (1977) comments that it would be more relevant to ask women their feelings about a repetition of the same treatment, where the treatment is a non-essential procedure or one which could be made less unpleasant.

In Cartwright's study, women who had had an induction were asked if they would choose to have another one if they had another baby. In contrast, the present study only explored women's reactions to inductions they had already been given. It is possible that a more negative response would have been obtained if they had been asked how they would feel about another induction at a future birth.

In conclusion, the discussion of research and methodological issues suggests that a number of factors could influence the results obtained in research on women's reactions to medical interventions. Greater consideration needs to be given to these factors in

future research programmes before more definitive conclusions can be drawn regarding the views and reactions of women to medical technology.

7.6 Implications of the General Trends in Obstetricians' Perceptions

The general trends in the findings of the present study indicate that obstetricians tended to perceive mothers' experiences of the medical interventions less positively than mothers themselves did. Similarly, although to a lesser degree, they tended to underestimate the extent to which mothers experienced the psycho-social procedures positively.

In the literature review it was noted that several authors (Graham and Oakley, 1981; Comaroff, 1977) in the field have suggested that differences exist in maternal and medical perspectives of reproduction. From this it was surmised that possible differences may exist between mothers' reactions to medical interventions and obstetricians' perceptions of these. The only research to have explored this issue to a limited extent was that of Cartwright (1979) whose findings suggested that obstetricians may have a tendency to overestimate the extent to which inductions, and to lesser extent epidurals, are experienced positively by women. The findings of the present study are not in accordance with Cartwright's. However, for reasons noted earlier, the two studies are not strictly comparable due to differences in methodology as well as the fact that Cartwright focussed on obstetricians' perceptions of only two medical interventions. Further research is required in the area in order to confirm or refute the findings of the present study.

Four possible reasons can be put forward to explain the differences observed in the present study between mothers' reactions to medical interventions and obstetricians' perceptions of these:

i) While a reasonable response rate (50 per cent) was obtained in the postal survey of obstetricians, the possibility of bias exists. Given that obstetricians are a relatively homogeneous group in terms of education and income, the most likely direction of this bias would have been toward those obstetricians who are more interested in mothers' experiences of medical intervention. It is possible that these more patient-centred obstetricians may have had a greater tendency than non-respondents to overestimate the extent to which women experience medical interventions negatively.

ii) Against the background of the controversy surrounding the use of obsterrical interventions, it is possible tht there was a tendency for obstetricians to provide what they regarded as socially desirable responses. Chalmers (1978) comments that the debate about obstetric practice has highlighted the fact that obstetricians are more vulnerable to criticism than their colleagues in other branches of medicine, due to pregnancy being an event of considerable emotional and cultural significance. Since all self-report measures are susceptible to faking (Anastasi, 1982), it is possible that obstetricians' responses were influenced by their need for social approval. If this was the case, it is interesting to note that they failed to record the full extent of women's positive reactions to the psycho-social procedures.

iii) As discussed in Section 7.5.2 it may be that the ratings obtained from the women understated their negativity about the medical interventions. Of interest though, is the fact their ratings did not appear to understate their negativity (or their positivity) about the presence or absence of the psycho-social procedures. One explanation could be that the women may have felt freer to express the full range of their feelings towards non-medical procedures about which they may believe they should have some choice. In contrast, they may have regarded many of the medical interventions as essential to their well-being or that of the baby's and therefore felt more ambivalent about expressing any negativity about them.

iv) Finally, the ratings given by both the women and the obstetricians could be an accurate reflection of their experiences and perceptions.

If the latter is the case, the question remains as to why obstetricians should have a more negative view of women's experiences of obstetrical interventions than women themselves do. Parfitt (1977) suggests that many obstetricians (most of whom are men) regard labour and childbirth not only as a process with pathological potential, but as an ordeal from which women need to be rescued. From this perspective it is possible that, while obstetricians regard women's experiences of medical intervention to be fairly negative, they may well regard such intervention to be both necessary and less negative for women than the absence of intervention.

This viewpoint is lent some support by the high intervention rates obtained for many of the medical

interventions included in this study. Further support comes from the finding that the less medically oriented procedures of squatting and side-lying were perceived by obstetricians to be more negative experiences for women than many of the conventional medical interventions. The same trend was evidenced by the very low rating which obstetricians assigned to the absence of perineal anaesthesia in the second stage.

Further research is required to confirm these findings. However, in combination they suggest that, despite their negative perceptions of women's experiences of medical interventions, many obstetricians probably do regard pregnancy and childbirth as potentially pathological processes which require close medical management and frequent intervention. Furthermore, although they appear to be increasingly aware of the importance of the psycho-social dimension of childbirth, this may not necessarily be linked to an increasing acceptance of alternative more natural approaches to childbirth.

7.7 CONCLUSIONS

The preceding discussion has highlighted the need for further research on women's experiences of obstetrical interventions and obstetricians' perceptions of these. While the findings of the present study suggest that many women may well have a more positive reaction to medical interventions than has previously been suggested, further research is required to clarify the reasons for these findings. Similarly, the finding that obstetricians are more negative in their perceptions of women's experiences than women themselves are, requires further exploration. While suggestions have been put forward to explain these findings, future research needs to take into account

the various research and methodological issues raised in the preceding discussion before more definitive conclusions can be reached.

With regard to the psycho-social dimension, the findings of the present study suggest that women are very positive about all those procedures which provide them with greater emotional support and contact with their infants. The relative importance of these procedures was evident in the fact that their absence was frequently rated more negatively by women than many of the major medical interventions. This finding is in line with Evans' (1985) observation that women seem more disturbed and affected by the social and psychological context within which their medical care is organised than by the use of medical intervention per se. Of interest therefore, was the further finding in the present study that while obstetricians were aware of the importance of the psycho-social procedures they had a tendency to underestimate the full extent of their importance to women.

The present study did not examine mothers' experiences or obstetricians' perceptions of alternative birth practices, such as the Leboyer method, the Lamaze method and more natural home birth methods. However, there was limited evidence to suggest that obstetricians may perceive less medically oriented births to be more negative experiences for women than routine hospital births. Given that the few women who experienced less medically oriented procedures were very positive about their experiences, further research is required to explore obstetricians' perceptions of alternative birth practices. For if, as the present study suggests, obstetricians do regard these alternatives as negative experiences for women, this may well influence the extent to which women are

granted the opportunity to experience these alternatives in the future.

A number of researchers (e.g. Hartman et al, 1979; Riley, 1977) have expressed the view that mothers' preferences for the type of maternity care they are to receive can only be truly established when they have been afforded the opportunity to compare and contrast a wider range of birth experiences. Hartman et al (1979) believe that the high satisfaction levels obtained from women in their study may in part be an artifact of the limited alternatives currently available to them in standard hospital births. This view is offered some support by research on the place of confinement where it has been found that women who have had the opportunity to experience both hospital and home confinements express a distinct preference for the latter (Cartwright, 1979; Goldthorpe and Richman, 1974). Future research needs to incorporate the views of women who have had the opportunity to experience the full range of birth experiences - from homebirth to hospital birth - in order to obtain a comprehensive view of women's reactions to current obstetrical care.

Finally, the fact that the findings of the present study did not confirm the views or research findings of various feminist and consumer organisations in itself highlights an important point; namely that childbearing women do not form a homogeneous group. Not all women have the same desires, expectations and needs. While some are mentally and physically constituted to find giving birth unaided a challenge to be met with gratification, others do find labour more painful than they are prepared to bear. What seems to be most needed is a move towards wider options and greater freedom of choice to allow women access to the type of maternity care most suited to their individual needs.

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Appendix 1 Consent Form

This research study is being carried out under the auspices of the School of Psychology, University of the Witwatersrand. The aim of the study is to find out more about the experiences of women during pregnancy and childbirth. It is hoped that this research will lead to additional ways of helping women during this important time of life. Should you agree to participate in this research, you could be of assistance to many other mothers in the future.

If you agree to help with this study, you will be asked to complete two questionnaires. These questionnaires will remain anonymous and your answers to them will be kept in the strictest confidence. Under no circumstances will any individual form be examined for any purposes other than this research.

If you would be so kind as to help with this research, please sign below. Thank you.

SIGNATURE ..... DATE .....

WITNESSES

1. .....

2. .....

Appendix 2 Biographical Questionnaire : Maternal Sample

CONFIDENTIAL

Thank you for agreeing to take part in this study. Will you please answer the following questionnaire as accurately as possible. Read every question carefully and tick or fill in blank spaces where applicable.

1. How old are you? _____

2. What is your nationality?

South African	English	Other (Specify)

3. What is your marital status?

married	divorced	separated	widowed	remarried

4. Did you work before having the baby?

YES	NO

If YES, what was your occupation? _____

and, when did you stop work? _____

5. What is your highest attained level of education?

Std. 8	Matric	University Degree	Technical (College)	Other (Specify)

(continued)

Appendix 2 (continued)

6. To what religion do you belong?

Catholic	Protestant	Jewish	Other (specify)

7. What is your husband's present occupation?

_____

8. Please tick which group your family's total income falls into :

(i) Less than R10 000 per annum ☐

(ii) Between R10 001 and R20 000 per annum ☐

(iii) Between R20 001 and R30 000 per annum ☐

(iv) Between R30 001 and R40 000 per annum ☐

(v) Between R40 001 and R50 000 per annum ☐

(vi) More than R50 001 per annum ☐

(continued)

Appendix 2 (continued)

9. What sex is your baby?

Boy	Girl

10. Did you plan this baby?

YES	NO

11. Was this baby your first, second or later baby?

First	Second	Third	Fourth	Fifth	Other (Specify)

12. Have you ever had a stillbirth or miscarriage?

YES	NO

13. Did you attend childbirth preparation classes?

YES	NO

14. How well prepared do you think you were for childbirth?

Well prepared	Not well prepared

Thank you for your co-operation - it is much appreciated. Please continue with the next questionnaire.

Appendix 3 Mothers' Reactions to Medical Interventions : Maternal Questionnaire

CONFIDENTIAL

This questionnaire consists of a list of questions about your medical experiences during pregnancy and childbirth. The majority of these questions consist of two parts. Part a. of each question asks whether or not you had a particular medical intervention or experience. If your answer to this question is "no" you merely move onto the next question. If your answer to this question is "yes" you are then asked to rate your feelings about the experience or intervention. Please note that on this rating scale, 1 means an extremely negative experience and 10 means an extremely positive experience. In the example below, the rating of 7 implies that the scan or sonar was a fairly positive experience

Example

a. Did you have an ultrasound test (i.e. sonar or scan) during your pregnancy?

YES	NO

b. If yes, rate your experience of this from 1 to 10 [7]

All of the questions will ask you to rate your feelings about a particular experience along a positive - negative continuum. Note that by a positive experience is meant those experiences which made you feel pleasant and which you found easy to cope with. By a negative experience is meant those experiences which were unpleasant and difficult to cope with.

PLEASE NOTE

For those mothers for whom this is a second or later pregnancy, you are only required to rate your experiences from your most recent pregnancy/birth.

(continued)

Appendix 3 (continued)

Please answer the questions as frankly and honestly *as possible* and ...re that you answer *all the questions*. There are no right or wrong answers. *Your own* experiences are what is needed. Remember that your answers are strictly confidential and will not be divulged to anyone.

REMINDER : 1 = *extremely negative experience*
10 = *extremely positive experience*

A. ANTE-NATAL PROCEDURES

1. a. Did you have an ultrasound test (i.e. sonar or scan) during your pregnancy? | YES | NO |

b. If YES, rate your experience of *this* from 1 to 10 (Note : 1 = negative, 10 = positive) ☐

2. a. Were you required to have any X-rays during your pregnancy? | YES | NO |

b. If YES, rate your experience of this from 1 to 10 ☐

3. a. Did the doctor try to change your baby's position during pregnancy? | YES | NO |

b. If YES, rate your experience of this from 1 to 10 ☐

(continued)

Appendix 3 (continued)

4. a. Were you given a "non-stress" test during pregnancy? In other words, was the foetal heart rate recorded towards the end of your pregnancy to check on your baby's well-being? YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

5. a. Were you given a "stress" test or "oxytocin challenge test" towards the end of your pregnancy? In other words, was the foetal heart rate recorded following the setting up of an oxytocin drip? YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

6. a. Were you given an amniocentesis during pregnancy? YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

(continued)

Appendix 3 (continued)

REMINDER : 1 = extremely negative experience
10 = extremely positive experience

B. LABOUR : FIRST STAGE INTERVENTIONS

7. Shaving of hair

a. Which one of the following kinds of shaves did you have? :

(Place tick in appropriate box)

(i) A half shave (i.e. around the vaginal area only) ☐

(ii) A full shave (i.e. around the vaginal and pubic areas) ☐

(iii) A 'caesar' shave ☐

b. Please rate your experience of the particular kind of 'shave' you had from 1 to 10 ☐

8. a. Were you given an enema? | YES | NO |

b. If YES, rate your experience of this from 1 to 10 ☐

(continued)

Appendix 3 (continued)

9. a. Were you given drugs e.g. pethidene or an injection to relieve pain during labour? | YES | NO |

b. If YES, rate your experience of this from 1 to 10 [ ]

10. a. Were you given assistance (i.e. catheterized) to help you pass water? | YES | NO |

b. If YES, rate your experience of this from 1 to 10 [ ]

11. a. Were you given a sugar drip for energy? | YES | NO |

b. If YES, rate your experience of this from 1 to 10 [ ]

12. a. Did you have an internal examination (i.e. a per vaginum examination) during labour contractions? | YES | NO |

b. If YES, rate your experience of this from 1 to 10 [ ]

(continued)

Appendix 3 (continued)

REMINDER : 1 = extremely negative experience
10 = extremely positive experience

The following section applies only to women who had a vaginal delivery or an emergency caesarean section following a trial of labour. If you had a planned caesarean section (i.e. you did not experience any part of labour) please leave out the following section and proceed to Question 34 on p.13 under the heading "CAESAREAN SECTION".

INDUCTION OF LABOUR

13. a. Did the doctor break your waters? YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

14. a. Were you given a drip to start labour. YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

15. a. Were you given pills to make labour start? YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

16. a. Were you administered vaginal suppositories to make labour start? YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

(continued)

Appendix 3 (continued)

HOSPITAL PROCEDURES

17. a. For what proportion of labour were the nurses with you?
(Place tick in appropriate box)

(i) Most of the time ☐

(ii) Approximately half of the time ☐

(iii) Almost no time at all ☐

b. Please rate your particular experience from 1 to 10 ☐

18. a. For what proportion of labour was your doctor with you?
(Place tick in appropriate box)

(i) Most of the time ☐

(ii) Approximately half of the time ☐

(iii) Almost no time at all ☐

b. Please rate your particular experience from 1 to 10 ☐

19. a. Were you moved from a labour ward to a delivery ward just before your baby was born? YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

(continued)

Appendix 3 (continued)

REMINDER : 1 = extremely negative experience
10 = extremely positive experience

The following section applies only to women who had a vaginal delivery. If you had an emergency caesarean section please leave out the following section and proceed to Question 34 on p.13 under the heading "CAESAREAN SECTION".

C. SECOND STAGE INTERVENTIONS

VAGINAL DELIVERY

20. a. In what position were you placed for delivery? (Place tick in appropriate box)

(i) on your back with your legs in stirrups ☐

(ii) on your back in a semi-supported position ☐

(iii) on your side ☐

(iv) squatting ☐

(v) other (please specify) ..... ☐

b. Please rate your particular experience from 1 to 10 ☐

21. a. Did you have an episiotomy (i.e. a cut to your perineum)?

YES	NO

b. If YES, rate your experience of this from 1 to 10 ☐

(continued)

Appendix 3 (continued)

22. a. Did you have a forceps delivery? YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

23. a. Did the doctor apply a cap to the baby's head to help delivery (i.e. a vacuum extraction)? YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

24. a. Which one of the following kinds of vaginal deliveries did you have? (Place tick in appropriate box)

(i) A vaginal delivery with an epidural anaesthetic (i.e. an injection in the spine) ☐

(ii) A vaginal delivery with a local anaesthetic in the perineal/vaginal area ☐

(iii) A vaginal delivery without an epidural anaesthetic or local anaesthetic ☐

b. Please rate your experience of the particular kind of delivery which you had from 1 to 10 ☐

25. a. Were you given gas to relieve pain at delivery? YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

(continued)

Appendix 3 (continued)

26. a. Did the doctor use a foetal heart monitor to measure your baby's heart rate? | YES | NO |

b. If YES, rate your experience of this from 1 to 10 [ ]

D. THIRD STAGE INTERVENTIONS

27. a. How was the placenta (i.e. afterbirth) delivered? (Place tick in appropriate box)

(i) Naturally, without any assistance [ ]

(ii) Doctor removed it by hand [ ]

(iii) Given a general anaesthetic to remove it [ ]

b. Please rate your experience of whichever procedure you had from 1 to 10 [ ]

28. a. After delivery, did you require stitches for your cut (i.e. episiotomy) or tear? | YES | NO |

b. If YES, rate your experience of this from 1 to 10 [ ]

(continued)

Appendix 3 (continued)

PSYCHO-SOCIAL PROCEDURES

29. a. Where was your baby placed immediately after delivery? (Please tick in appropriate box)

(i) On your stomach ☐

(ii) On the table ☐

(iii) In the cot ☐

(iv) Handed to father ☐

(v) Taken away for emergency medical attention ☐

b. Please rate the particular experience which you had *from 1 to 10* ☐

PLEASE NOTE : The following two questions require you to rate your experience regardless of whether your answer is YES or NO

30. a. Was your husband with you during labour? YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

If NO, rate your experience of this from 1 to 10 ☐

31. a. Was your husband with you during delivery? YES | NO

b. If YES, rate your experience of this from 1 to 10 ☐

If NO, rate your experience of this from 1 to 10 ☐

(continued)

Appendix 3 (continued)

32. a. Did you hold your baby before or after he/she was wrapped?

(Place tick in appropriate box)

(i) Before ☐

(ii) After ☐

(iii) Not at all ☐

b. Please rate your particular experience from 1 to 10 ☐

33. a. How soon after birth were you allowed to breastfeed your baby?

(Please tick in appropriate box)

(i) Immediately ☐

(ii) Within the first hour ☐

(iii) Between 1 and 4 hours ☐

(iv) Between 4 and 12 hours ☐

(v) After 12 hours following birth ☐

(vi) Not breast feeding ☐

b. Please rate your particular experience from 1 to 10 ☐

(continued)

Appendix 3 (continued)

CAESAREAN SECTION

This section applies only to women who had a caesarean section. If you had a vaginal delivery please leave out this section and proceed to Question 43 on p.17.

34. a. Which one of the following kinds of "caesars" did you have?

(Place tick in appropriate box)

(i) An emergency "caesar" with a general anaesthetic ☐

(ii) A planned "caesar" with a general anaesthetic ☐

(iii) An emergency "caesar" with an epidural anaesthetic (i.e. an injection in the spine) ☐

(iv) A planned "caesar" with an epidural anaesthetic (i.e. an injection in the spine) ☐

b. Please rate your experience of the particular kind of "caesar" which you had from 1 to 10 ☐

35. a. Did the doctor use a foetal heart monitor to measure your baby's heart rate? YES ☐ NO ☐

b. If YES, rate your experience of this from 1 to 10 ☐

(continued)

Appendix 3 (continued)

36. a. Did you have a catheter?

YES	NO

b. If YES, for how long was it left in?

(Place tick in appropriate box)

Less than 12 hours ☐

More than 12 hours ☐

and rate your experience of this from 1 to 10 ☐

PLEASE NOTE : The following two questions require you to rate your experience regardless of whether your answer is YES or NO.

37. a. Was your husband with your pre-operatively?

YES	NO

b. If YES, rate your experience of this from 1 to 10 ☐

If NO, rate your experience of this from 1 to 10 ☐

38. a. Was your husband with you during your "caesar"?

YES	NO

b. If YES, rate your experience of this from 1 to 10 ☐

If NO, rate your experience of this from 1 to 10 ☐

(continued)

Appendix 3 (continued)

PLEASE NOTE : The following two questions apply only to women who had an *epidural anaesthetic*. If you had a general anaesthetic please proceed to question 41.

39. a. Where was your baby placed immediately after delivery?

(Place tick in appropriate box)

(i) next to you ☐

(ii) in the cot ☐

(iii) handed to father ☐

(iv) taken away for emergency medical attention ☐

b. Please rate your particular experience from 1 to 10 ☐

40. a. Did you hold your baby before or after he/she was w

(Place tick in appropriate box)

(i) Before ☐

(ii) After ☐

(iii) Not at all ☐

b. Please rate your particular experience from 1 to 10 ☐

(continued)

Appendix 3 (continued)

PLEASE NOTE : Leave out Question 41 if you had an epidural anaesthetic and proceed to Question 42.

41. a. How soon after your general anaesthetic were you able to see your baby?

(Place tick in appropriate box)

(i) Between 1 and 12 hours ☐

(ii) After 12 hours following birth ☐

b. Please rate your particular experience from 1 to 10 ☐

42. a. How soon after your "caesar" were you able to breastfeed your baby?

(Place tick in appropriate box)

(i) Immediately ☐

(ii) Within the first hour ☐

(iii) Between 1 and 4 hours ☐

(iv) Between 4 and 12 hours ☐

(v) After 12 hours following birth ☐

(vi) Not breast feeding ☐

b. Please rate your particular experience from 1 to 10 ☐

(continued)

Appendix 3 (continued)

NOTE : The final question should be answered by everybody.

43. a. In retrospect, were there any medical procedures which you would rather not have had?

YES	NO

b. If YES, please specify which procedure(s) and why not : _____

(continued)

Appendix 3 (continued)

Thank you once again for your co-operation in taking part in this study. There may be some aspect of your pregnancy and childbirth experience that has not been covered in this questionnaire and which you might feel is important. If so, please write about it in the space below :

Appendix 4 Covering Letter to Obstetricians

65 Hamilton Avenue,
CRAIGHALL PARK,
2196

Tel. 447-1448

Dear Dr.

The enclosed questionnaire forms part of a masters research project that I am conducting under the supervision of Dr. B. Chalmers of the School of Psychology, University of the Witwatersrand.

The aim of the research project is to examine the psychological impact of the various obstetrical and hospital procedures which are commonly experienced by women during pregnancy and childbirth. It is hoped that this research will lead to additional ways of helping and supporting women during this important time in their lives.

Your position, as a medical specialist in the field of obstetrics, makes you ideally suited to estimating the psychological and physical demands made on women when coping with pregnancy and childbirth. Your participation in this project will therefore be of great value in helping us to evaluate the degree to which women experience the various obstetrical and hospital procedures as positive or negative. Since a good response to this questionnaire is essential for the validity of this study, your participation in this research will be much appreciated.

The questionnaire has been designed to take not more than 10-15 minutes of your time.

(continued)

Appendix 4 (continued)

You have my assurance that your answers to the questionnaire will be treated in the strictest confidence. Under no circumstances will any individual form be examined for any purposes other than this research or by anybody who is not directly involved in the analysis of the results.

Thank you for your co-operation.

Yours sincerely,

J.M. HAYWARD (Mrs.)

P.S. If for any reason you do not wish to complete the questionnaire, please be so kind as to answer the biographical information section on pages 7 and 8 of the questionnaire and return it in the enclosed envelope. In this way a record of questionnaire returns can be kept for statistical and sampling purposes.

Appendix 5 Obstetricians Biographical Questionnaire

CONFIDENTIAL

The following information is required for data analysis purposes only. Although the inclusion of your name would facilitate administrative aspects of this analysis, it is not essential and you may omit it if you so wish.

All responses will be treated in the strictest confidence.

Please tick or fill in the appropriate information.

NAME (optional) : .....

1. Are you male or female? .....

2. What is your nationality?

South African	British	Other (Please specify) ....

3. What is your home language?

English	Afrikaans	Other (Please specify) .....

4. What religious group do you belong to?

Catholic	Protestant	Jewish	Other (Please specify) .....

(continued)

Appendix 5 (continued)

CONFIDENTIAL

5. Which age category do you belong to?

Below 30 years	31 - 40 years	41 - 50 years	51 - 60 years	Over 60 years

6. For how many years have you practised obstetrics and gynaecology?.....

If you wish to make any additional remarks please do so in the space below :

.....

.....

.....

.....

.....

.....

Thank you for your co-operation. Your help is much appreciated.

Appendix 6 Mothers' Reactions to Medical Interventions : Obstetricians' Questionnaire

CONFIDENTIAL

This questionnaire consists of a list of obstetrical, psycho-social and hospital procedures which commonly take place during pregnancy and childbirth. We are interested in evaluating the psychological impact of these procedures on women.

Although the researcher is aware of individual differences in response to the same experience, the aim of this study is to try to establish what the response of most women is to any particular procedure, and when variations in this response take place. Accordingly, I would like you to rate the procedures listed on the following pages in terms of how negatively or positively you think they are experienced by the majority of women.

Your score in the rating column can range from 1 - 10 points. If you think a certain procedure is experienced positively by women i.e. is relatively pleasant and easy to cope with, then select a high number towards 10 and place it in the rating column. If however, you think a certain procedure is experienced negatively by women i.e. is unpleasant and difficult to cope with, then select a low number towards 1 and place it in the rating column.

In addition to completing the questionnaire, it would also be appreciated if you would complete the biographical information sheet on pages 7 and 8.

Please return the questionnaire in the enclosed envelope.

Thank you for your assistance.

(continued)

Appendix 6 (continued)

Rate how negatively or positively you think women experience the following procedures :

Note : 1 = extremely negative experience
10 = extremely positive experience

		Rating Column (1 - 10)
A.	ANTENATAL PROCEDURES	
1.	Sonar	.....
2.	X-Rays	.....
3.	External cephalic version	.....
4.	Non-stress test	.....
5.	Oxytocin challenge test	.....
6.	Amniocentesis	.....
B.	FIRST STAGE INTERVENTIONS	
1.	Shaving of hair :	
	- perineal	.....
	- perineal and pubic	.....
	- umbilicus to pubis	.....
2.	Enema	.....
3.	Analgesics e.g. pethidene	.....
4.	Catheterization	.....
5.	Dextrose drip	.....
6.	Per vaginum examination	.....
7.	Induction of labour :	
	- Surgical (A.R.O.M.)	.....

(continued)

Appendix 6 (continued)

	Rating Column (1 - 10)
- Medical	
i) intravenous oxytocin	.....
ii) oral oxytocin	.....
iii) vaginal prostaglandins	.....

C. SECOND STAGE INTERVENTIONS

Vaginal Delivery

1. Maternal position for delivery :	
- legs in stirrups	.....
- leaning back, semi-supported	.....
- side-lying	.....
- squatting	.....
2. Episiotomy	.....
3. Forceps delivery	.....
4. Vacuum extraction	.....
5. Type of anaesthesia for delivery :	
- epidural anaesthetic	.....
- pudendal block	.....
- no local anaesthesia	.....
6. Analgesia : nitrous oxide	.....
7. Foetal heart monitor	.....

(continued)

Appendix 6 (continued)

		Rating Column (1 - 10)
	Caesarean Section	
8.	Emergency Caesarean Section with :	
	- local (epidural) anaesthetic	.....
	- general anaesthetic	.....
9.	Planned Caesarean Section with :	
	- local (epidural) anaesthetic	.....
	- general anaesthetic	.....
10.	Foetal heart monitor	.....
11.	Duration of catheterization :	
	- less than 12 hours	.....
	- more than 12 hours	.....
D.	THIRD STAGE INTERVENTIONS	
1.	Delivery of placenta :	
	- natural	.....
	- manual	.....
	- operative	.....
2.	Suturing of episiotomy or tear	.....
E.	PSYCHO-SOCIAL PROCEDURES	
	Vaginal Delivery	
1.	Placement of infant after delivery :	
	- on mother's stomach	.....
	- on table	.....
	- in cot	.....
	- given to father	.....
	- requiring emergency medical attention	.....

(continued)

Appendix 6 (continued)

			Rating Column (1 - 10)
2.	i)	Husband present during labour	.....
	ii)	Husband absent during labour	.....
3.	i)	Husband present at delivery	.....
	ii)	Husband absent at delivery	.....
4.	Holding of infant by mother :		
	-	prior to wrapping	.....
	-	after wrapping	.....
	-	not at all	.....
	Caesarean Section		
5.	i)	Husband present pre-operatively	.....
	ii)	Husband absent pre-operatively	.....
6.	i)	Husband present during caesar	.....
	ii)	Husband absent during caesar	.....
7.	Epidural anaesthetic		
	Placement of infant after delivery :		
	-	alongside mother	.....
	-	in cot	.....
	-	given to father	.....
	-	requiring emergency medical attention	.....
8.	Epidural anaesthetic		
	Holding of infant by mother :		
	-	prior to wrapping	.....
	-	after wrapping	.....
	-	not at all	.....
9.	General anaesthetic		
	Mother sees infant :		
	-	1 to 12 hours following anaesthetic	.....
	-	after 12 hours following anaesthetic	.....

(continued)

Appendix 6 (continued)

		Rating Column (1 - 10)
F.	HOSPITAL PROCEDURES	
1.	Presence of nurses during labour :	
	- most of the time	.....
	- approximately half of the time	.....
	- almost no time at all	.....
2.	Presence of obstetrician during labour :	
	- most of the time	.....
	- approximately half of the time	.....
	- almost no time at all	.....
3.	Movement of mother from labour ward to delivery ward prior to birth	.....

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