

COMPARISON OF THE EFFECT OF THE TYPE OF DELIVERY  
UPON THE MOTHERS PERCEPTION OF HER BABY

by


Sylvia A. McSkimming, R.N., B.S.

A Thesis  
Presented to  
The University of Oregon Health Sciences Center  
School of Nursing  
and the Graduate Council of the  
University of Oregon Health Sciences Center  
in partial fulfillment  
of the requirements for the degree of

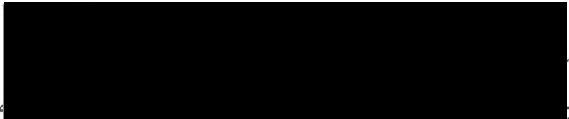
Master of Nursing  
June 8, 1979

APPROVED:

  
\_\_\_\_\_  
Wilma E. Peterson, Ph.D., Associate Professor, Thesis Advisor

  
\_\_\_\_\_  
Barbara C. Gaines, Ph.D., Associate Professor, First Reader

  
\_\_\_\_\_  
Patricia S. Tomlinson, M.N., Associate Professor, Second Reader

  
\_\_\_\_\_  
John M. Brookhart, Ph.D., Chairman, Graduate Council

This study was supported by a United States  
Public Health Service Traineeship from  
Grant Number 5A11 NU 00250-01 and  
Grant Number 5A11 NU 00250-02

DEDICATION

To David, Sandy, Kristi, Jean, and Jim McSkimming for their love,  
support and encouragement.

s.a.m.

## TABLE OF CONTENTS

<u>CHAPTER</u>	<u>PAGE</u>
I. INTRODUCTION . . . . .	1
REVIEW OF THE LITERATURE. . . . .	2
Maternal Attachment. . . . .	3
Maternal Perceptions . . . . .	7
Cesarean Section Delivery. . . . .	10
Statement of Problem . . . . .	14
Hypotheses . . . . .	14
II. METHODS. . . . .	16
DESIGN AND OPERATIONAL DEFINITIONS. . . . .	16
INDEPENDENT VARIABLE. . . . .	17
DEPENDENT VARIABLE. . . . .	17
INTERVENING VARIABLES . . . . .	19
Demographic . . . . .	19
Pre-Natal Support. . . . .	20
Control. . . . .	20
Maternal-Infant Contact. . . . .	20
Post-Partum Support. . . . .	21
Cesarean Section Delivery. . . . .	21
SETTING AND PROCEDURE . . . . .	21
SAMPLE. . . . .	22
Maternal . . . . .	22
Infant . . . . .	23
STATISTICAL ANALYSIS. . . . .	24
III. FINDINGS . . . . .	25
SAMPLE. . . . .	25
FINDINGS RELATED TO MATERNAL PERCEPTION AND TYPE OF DELIVERY . . . . .	26
FINDINGS RELATED TO THE INTERVENING VARIABLES . . . . .	29

TABLE OF CONTENTS (Continued)

<u>CHAPTER</u>	<u>PAGE</u>
Demographic. . . . .	29
Pre-Natal Support. . . . .	29
Control. . . . .	31
Maternal-Infant Contact. . . . .	33
Post-Partum Support. . . . .	34
Cesarean Section Delivery. . . . .	35
 IV. DISCUSSION. . . . .	 39
DELIVERY METHOD . . . . .	39
INTERVENING VARIABLES . . . . .	40
Demographic. . . . .	40
Pre-Natal Support. . . . .	40
Control. . . . .	41
Maternal-Infant Contact. . . . .	42
Post-Partum Support. . . . .	43
Cesarean Section Delivery. . . . .	45
 V. SUMMARY AND CONCLUSIONS. . . . .	 48
HYPOTHESES AND MAJOR FINDINGS . . . . .	48
LIMITATIONS OF THE STUDY. . . . .	49
IMPLICATIONS FOR FURTHER STUDY. . . . .	50
 REFERENCES. . . . .	 51
 APPENDICES	
A. Neonatal Perception Inventory I . . . . .	53
B. Neonatal Perception Inventory II . . . . .	56
C. Degree of Bother Inventory . . . . .	60
D. Hospital Interview Guide . . . . .	61
E. Infant Log . . . . .	65

TABLE OF CONTENTS (Continued)

<u>CHAPTER</u>	<u>PAGE</u>
F. One Month Post-Partum Interview Guide . . . . .	.67
G. Consent Form for Human Research . . . . .	.69
ABSTRACT . . . . .	.71

LIST OF TABLES

<u>TABLE</u>	<u>PAGE</u>
1. Comparison of age and education level of the sample according to hospital and type of delivery.	.27
2. Comparison of samples from three studies. . . . .	.28
3. Mean scores, range values, t values and degrees of freedom obtained on the NPI I, NPI II and DBI according to type of delivery.	.30
4. Mean scores, range values, and t values on the NPI I, NPI II and DBI of mothers according to presence or absence of the father during delivery.	.32
5. Means, range values, and t values on the NPI I, NPI II and DBI of mothers who reported induced or spontaneous labor.	.32
6. Mean maternal-infant contact time and range values in hours based on the Infant Log according to type of delivery.	.34
7. Summary of scoring criteria by category for maternal postpartum support.	.34
8. Means, range values, and t value for the NPI I, NPI II and DBI according to reasons for cesarean section delivery.	.37
9. Means, range values and t value, for the NPI I, NPI II and DBI according to maternal concerns prior to cesarean section delivery.	.38



## CHAPTER I

### INTRODUCTION

During the last twenty years in the United States there has been an increase in the number of prospective parents attending childbirth education classes. These classes prepare the parents to expect a vaginal delivery of their infant with the father as an active assistant to the mother during labor and delivery. Additionally, the parents anticipate that the infant will remain with the mother as much of the day and night as she desires and that the father may visit at any time. Based on the assumption that control of her delivery and post-partum experiences facilitate a mother's attachment to her infant, the mother seeks to have lengthy contact with her infant, and to assume caregiving tasks early in the post-partum period.

Current data suggest, however, that between ten and fifteen percent of all infants born in the United States are delivered by cesarean section. With a cesarean section delivery, the parental expectations for the intra-partum and post-partum experience may be unmet. If the mother delivered by cesarean section, she probably experienced separation from her infant. Hospital policy may have required that the infant be removed from the delivery suite and placed in the newborn nursery for an extended observation period. If this occurred the mother's contact with her infant was limited, and the process of early attachment with her infant may have been affected.

Maternal-infant attachment may be defined as the degree to which a mother considers that her infant occupies an essential part of her life. Indications of this attachment having occurred can be identified

when the mother expresses feelings of love, possession, devotion, and protectiveness. When attachment has occurred, the mother positively anticipates prolonged contact with her infant (Robson and Moss 1970). Some of the current literature suggests that this attachment may be strengthened by the interaction process between the mother and infant. Broussard and Hartner (1970) believed that the way the mother interacted with her infant would be modified by how she perceived its appearance and behavior, and reciprocally, the infant's behaviors would be altered by the mother's handling. A mother's perceptions of her newly born infant may well be altered because of the nature of her delivery and post-partum experiences. It has been hypothesized that with altered perceptions, the mother's interactions with her infant may be changed and the process of maternal-infant attachment altered.

The goal of this study was to compare maternal perception of the infant between two groups of mothers, namely: mothers who delivered vaginally and mothers who delivered by cesarean section. If cesarean section delivery affects the mothers perception of her infant, nurses may need to examine how they can help these mothers to attain a more optimal perception of their infants.

#### REVIEW OF THE LITERATURE

The investigator noted the diverse research literature which identified components of maternal infant attachment. For the purpose of this study, however, the investigator chose to present literature related to the effects of maternal-infant contact on maternal attachment behaviors, and maternal perceptions as a corollary of maternal attachment. Literature on cesarean section delivery was also presented because the investigator was concerned that this method of delivery

would affect maternal perceptions.

### Maternal Attachment

Early observations related to the phenomenon of attachment were noted in the animal kingdom. In goats, cows, and sheep, it was noted that when these animal mothers were separated immediately after birth for a period of one to four hours from their newborn that they developed maladaptive mothering behaviors. The animal mothers that experienced this separation were observed to butt their offspring and feed other young of the species indiscriminately. If, however, the separation did not occur until the fifth post-partum day, there was no disruption of the animals maternal nurturing behaviors. Based on these observations, the investigators claimed that there was a critical time period when attachment between a mother and her young occurred in mammals (Collias, 1956 ; and Hersher, Moore, and Richmond, 1958).

These observations from the animal kingdom, as well as results of studies related to separation of human mothers and their premature infants, suggested that separation could permanently affect the maternal behaviors of some women. Barnett (1970) reported a pilot study conducted during the years of 1964-1966 at Stanford University School of Medicine. The experimental group of thirteen randomly selected mothers were allowed to touch their infants and progress to the caregiving tasks of feeding and diapering while the infants were still in incubators. Only two of the experimental mothers refused this handling contact while the premature infants were still in the incubator.

The control group, consisting of thirteen mothers, had visual contact with their infants in the incubator, but caregiving activities were not allowed until just prior to hospital discharge. The control

mothers, who were deprived of the touching interaction with their infants until just prior to discharge from the hospital, tended to return to interests and responsibilities they held prior to delivery during the three to twelve week separation from their infants. When the infants of the control mothers came home from the hospital, they appeared to enter the family as individual members not as dependent infants, and to compete for their mother's time and attention. Differences between the control group and the experimental group of mothers as documented by home interviews seemed to center around commitment to the infant, confidence in the ability to mother the infant, and stimulation of the infant. There was no statistical analysis or content analysis of the data reported.

Kennell and Klaus (1970) hypothesized that an attachment period existed for the human mother, and that it was identifiable. Using an experimental design that controlled for maternal-infant contact periods, Kennell and Klaus measured the outcomes in terms of maternal behaviors. The control group of fourteen primiparous mothers saw their infants shortly after birth. They next saw their infants for a brief period six to twelve hours after birth, followed by twenty to thirty minutes feeding periods every four hours for the remainder of their hospital stay. The experimental group of fourteen primiparous mothers had extended contact periods with their infants in addition to the routine contacts. These mothers had their infants with them for one hour during the first three hours of life, and for five extra hours each afternoon during the three days of their hospital stay.

At the one month follow-up interview and examination, mothers were rated on their answers to the following questions: "When the baby cries

and has been fed, and the diapers are dry, what do you do?" and "Have you been out since the baby was born, and who sat?" (Kennell and Klaus, 1974, p. 174). Scores from 0-3 were given for the mothers' answers. The mothers were also observed during a routine examination of their babies and were rated on their proximity to the infants as well as on their soothing behaviors when the baby cried. The mothers were rated from 0-3. In each case, three was considered to be a desired score. Combining the interview and observation scores, the extended contact group scored in the range of 7-12, while the control group scored between 2-10 ( $p < .002$ ). Thus, the extended contact mothers scored significantly higher on the rated behaviors than did the control mothers.

Kennell and Klaus also found that differences in the maternal attitude and behaviors of the two groups continued to be evident at one year. Observations of the maternal-infant dyads and interviews with the mothers showed that the extended contact mothers spent more time soothing their infants during a physical examination and focused more of their interest and comments on their infants than did the control mothers. This was true even of the mothers who had returned to school or work. A statistical analysis of the data was not reported.

Finally, Kennell and Klaus (1974) looked at the Bayley Mean Developmental Index of the two groups of infants at the one year follow-up. The extended contact group scored at 98 compared to a score of 93 for the control infants ( $p < .05$ ).

deChateau (1976) studied mothers and their infants to determine if differences in the type maternal-infant contact experienced by mothers altered their maternal attachment behaviors. His investigation focused

on the immediate post-partum period of forty-two primiparous mothers. Twenty mothers and infants experienced routine post-partum procedures. These infants were shown to their mothers briefly after delivery and were taken to be weighed, measured, examined, and dressed. Approximately thirty minutes later the fully clothed infants were placed in bassinets beside the mothers so that they could see and touch them. Twenty-two mothers and infants were allowed to experience an extra skin-to-skin contact period after delivery. Ten minutes post-partum the naked infant was placed on the mother's abdomen. After five minutes, or fifteen minutes post-partum, the infant was moved to the mother's chest and allowed to nurse. When the infant was twenty-five to thirty minutes old, the usual post-partum routine was initiated. The extra contact period lasted approximately ten to fifteen minutes.

When the infants were thirty-six hours old, trained observers recorded thirty-five behaviors during a fifteen minute feeding observation period. Using a time sampling method, the observations were recorded for thirty seconds during twenty time periods. The extra contact mothers sat up significantly more frequently than did the control mothers during feeding. They also held their infants more and exhibited more "encompassing behaviors" than did the control mothers. deChateau defined encompassing behavior as observed when the mother's upper arm, lower arm, and hand was around the infant's body. The extra contact mothers also looked at their infants "EN FACE" two times as often as the control mothers. This behavior was not different at a statistically significant level. "EN FACE" position has been defined as occurring when the mother's face is turned in such a way that her eyes meet her infants eyes in the same vertical plane (Robson 1967).



deChateau conducted a follow-up observation in the home when the infants were three months old. Sixty-one behaviors were rated during a time sample ten minute observation period. Nineteen control mothers and infants, and twenty-one extra contact mothers and infants were observed during free play. The extra contact mothers showed more kissing, looking EN FACE and less grooming behaviors than did the control mothers. The infants who had experienced the extra contact post-partum showed more smiling and less crying behaviors than did the control infants. These behaviors were significantly different for the two groups. The level of significance was not reported.

#### Maternal Perceptions

Maternal-infant attachment may be documented in terms of the behaviors exhibited by the mother toward her infant, but how a mother perceives her infant may also be significant to her interactions with her infant and may alter the process of maternal-infant attachment. Broussard and Hartner (1970) hypothesized that the mother provided the environment needed for optimum healthy infant development based on her sensitivity to her infant's needs. That is, Broussard and Hartner stated that the way the mother related to her neonate would be modified by how she perceived its appearance and behavior, and reciprocally, the infant's behaviors would be altered by the mother's handling.

There is cultural pressure to be "better than average" in the United States. If this assumption is true, a new mother responding to that cultural bias should view her infant as better than the average infant when specific behaviors were compared. Broussard and Hartner (1970) identified behaviors of crying, spitting, feeding, elimination,

sleeping, and predictability as infant behaviors to be rated by a mother for the "Average Baby" and her own infant. The "Average Baby" and "Your Baby" inventories were given to three hundred and eighteen primiparous mothers on their first or second post-partum days and again when the infants were approximately one month of age. Broussard and Hartner named the combined scale the Neonatal Perception Inventory (NPI), and identified the two forms as time I or time II scales.

The infants who were rated negatively by their mothers were labeled as being in a high risk category for emotional and developmental disturbances. Those who were rated positively in comparison to the average baby by their mothers were classified as low risk for emotional and developmental disturbances.

To test the predictive validity of the instrument, a follow-up study was conducted with one hundred-twenty of the original subjects when the children were between the ages of four years six months, and four years nine months. They were rated by two psychiatrists who did not have access to the children's previously assigned risk rating. Interviews and observations were conducted in the child's home and at the clinic. Of the thirty-six children who were originally rated as high risk based on their mother's negative rating of them on the one month Neonatal Perception Inventory (NPI II), 66 percent were judged to be in need of therapeutic intervention. Of the forty-nine children who were rated as low risk on the NPI II scale, only 20.4 percent were identified as being in need of therapeutic intervention. The authors concluded that maternal perceptions of their infants at one month could be used as a predictive measure of subsequent intervention needs.



The mother's perceptions of her infant at twenty-four to forty-eight hours of age as measured by the Neonatal Perception Inventory (NPI I) were not predictive of future difficulty. The authors stated that this may be because the mother still held a view of her fantasy infant. By the time the infant was one month of age, however, the mother's perception of her infant may have helped her to develop permanent interaction patterns.

The authors also developed the Degree of Bother Inventory (DBI) to measure the mother's affective evaluation of her infant's behavior. The same behaviors which were identified on the NPI were rated by the mother as bothering her "a great deal" to "none". The equally weighted behaviors were given a score of four for the answer "a great deal" and one for the answer "none". The possible score for the DBI was 6 to 24. The mother's score on the DBI correlated well with her NPI II score ( $\chi^2$  at  $p < .001$ ).

Broussard and Hartner (1970) maintained that factors such as educational level of the parents, father's income and occupation, maternal age, religious affiliation, infant's sex, pre-natal and post-partum complications and type of delivery had no effect on the child's later development.

Burns (1978) studied the relationship between a mother's perceptions of her infant, and the infant's temperament. The purpose of the study was to determine whether the mother's NPI II score was based on an accurate perception of her infant. Fifty primiparous mothers were given questionnaires one month post-partum and asked to score their infant's temperament on a modified version of the Carey Infant Temperament Scale. Burns also requested that the mothers rate their infants' behaviors compared to the average infants' behaviors (NPI II). The study attempted to determine if mothers who had a negative NPI II score had infants whose temperament characteristics were extreme as scored on the above temperament scale. Although certain behavior characteristics were more closely related to the

mother's attitude than others, there was no direct one to one relationship between the infants' temperament and the NPI II. The study does suggest, however, that the mother's estimate of her own infant rather than her estimate of the average baby influenced her attitude.

Burns found that maternal age and education, and infant sex were significantly related to the NPI II. These findings were contrary to the findings of Broussard and Hartner (1970).

### Cesarean Section Delivery

Many researchers have included in their study sample mothers who delivered vaginally while cesarean section mother's needs and perceptions have not been explored. A review of the literature related to the changing incidence of cesarean section delivery and to the perceived experiences of cesarean section mothers follows.

Hibbard (1976) conducted a review of 4,003 charts to determine trends in cesarean section deliveries. He sampled four time periods from 1948-1974, at Los Angeles County Hospital, University of Southern California. Indications for cesarean section delivery showed definite differences during the time periods of 1948-1953 and 1974. The author did not explain the reason for the difference in the length of the two time periods that were reported, i.e., five years versus one year. It may be that 1974 was the latest single year's data that were available.

In 1948-1953 there were 6/10,000 deliveries by cesarean section because of breech presentation, while in 1974 there were 189/10,000. Two cesarean sections were performed for fetal distress in 1948-1953, while in 1974 there were 87/10,000. In 1948-1953 failure to progress in labor was not considered a reason for surgical intervention, but in 1974 there were 119/10,000 births by cesarean section because of failure to progress in labor. Repeat cesarean sections accounted for 158/10,000

births in 1948-1953 and 305/10,000 births in 1974. Total cesarean section deliveries in 1948-1953 were 311/10,000 live births, and in 1974 were 911/10,000 live births for this population. The rate of cesarean section deliveries had more than tripled by 1974.

Mevs (1977) reported on the live births and cesarean section delivery rate in the United States from May 1975 to May 1976. Of the 3,310,000 recorded births, ten to fifteen percent were reported as being delivered by cesarean section, this means that approximately 331,000 to 496,500 live births were delivered by cesarean section during that year. Despite the fact that obstetricians recognize cesarean section delivery to be a safe delivery method, cesarean section deliveries are listed as a complication on the birth certificate. It should be noted that the incidence of cesarean section deliveries reported was an estimated figure because all states do not require that complications be noted on the birth certificate.

Some of the above statistics are indicative of changes in technology as well as obstetrical practice. Even though cesarean sections were increasing in frequency and were viewed as a safe method of delivery, nursing researchers have found that women perceived differences in their feelings regarding the cesarean section delivery as compared to a vaginal delivery.

Affonso and Sticher (1978) studied women's reactions to cesarean section delivery. Using a sample of 105 women who delivered by cesarean section at a hospital in Tucson, Arizona, the authors interviewed the mothers to ascertain how they felt about their delivery experiences. Of this group, 98 percent were able to give the reason for the cesarean section delivery even though 41 percent of the women had less than two

hours to prepare themselves for the alternate delivery method. Thirty-five percent of the total sample were women who had repeat cesarean section deliveries, and had more than six weeks to prepare for the event. Twenty-one percent of the mothers had three hours to one week to prepare for cesarean section delivery and four percent were unable to recall when they knew that the delivery would be by cesarean section.

Eighty-eight percent of the sample related fears regarding their own safety prior to delivery and 53 percent related fears regarding their infants' health. The majority of the subjects, regardless of parity, perceived a cesarean birth as a more difficult experience than a vaginal delivery. Reasons given by the mothers for the perceived difficulty with a cesarean section delivery were pain, increased recovery time, inability to see the baby born, or "bond" with the baby immediately after birth, and more emotional distress.

The subjects were also questioned about their husbands perceptions of the cesarean section delivery. Sixty percent of the respondents perceived their husbands as worried about them and the baby; forty-six percent were perceived as relieved that the delivery was accomplished. Twenty-six percent of the mothers felt that their husbands were angry over the doctor's decision to do the cesarean section and 58 percent of the mothers perceived the fathers as being disappointed that they could not witness the birth, and that the infant could not be delivered vaginally.

Enkin (1977), writing about cesarean section deliveries, stated, "The decision to do a cesarean is one which the doctor can make. The decision to have a cesarean birth is one which the parents should make" (p. 100).



Enkin (1977), Reynolds (1977), and Bampton and Mancini (1973) reported that the mother may have feelings of grief over not delivering vaginally and that her recovery period may be increased.

Marut and Mercer (1979) compared satisfaction with the type of delivery for 20 primiparous mothers who delivered by cesarean section and 30 primiparous mothers who delivered vaginally. Data were collected within the first 48 hours post-partum by interview and questionnaire. Differences in the groups were statistically significant ( $p < .05$ ) in regards to control, fear, concern for the infant, and time of mother-infant contact. Subject's feelings of satisfaction with the delivery were linked to their perceived control during delivery. Cesarean section mothers were less satisfied with the delivery experience than mothers who delivered vaginally. A support person in the delivery area, however, seemed to decrease the anxiety among the mothers and helped them integrate the delivery experience post-partum. This was true for both groups of mothers.

A maternal-infant bonding project has been in progress for approximately five months in Portland, Oregon. The data have been collected on approximately 300 primiparous mothers who delivered in two Portland area hospitals. The NPI II has been used as a data collection tool. (C. Reinhard M.A., Project Director, 1978). Despite Broussard and Hartner's claim that the type of delivery does not affect the results obtained by the use of the NPI, the above project's preliminary data indicate that mothers who have delivered by cesarean section tend to have lower NPI II scores than the mothers who delivered vaginally.

If, as the statistics suggest, 10 to 15 percent of all live births are delivered by cesarean section, and if this minority group of mothers are at risk in terms of perception of their infants, then the topic of maternal perceptions and type of delivery needs further study.

#### Statement of Problem

The rationale for studying the relationship between type of delivery and the mother's perception of her infant was based on the following conceptual framework derived from the review of the literature. Maternal-infant attachment may be necessary for the infant to reach full developmental potential. Early interaction between mother and infant may facilitate this attachment. There also may be a critical time period when separation of the mother and infant affect the attachment. Maternal perception of her infant may relate directly to the mother's attachment to her infant. Finally, early identification of negative maternal perception of the infant may be predictive of future developmental difficulties.

A cesarean section was the delivery method for ten to fifteen percent of mothers in the United States. Mothers who have experienced cesarean section deliveries have expressed negative feelings about this experience. These feelings may affect the mother's ability to perceive her infant positively. Therefore, it was the purpose of this study to determine whether the type of delivery experienced by the mother affected her perception of her infant.

#### Hypotheses

To answer the question posed in the study, the following hypotheses were tested.

1. Mothers who experienced cesarean section delivery would score lower on the Neonatal Perception Inventory II than would mothers who delivered vaginally.
2. Mothers who delivered by emergency cesarean section would score lower on the Neonatal Perception Inventory II than mothers who delivered by non-emergency cesarean section.

## CHAPTER II

### METHODS

#### DESIGN AND OPERATIONAL DEFINITIONS

This study was conducted as a pre-experimental design examining the effects of delivery on the mother's perception of her infant as measured by the Neonatal Perception Inventory I, and II, and the Degree of Bother Inventory (DBI). These instruments appear in Appendices A,B, and C. The design resembled Stanley and Campbell (1966) design three. The comparison variable, or X, was cesarean section delivery,  $X_1$  was emergency cesarean section delivery.

$O_1$  represents group I, and was made up of women who delivered their infants by emergency cesarean section. An emergency cesarean section was defined as one in which the mother had approximately one hour or less prior knowledge that the delivery would be by cesarean section.  $O_2$  represents group II whose members were women who delivered their infants by non-emergency cesarean section. In this group the mothers were aware that a cesarean section delivery was likely even before they went into labor.  $O_3$  or group III women, delivered their infants vaginally. The diagram below was used for the design of this study.

$$X \begin{array}{c} O_1 \\ O_3 \end{array} \quad X \begin{array}{c} O_2 \\ O_3 \end{array} \quad X_1 \begin{array}{c} O_1 \\ O_2 \end{array}$$

Because the data collection period covered four months, the effects of history might have influenced the internal validity of the study. The investigator made an effort to control for this by recruiting a convenience sample of primiparous mothers for all groups during the entire four month period.



### INDEPENDENT VARIABLE

The independent variable of this study was the type of delivery the mothers experienced. Types of delivery were emergency cesarean section, non-emergency cesarean section, and vaginal. Data examining the independent variable were collected by means of the Hospital Interview Guide that appears in Appendix D. The tool was a structured interview guide which asked specific questions related to labor and delivery. The tool was developed by the investigator and was read for content validity by two faculty members. It was pilot tested by five volunteer mothers who had undergone emergency cesarean section delivery for the birth of their first infants.

### DEPENDENT VARIABLE

The dependent variable of this study was the mother's perception of her infant at one month. To ascertain this data, the Neonatal Perception Inventory II (NPI II) and the Degree of Bother Inventory (DBI) were used. The Neonatal Perception Inventory (NPI) was developed by Broussard (1970) and was based on the assumption that mothers delivering healthy first born infants expected their infants to be better than average because being above average was valued in the United States.

The six behaviors of crying, spitting, elimination, feeding, sleeping, and predictability were rated by the mother on a scale ranging from "a great deal" to "none". The answer "a great deal" was given a score of five and the answer "none" a score of one. Each of the six behaviors scored were given equal weight by the scoring method. The mother scored these behaviors for "The Average Baby" and for her infant.

The range of scores on the "Average Baby" and "Your Baby" perception tools was from six to thirty. To obtain the mother's NPI Score, the mother's perception score was subtracted from her "Average Baby" perception score. The resultant possible NPI score ranged from a -24 to 24. The NPI I and the NPI II were worded differently to reflect the passage of time, but were scored in the same way. Infants whose mothers had a NPI score of 1 to 24 were considered at "low risk" for developing emotional or developmental difficulties because their mothers perceived them positively. Infants whose mothers had NPI score of -24 to 0, were identified as being at risk for future developing emotional or developmental difficulties because their mothers perceived them as being less than the average baby for these behaviors.

A Chi Square test for association of the risk rating of the child, and subsequent childhood emotional disorders proved significant at the  $P. < .001$  level of significance for the NPI II.

In addition to the described predictive validity, Broussard and Hartner claim a high degree of content validity for the tool. Content validity was demonstrated because the questions asked were representative of the behaviors being measured.

Reinhard (1978), Burns (1978) and Imle (1977) have collected data from their samples using the NPI. The data from these research projects were analyzed in terms of the mother's perceptions of her infant. There were no reliability coefficients available from these sources for the scale.

The Degree of Bother Inventory (DBI) also developed by Broussard, measured the mother's affective evaluation of her infant's behaviors. Sleeping, crying, spitting, elimination, feeding, and predictability

were rated as bothering her "a great deal" to "none". A score of four was given for the answer "a great deal" and a score of one was given for the answer "none". The mother could add and rate other behaviors which bothered her. The behaviors were weighted equally. The possible score range of the DBI was 6 to 24, or more. Broussard (1970) stated that this measure of the mother's affective evaluation of her infant correlated well with her NPI II score. ( $\chi^2$  at  $p < .001$ ). Other than the author's claim of high face validity, there were no data related to the validity or reliability of the Degree of Bother Inventory.

#### INTERVENING VARIABLES

Intervening variables which the investigator assumed might affect the strength of the dependent variable were demographic, pre-natal support of the mother, maternal control of the labor and delivery experience, maternal-infant contact periods, and post-partum support of the mother. In addition, the investigator questioned whether the reason for the cesarean section delivery or maternal concerns prior to the delivery would affect the strength of the dependent variable for the cesarean section mothers. Data pertaining to these variables were collected on the Hospital Interview Guide, the Infant Log, and the One Month Post-partum Interview Guide (Appendices D, E, and F).

##### Demographic

Broussard and Hartner (1970) claimed that the difference in maternal age and education, religion, sex of the infant, and socio-economic status had no effect on the probability risk for the child. Burns (1978) reported, however, that maternal age, education, and sex of the infant were significant factors influencing the results of the NPI II score.

Demographic data were therefore collected on the study subjects to either support Broussard and Hartner's claim of no effect or Burn's claim of significant effect.

#### Pre-Natal Support

Attendance at pre-natal childbirth classes, and presence of the father during labor and delivery were defined as pre-natal support variables. The investigator made the assumption that attendance at prepared childbirth classes was supportive to the mothers because the classes helped them gain an understanding of the physiological changes which occurred during labor and delivery. The investigator was aware that the content of the classes was standardized, but that there was no way to control for individual instructor differences, group differences, and individual learning styles. The presence of the father during labor and delivery may decrease maternal anxiety (Marut and Mercer, 1979), and thus may be assumed to be supportive of the mother. No other studies were available to document these assumptions.

#### Control

Marut and Mercer (1979) reported that mothers who perceived loss of control over labor and delivery tended to have harsh criticism of themselves and others. The investigator was concerned that this self-criticism might have altered the mother's perception of her infant.

#### Maternal-Infant Contact

Contact periods between mother and infant were reported as affecting the behavior of the mother towards her infant (deChateau 1976, and Kennell and Klaus, 1972, 1974). The investigator hypothesized that early maternal-infant contact may also affect the mother's perception

of her infant.

#### Post-Partum Support

Post-partum support was subdivided by the investigator into three categories:

1. Help at home after hospital discharge.
2. Father's participation in the care of the infant.
3. Phone or personal contacts initiated by the mother to ask information or guidance about her physical status or the physical status of her infant.

There was no literature noted which addressed post-partum support and maternal perception of the infant, but the investigator assumed that there might have been an interrelation. Data on post-partum support was collected on the One Month Post-Partum Interview Guide (Appendix F).

#### Cesarean Section Delivery

Affonso and Stichler (1978) documented the reasons given by the mothers for the needed cesarean section delivery. They also reported specific maternal concerns prior to the delivery. The investigator questioned whether different maternal concerns and reasons for the cesarean section delivery would affect the results of the NPI for the cesarean section mother.

#### SETTING AND PROCEDURE

The subjects for this study were primiparous mothers who delivered during the four month data collection period in the maternity departments of two community hospitals in Portland, Oregon. Bed capacity of the two hospitals was 107 (hospital A) and 150 (hospital B). The 1978

delivery rate was 70/month for hospital A and 83/month for hospital B.

Two methods of recruitment of subjects were used. The principal investigator attended prepared childbirth classes for the mothers who delivered at the two hospitals. The study purpose was explained to the classes and subjects were sought. The signed informed consent forms were placed in the labor room with the subjects pre-admission forms. (See Appendix G). The second method of obtaining subjects was to seek their informed consent after hospital admission. The study was explained to the subjects by the labor room staff after admission and before delivery. The signed informed consent forms were then placed with the subject's chart. During the first or second post-partum day and before hospital discharge, the investigator interviewed the mother using the Hospital Interview Guide and had the mother complete the NPI I. The hospital nursery staff completed the Infant Log for the first 24 hours post-partum.

A second interview was scheduled in the home when the infants were between 27 and 34 days of age. At the time of the home interview the One Month Post-Partum Interview Guide, the NPI II, and the DBI were administered to the mothers. (See Appendix B, C, and F). Both the in hospital and at home interviews took approximately 30 minutes to complete. Subjects were assigned code numbers to preserve their anonymity. Replies on all data collection tools for a subject were assigned the same number.

#### SAMPLE

The criteria for inclusion in the sample were:

##### Maternal

1. The mother was a primipara.

2. The mother was free from pre-existing handicapping conditions which would affect her ability to assume the care giving role.
3. The mother experienced no complications from the labor or delivery that influenced her ability to care for her infant, eg. , hemorrhage, respiratory distress, or surgical complications.
4. The mother planned to keep the baby.
5. The mother had registered for and attended 70 percent or five of the seven prepared Childbirth classes.
6. The mother's primary language was English

#### Infant

1. The baby had a gestational age of at least 36 weeks as determined by a physician.
2. The infant's health was such that it could be brought to its mother's bedside on request during the first 24 hours after birth.
3. The baby had no observable congenital anomalies.
4. The hospital personnel had kept an accurate and complete Infant Log for the neonates first 24 hours of life.

Twenty-five subjects were recruited from hospital B during the four month data collection period, and eighteen subjects from hospital A during a one and one-half month period. Data collection occurred between December 1978 and March 1979. This population represented the

number of potential subjects known to the investigator, but not the total number of possible candidates who delivered at these two hospitals during the data collection period. The investigator was unable to obtain an accurate determination of the possible candidates. None of the women who were invited to participate in the study declined.

#### STATISTICAL ANALYSIS

The data collected for this study were nominal, rank, and interval data. Statistical analysis of the data was done using the  $t$  test for related measures, Spearman Rank correlations, and a Correlation Matrix.



## CHAPTER III

### FINDINGS

#### SAMPLE

Using the recruitment procedures described in the preceding chapter, forty-three subjects who met the inclusion criteria for the study were obtained. The mothers were assigned a group according to the type of delivery experienced. Group I mothers delivered by emergency cesarean section. These mothers had less than one hour prior knowledge that their infants would be born by cesarean section delivery. Non-emergency cesarean section mothers, or group II subjects, were aware that a cesarean section delivery was likely prior to the onset of labor. Group III mothers delivered vaginally.

The Hospital Interview and the Neonatal Perception Inventory I were completed for all subjects. The investigator was unable to locate three of the subjects at the time of the one month post-partum follow-up data collection period and their data were not included in the findings. These three mothers were group III subjects. The total number of subjects for which data were reported was ten subjects in group I, five subjects in group II, and twenty-five subjects in group III.

The samples, according to hospital of delivery, were similar enough in age and educational level that using the two hospitals for subject recruitment did not alter the characteristics of the sample. There were many similarities noted among groups according to the type of delivery experienced. The only statistically significant finding ( $p < .05$ ) was the difference in the maternal ages of group I and group II mothers.

Table 1 summarizes the age and education levels of the maternal sample according to hospital and type of delivery. The study sample was compared to Broussard's (1970), and Burns' (1978) samples. Slight differences were noted in the maternal age, education range, and medians for the three samples. These differences were not significant, and the investigator chose to compare this study's results with those reported by Broussard and Burns.

Eighteen female infants and twenty-two male infants were born to the sample mothers. There was no consistent sex distribution noted for the infant according to either hospital of delivery or type of delivery. The sex distribution of the infants of the present study compared favorably to that of Burns' sample and varied only slightly to the infant distribution of Broussard's sample. This finding reinforced the similarity between the three study samples. Table 2 summarizes the characteristics of the samples of Broussard's, Burns' and the present study.

#### FINDINGS RELATED TO MATERNAL PERCEPTION AND TYPE OF DELIVERY

This study tested two hypotheses. First, that mothers who delivered by cesarean section (groups I and II) would score lower on the Neonatal Perception Inventory (NPI II) than mothers who delivered vaginally (group III). Second, that mothers who had emergency cesarean section deliveries (group I) would score lower on the NPI than mothers who delivered by non-emergency cesarean section (group II). A t test for independent samples showed a statistically significant difference in the NPI II scores of the mothers in group II and group III ( $t=3.00$   $p.<.01$ ). While the hypotheses generated were not supported statistically, the group II mothers did score higher on the NPI II than the group I mothers.

TABLE 7

Comparison of Age and Education Level of the Sample  
According to Hospital and Type of Delivery.

	Maternal			
	Age Mean	Age Range	Education Mean	Education Range
Hospitals of Delivery				
Hospital A (N=16)	23.75	17-32	12.93	11-17
Hospital B (N=24)	24.66	18-35	13.29	11-17
Type of Delivery				
Group I (N=10)	22.90*	17-30	12.90	11-16
Group II (N=5)	26.40*	22-31	12.90	11-16
Group III (N=25)	24.44	19-35	13.24	12-17
Total of Population (N=40)	24.30	17-35	13.15	11-17

\* p. <.05

TABLE 2

## Comparison of Samples from Three Studies.

	Broussard 1971 N=120	Burns 1978 N=50	McSkimming 1979 N=40
Maternal Population			
Median Age	21.80	25.00	23.75
Age Range	18-41	18-33	17-35
Median Education	x	13.00	12.35
Educational Range	xx	10-19	11-17
Sex Distribution of Infants Expressed in Percent			
Female	42.50	45.10	45.00
Male	57.50	54.90	55.00

x Not available

xx Grammar to post graduate

The investigator also administered the NPI I, and the Degree of Bother Inventory (DBI) to the subjects to ascertain any measurable differences in the groups according to type of delivery that might have become evident with those tools. There were no statistically significant differences noted on the NPI I or DBI.

Table 3 summarizes the mean scores, range values, t values, and degrees of freedom of the NPI I, NPI II, and DBI according to the type of delivery.

#### FINDINGS RELATED TO INTERVENING VARIABLES

The investigator questioned whether intervening variables would affect the strength of the dependent variable. The intervening variables identified were: demographic, maternal pre-natal support, maternal control of the labor and delivery experience, maternal-infant contact, and maternal post-partum support. Maternal concerns and reasons for cesarean section were identified as intervening variables for the cesarean section mothers. Data were collected on these variables and the results reported.

##### Demographic

Demographic data for this study were maternal age, education, and infant sex. Findings on these demographic characteristics are shown in Table 1. A correlation matrix showed no statistically significant correlation between demographic variables and the NPI I, NPI II, and DBI.

##### Pre-Natal Support

Pre-natal support had two components as defined by the investigator.

TABLE 3

Mean Scores, Range Values, t Values, and Degrees of Freedom Obtained on the NPI I, NPI II, and DBI According to Type of Delivery.

Delivery Group	NPI I		NPI II		DBI	
	Mean	Range	Mean	Range	Mean	Range
Group I (N=10)	1.20	2.00-5.00	3.10	4.00-9.00	15.10	9.00-17.00
Group II (N=5)	1.40	0.00-3.00	5.60	3.00-8.00	14.60	9.00-21.00
Group III (N=25)	2.20	3.00-19.00	2.40	2.00-6.00	15.60	12.00-30.00
Comparison of Groups	t	df.	t	df.	t	df.
I and II	.19	13	1.42	13	.20	13
II and III	.77	33	.66	33	.27	33
II and III	.45	28	3.00*	28	.41	28

\*p. <.01

They were: attendance at pre-natal childbirth classes, and presence of the father during labor and delivery. To be included in the study population, mothers had to have attended a minimum of 70 percent of their childbirth classes. This criterion was met by all study mothers.

Thirty-nine fathers were present during labor and all 39 planned on being present during delivery. No data were available on one father. Six fathers whose infants were delivered by cesarean section were not present during the event. Statistical analysis was not done on presence of the father during the labor, but was done on the presence or absence of the father during delivery. The t test for independent samples showed that the NPI II score of the two groups differed at a statistically significant level ( $t=2.42$   $p. <.05$ ). Table 4 summarizes the means, range values and t values on the NPI I, NPI II, and DBI according to presence or absence of the father during delivery.

#### Control

Data on control of the labor and delivery were collected on whether or not labor was induced. Ten study mothers reported that their labors had been induced. A t test for independent samples indicated that mothers who experienced induced labor scored significantly higher on the NPI I ( $t=2.16$   $p. <.05$ ). The NPI I score of one mother who experienced induced labor skewed the mean scores of that group positively. No other statistically significant findings were evident. The mean scores, range values, and t values according to induced or spontaneous labor are reported in Table 5.

TABLE 4

Mean Scores, Range Values, t Values, on the NPI I, NPI II, and DBI of Mothers According to Presence or Absence of the Father During Delivery.

Group	NPI I		NPI II		DBI	
	Mean	Range	Mean	Range	Mean	Range
Father Present (N=33)	1.69	-2.00-19.00	2.54	-4.00-9.00	15.88	9.00-30.00
Father Absent (N=6)	2.50	0.00-5.00	5.33	2.00-9.00	12.16	9.00-21.00
t Values	t=.54		t=2.42*		t=1.85	

\*  $p. < .05$

TABLE 5

Means, Range Values, and t Values on the NPI I, NPI II, and DBI of Mothers Who Reported Induced or Spontaneous Labor.

Group	NPI I		NPI II		DBI	
	Mean	Range	Mean	Range	Mean	Range
Spontaneous Labor (N=30)	1.23	-2.00-5.00	2.80	-4.00-9.00	15.30	9.00-23.00
Induced Labor (N=10)	3.70	0.00-19.00	3.60	1.00-8.00	15.40	9.00-30.00
t Values	t=2.16*		t=.80		t=.06	

\*  $p. < .05$



### Maternal-Infant Contact

Twenty-nine mothers reported touching contact with their infants during the first hour post-partum, while eleven mothers reported initial touching contact as occurring after the first hour. All mothers reported that the initial contact period was fifteen minutes or longer. There proved to be no statistically significant differences in the NPI I, NPI II, and DBI scores of mothers who did or did not experience this early contact.

To ascertain the hours of contact between the mother and newly-born infant, a log was maintained by the nursery staff for the first 24 hours post-partum. A correlation matrix of the maternal-infant contact and the scores on the NPI I, NPI II, and DBI showed no statistical significance.

The investigator also questioned whether hospital policy influencing this contact would alter the scores on the NPI I, NPI II, and DBI. Twelve mothers stated that hospital policy did influence the contact they had with their infants during the first 24 hours post-partum, while 28 mothers reported that it did not. There were no statistically significant differences in the scores of these mothers.

Mean contact time and range values based on the Infant Log maintained by the nursery staff and according to type of delivery experienced are summarized in Table 6.

TABLE 6

Mean Maternal-Infant Contact Time and Range Value in Hours Based on the Infant Log According to Type of Delivery.

Group	Mean	Range
Group I (N=10)	6.58	3.00-11.00
Group II (N=5)	5.10	3.00-7.50
Group III (N=25)	7.55	4.50-12.50

#### Post-Partum Support

Data on maternal post-partum support were collected in three categories. The first category was the help the mother had at home after hospital discharge, the second was the father's infant care activities, and the third was contact made by the mother for information. The criteria used to rate maternal post-partum support appear in Table 7.

TABLE 7

Summary of Scoring Criteria by Category for Maternal Post-Partum Support.

Scores	0	1	2	3
Helper at Home	None	Stayed 1-2 days	Stayed 3-4 days	Stayed 5 or more days
Father Support	No infant caregiving	Comforting eg. holding	Comforting & caregiving, eg. feeding, changing	Comforting caregiving & total care, eg. baby-sitting
Maternal Contacts	None	1-2 contacts	3-4 contacts	5 or more contacts

A Spearman Rank Order correlation indicated a significant correlation between father's support and the DBI ( $\rho=.45$   $p. <.05$ ). Maternal contact correlated negatively with the NPI I ( $\rho= -.43$   $p. <.05$ ). The total post-partum support score also correlated negatively with the NPI I ( $\rho= -.55$   $p. <.05$ ).

#### Cesarean Section Delivery

The investigator questioned whether there were significant differences among the cesarean section mothers according to reasons for the cesarean section delivery or maternal concerns prior to the delivery. The mothers reported the following reasons for cesarean section delivery of their infants; infant position, cephalic pelvic disproportion, and lack of progress in labor. The NPI I scores of mothers who had a cesarean section because of cephalic pelvic disproportion were significantly lower than the scores of mothers who delivered by cesarean section because of lack of progress in labor ( $t=2.63$   $p. <.05$ ). Also, the DBI scores of mothers whose cesarean section delivery was caused by cephalic pelvic disproportion were significantly higher than mothers who delivered by cesarean section because of infant position ( $t=2.95$   $p. <.05$ ).

Maternal recall of concerns prior to cesarean section delivery were for the infant, for themselves regarding anesthesia or surgical pain, or relief at having the labor process terminated by delivery. The NPI I scores for mothers who felt relief that delivery was accomplished were significantly higher than mothers whose concerns were for their own

safety ( $t=3.82$   $p. <.01$ ). The same was true of the NPI II scores ( $t=2.26$   $p. <.05$ ).

Means and range values of the NPI I, NPI II, and DBI according to reasons for cesarean section delivery and maternal concerns prior to cesarean section delivery are summarized in Tables 8 and 9.

TABLE 8

Means, Range Values, and t Values for the NPI I, NPI II, and DBI  
According to Reasons for Cesarean Section Delivery.

	NPI I		NPI II		DBI	
	Mean	Range	Mean	Range	Mean	Range
Reasons for Cesarean Section Delivery						
A. Infant position (N=5)	1.20	-2.00-4.00	4.00	1.00-9.00	12.00	19.00-15.00
B. Cephalic-Pelvic disproportion (N=5)	0.20	0.00-1.00	2.40	-4.00-7.00	17.40	13.00-21.00
C. Lack of Progress (N=5)	2.40	0.00-5.00	5.40	2.00-8.00	15.40	9.00-22.00

## t Values

A and B	t=.92	t=.70	t=2.95*
A and C	t=.89	t=.76	t=1.19
B and C	t=2.62*	t=1.39	t=.67

\* p. <.05

TABLE 9

Means, Range Values, and t Value for the NPI I, NPI II, and DBI According to Maternal Concerns Prior to Cesarean Section Delivery.

Concerns	NPI I		NPI II		DBI	
	Mean	Range	Mean	Range	Mean	Range
Concern for Infant*(N=1)						
Concern for Self Safety (N=6)	-.34	-2.00-0.00	1.67	-4.00-5.00	17.33	-12.00-21.00
Relief (N=8)	2.00	0.00-4.00	5.13	2.00-8.00	13.88	9.00-22.00
t Value	t=3.82**		t=2.26***		t=1.57	

\* No statistical data computed

\*\* p. <.01

\*\*\* p. <.05

## CHAPTER IV

### DISCUSSION

#### DELIVERY METHOD

The results of this study did not support the hypotheses that mothers who experienced cesarean section deliveries would score lower on the NPI II than mothers who delivered vaginally or that mothers who experienced emergency cesarean section delivery would score lower than mothers who delivered by non-emergency cesarean section.

The group of mothers who delivered by non-emergency cesarean section scored higher on the NPI II than did mothers who delivered vaginally. This finding does not support the results reported by Reinhard (1978). Reinhard's data suggest that mothers who delivered by cesarean section scored lower on the NPI II than mothers who delivered vaginally. The higher NPI score of the non-emergency cesarean section mothers also contradicted Broussard's finding that the delivery experience of the mother had no effect on the mother's perception of her infant. There was no support for this finding from the literature reviewed. It is possible that the limited number of subjects (N=5) who delivered by non-emergency cesarean section may have been responsible for this finding. It is also possible that the mothers who delivered by non-emergency cesarean section were prepared for the event. The mother, alerted earlier in her pregnancy that cesarean section delivery was being considered, may have sought additional information that prepared her for the delivery. Thus, they may not have been experiencing an entirely unknown situation and this fact may have positively affected their perception score. These mothers may also have felt that they

received individualized attention and concern from the physician. This may have made the mother feel that she and her infant were special. It also may have caused the NPI II scores of these mothers to be higher than those of mothers who delivered vaginally. Finally, the group II mothers tended to be older than the mothers in group III, and this factor may have influenced their NPI scores.

### INTERVENING VARIABLES

#### Demographic

The demographic variables of this study were maternal age, education, and infant sex. The correlations showed no statistical significance between these variables and the NPI I, NPI II, and DBI. This finding is unlike Burns' (1978) report that maternal age, education, and infant sex affected the NPI II scores of her sample mothers. However, these findings are similar to those reported by Broussard (1970). She found that these variables did not affect the mother's perceptions of her infant.

#### Pre-Natal Support

The mother's attendance at prepared childbirth classes and the presence of the father during labor and delivery were identified as pre-natal support variables by the investigator. All of the sample mothers attended 70 percent or more of their prepared childbirth classes. It was not possible to compare the effect of the father's presence or absence during labor because all fathers were present. Most of the fathers were also present during delivery. Those who were not present were excluded from the surgical suite because of hospital policy. The fathers who were not present during delivery were from both the emergency and non-emergency cesarean section groups. The



NPI II scores of the mothers whose mates were absent during delivery were significantly higher than the scores of mothers whose mates were present during delivery ( $p. <.05$ ). This finding is difficult to explain.

Marut and Mercer (1979) found that the presence of a support person during delivery tended to decrease maternal anxiety. It is possible that the presence of a support person in the delivery room had a short term effect on the mothers. If this was so, the absence of the father during delivery should have had no effect on the findings one month later. Another possible explanation might be that the small number of subjects whose mates were absent compared to the large number whose mates were present for the delivery caused this finding. Although the finding of this study did not support that the presence of the father during delivery has a positive effect on the mother's perception of her infant, Marut and Mercer (1979) have identified the beneficial effect of having the father present during delivery.

#### Control

Three-fourths of the sample reported that labor occurred spontaneously. Without chart documentation it was not possible to verify that the labor did commence without induction. What may be significant, however, was that the mothers who reported no induction of labor perceived their labor as occurring spontaneously.

The mothers who experienced induced labor scored significantly higher on the NPI I ( $p. <.05$ ) than did mothers whose labor was spontaneous. Recalculation of the NPI I score of the sample who had induced labor, excluding the one high score reported in the findings,

changed the mean score on the NPI I for that group. The differences in the recalculated NPI I scores became statistically insignificant.

Marut and Mercer (1979) reported that perceived control of the delivery experience affected their mothers' satisfaction with the delivery experience. No other studies were reviewed that reported data related to maternal control of labor and delivery. The present study's data focused on only one variable which could be classified as control. The investigator is aware that many variables may interact to create the concept of control and that this study did not focus on them. Perceived maternal control of labor and delivery is an area that should be investigated.

#### Maternal-Infant Contact

Review of the literature (deChateau, 1976; and Kennell and Klaus, 1971) indicated that contact periods between mothers and infants affected the mother's behavior towards her infant. The effect on the mother's behavior may be of prolonged significance for the infant. The investigator questioned whether the post-partum maternal-infant contact would affect the mother's perceptions of her infant. Some mothers experienced touching contact during the first hour post-partum while some did not. There was a wide range in the total contact hours of the mothers for the first 24 hours post-partum. There were no statistically significant correlations between the NPI I, NPI II, and DBI scores and maternal-infant contact hours. These findings were not anticipated by the investigator and raised a question about the interrelationship between maternal perception and observable maternal behavior. This question needs to be considered in future research.

A consideration regarding the results, however, may have been the way in which the infants were presented to the mothers initially. deChateau (1976) and Kennell and Klaus (1971) found that presenting the naked, newly-born infant to the mother for skin to skin exploring contact enhanced attachment. deChateau also had the infants put to breast during the initial contact. These practices were not routinely carried out for the present study. It is possible that, if the initial maternal-infant contact occurred as described by deChateau, and Kennell and Klaus, the NPI II scores of the mothers would have differed significantly. The inconclusive findings of this study indicate the need for further study of the effects of maternal-infant contact.

#### Post-Partum Support

Post-partum maternal support, as defined by the investigator, included home help after hospital discharge, the father's child care activities, and contacts made by the mother for the purpose of obtaining information about physical or emotional care for herself or her infant. The data regarding maternal help after hospital discharge were obtained by asking the mother if she had had help when she and her infant came home from the hospital. There were no statistically significant findings related to maternal help after hospital discharge and maternal perception at one month. No reported research was found relevant to maternal post-partum support and maternal perceptions. The investigator questioned whether a helper at home after hospital discharge was supportive for the mother. An alternate explanation for the findings may be that even though the helper may have given positive reinforcement

to the mother for her infant care activity, this may not have affected the mother's perceptions of her infant.

Statistically there was a positive correlation between father support and the DBI ( $p. <.05$ ). This may be interpreted to mean that the more child care the father assumes, the more the mother is bothered by infant behaviors. It is possible that the father's child care activities are not supportive for the mother during the first month post-partum. These findings had not been anticipated by the investigator. The discrepancy may also have been caused by the scoring system used on the data collection tool. The investigator questioned whether data collected on the care giving activities of the father were representative of paternal support. Perhaps data related to total time spent in child care would have been a more reliable measure of the father's support. If total paternal time spent in child care is a significant support for the mother, this should be documented in future research. The investigator did not foresee this possibility and collected no data related to it.

The mothers ranked scores on the number of phone or personal contacts made to obtain information regarding physical or emotional care of the infant or herself correlated negatively with the NPI I ( $p. <.05$ ). The lower the NPI I score of the mother, the higher the number of contacts she made during the first month post-partum. The mothers with the low NPI I scores may have been exhibiting positive or compensating behaviors by reaching out for the needed child care and personal care information. Hospital personnel may be unable to anticipate the needs of the mothers and may be unable to provide them with

anticipatory guidance in home self and newborn infant care.

The sum of the support scores of the mother also correlated negatively with the NPI I. This finding seems to indicate that the mothers with lower NPI I scores had more post-partum support during the first month. There was no research available which looked at the effect of post-partum support on maternal perceptions. Research concerned with maternal support needs to be pursued.

#### Cesarean Section Delivery

The reasons for the cesarean section delivery reported by the sample were: infant position, lack of progress in labor, and cephalic pelvic disproportion. The NPI I score of mothers who delivered by cesarean section because of lack of progress in labor was statistically higher ( $p. <.05$ ) than the NPI I score of mothers who had cesarean section deliveries because of cephalic pelvic disproportion. The other significant finding related to maternal perception was that the DBI score of mothers who had cesarean section deliveries because of cephalic pelvic disproportion was significantly higher ( $p. <.05$ ) than the DBI score of the mothers who delivered by cesarean section because of infant position.

These results indicate that mothers who had cesarean section deliveries because of cephalic pelvic disproportion had a less positive perception of their infant and were bothered more by the infant's behavior than the mother who experienced a cesarean section delivery because of another reason. The small number of subjects in the group prevents the formation of conclusions from these data. The investigator speculates, however, that these mothers may have experienced a sense of failure in their first mothering role since they could not deliver their infants vaginally because of their pelvic measurements.

The other two groups of mothers delivered by cesarean section because of lack of progress or the infant's position, but not because of their own bodies. This question should be pursued in future research.

The investigator asked the cesarean section mother what her concerns were prior to the delivery of her infant. Only one mother reported that her primary concern was for her infant. This may mean then the concerns for infant safety were being anticipated and were being alleviated by hospital staff, or it may indicate that this sample of mothers was not able to focus on their infants prior to cesarean section delivery. Affonso and Stichler (1978) found that 53 percent of their sample were concerned about infant safety before cesarean section delivery. Fifty percent of this study's mothers reported having concerns about themselves compared to the 88 percent reported by Affonso and Stichler. Fifty-three percent of the mothers in the present study reported being relieved at having the labor process terminated by cesarean section delivery as compared to 30 percent of Affonso and Stichler's mothers.

The differences noted regarding maternal concerns may be accounted for in terms of the preparation for the cesarean section delivery. This study's mothers had all attended prepared childbirth classes where some pre-natal discussion of cesarean section delivery had occurred. Affonso and Stichler did not report on the childbirth preparation of their sample. This pre-natal preparation may well have answered some of the questions of the mothers regarding cesarean section delivery, and they may not have had the same fears for their safety as Affonso and Stichler's

sample. This preparation for cesarean section delivery and possible alleviation of concerns related to safety prior to the onset of labor, may also account for the higher percent of mothers in this study who felt relief that labor would be ended.

Mothers who were relieved to have labor terminated by cesarean section delivery scored significantly higher on the NPI I and NPI II ( $p < .05$ ) than did mothers whose major concerns were for their own safety. Giving the mothers anticipatory guidance may have freed her from concerns about her own safety. Mothers who were concerned for themselves may possibly have blamed the infant for putting them in an unsafe situation and therefore could have had difficulty rating their infants positively. Research is needed in this area to understand more about the role pre-natal teaching plays in alleviating safety concerns of mothers undergoing cesarean section.



CHAPTER V  
SUMMARY AND CONCLUSIONS

HYPOTHESES AND MAJOR FINDINGS

The measurement of maternal perception of her infant as compared to the average infant has been suggested as a way of screening for children who may develop psychosocial problems in childhood (Broussard and Hartner, 1970). The present study was conducted to ascertain if the delivery experiences of the mother would affect her perception of her infant. The subjects were divided into three groups according to type of delivery experienced. Group I mothers (N=10) were mothers who had one hour or less prior notification that delivery would be by cesarean section. This group was also referred to as the emergency cesarean section group. Group II mothers (N=5) were aware before starting labor that cesarean section delivery was possible and were therefore named the non-emergency cesarean section group. Group III mothers (N=25) delivered their infants vaginally. The hypotheses generated were that group I and group II mothers would score lower on the NPI II than would group III mothers, and that group I mothers would score lower than group II and group III mothers on the Neonatal Perception Inventory (NPI). Group II mothers scored statistically higher than did group III mothers at  $p < .01$  on the NPI II. These results did not support the original hypotheses.

The investigator examined variables of demographic data, maternal-infant contact, and maternal support and their effect of the dependent variable. Reasons for cesarean section delivery and maternal concerns were examined to ascertain their effect on the dependent variable for the cesarean section mothers.



Demographic data of maternal age, education and sex of the infant showed no significant correlation with the NPI I, NPI II, or DBI.

The data also did not support the suggestion that maternal-infant contact would affect the NPI I, NPI II, or DBI scores of the mothers.

Pre-natal and post-partum maternal support were examined. The six mothers whose infants were born without the father being present at delivery scored higher on the NPI II at  $p < .05$  level than did the mothers of infants whose fathers attended the delivery.

Mothers who delivered by non-emergency cesarean section did so because of cephalic-pelvic disproportion. Their NPI I, and NPI II scores were significantly higher ( $p < .05$ ) than the scores of the mothers whose cesarean section deliveries were necessitated because of infant position or lack of progress in labor. The small size of the sample may have affected these results.

#### LIMITATIONS OF THE STUDY

The sample of this study was limited in number and in heterogeneity. The sample consisted only of women who had voluntarily attended prepared childbirth classes. The results obtained are not generalizable.

Two instruments used for data collection were interview guides developed by the investigator. Responses of the subjects were limited by the instrument. Further, clarity of the data obtained was limited by the unknown content validity of the tools. Reliability and validity of the interview instruments have not been established.

The NPI was used to measure the dependent variable. Content validity, predictive validity, and reliability have not been established for this instrument, and the significance of the findings obtained by

its use may be questionable.

#### IMPLICATIONS FOR FURTHER STUDY

The investigator recommends that in future studies the sample be redefined to include a large heterogenous group of childbearing mothers. Secondly, because of the limited content validity of the data collection instruments designed by the investigator, they should be modified and have reliability and validity established.

Further areas of study which should be explored are:

1. Does the type of delivery affect the maternal-infant relationship?
2. Is there a relationship between maternal-infant contact and maternal perceptions?
3. What is the nature of the relationship between reasons for cesarean section delivery, maternal concerns prior to cesarean section delivery, and maternal perceptions?
4. Does pre-natal and/or post-partum support affect the maternal perception of the infant?
5. Are the findings related to maternal perception of the infant generalizable cross culturally?

## REFERENCES

## REFERENCES

- Affonso, D. D. "Missing Pieces"----A Study of Postpartum Feelings. Birth and the Family Journal, 1977, 4(4), 159-164.
- Affonso, D. D. and Stichler, J. Exploratory Study of Women's Reactions to Having a Cesarean Birth. Birth and the Family Journal, 1978, 5(2), 88-94.
- Bampton, B. and Mancini, J. The Cesarean Section Patient Is a New Mother Too. JOGN Nursing, 1973, July/August, 58-61.
- Broussard, E., and Hartner, M. Maternal Perception of the Neonate As Related to Development, Child Psych and Human Devel., 1970, 1(1), 16-25.
- Broussard, E. and Hartner M. Further Considerations Regarding Maternal Perception of the FirstBorn. In Hellmuth, J. (Ed.), Exceptional Infant, (Vol. 2), New York: Brunner/Mazel, 1971.
- Burns, K. Infant Behavior and Mother's Evaluation of the Infant. Unpublished master's thesis, 1978, University of Oregon Health Sciences Center, Portland, Oregon.
- Campbell D. and Stanley, J. Experimental and Quasi-Experimental Designs For Research. Chicago: Rand McNally, 1966.
- Collias, M. The Analysis of Socialization in Sheep and Goats. Ecology, 1956, 37, 228.
- de Chateau, Peter. The Influence of Early Contact on Maternal and Infant Behavior in Primiparae. Birth and the Family Journal, 1976, 3(4), 149-155.
- Enkin, N. Having a Section is Having a Baby. Birth and the Family Journal, 1977, 4(3), 99-102.
- Hibbard, L. Changing Trends in Cesarean Sections. Am. J. of Obstet. Gynecology, 1976, 125(6), 798-804.
- Hersher, L., Moore, A., and Richmond, J. Effect of Post-Partum Separation of Mother and Kid on Maternal Care in the Domestic Goat. Science, 1958, 128, 1342.
- Kennell, J. and Klaus, M., et. al. Maternal Behavior One Year After Early and Extended Post-Partum Contact. Develop. Med. Child Neurol. 1974, 16, 172-179.
- Klaus, M., and Kennell, J., et. al. Human Maternal Behavior At the First Contact With Her Young. Pediatrics, 1970, 46(2), 187-192.

Klaus M. Maternal Attachment: Importance of the First PostPartum Days. New England Journal of Medicine, 1972, 286(9), 460-463.

Imle, I. New Mother's Perceptions of Their First Born In Relation to Timing of the Teaching By the Nurse. Unpublished study funded by the University of Wyoming Faculty Research Grant-In-Aid, University of Wyoming, Laramie, 1977.

Marut, Joanne, and Mercer, Ramona. "A Comparison of Primipara's Perceptions of Vaginal and Cesarean Births", paper presented at the Western Interstate Commission for Higher Education Communicating Nursing Research, May 1979, Denver, Colorado.

Mevs, L. The Current Status of Cesarean Section and Today's Maternity Patient. JOGN Nursing, 1977, July/August 1977, 44-47.

Reinhard, C., M.A. Project Director Maternal-Infant Bonding Project, Portland, Oregon, Funded by CETA, United Way, and other contributions; Personal Communication, August 1978.

Reynolds, C. Updating Care of Cesarean Section Patients. JOGN Nursing, July/August 1977, 48-51.

Robson, K. and Moss H. Patterns and Determinants of Maternal Attachment. J. Ped., 1970, 77(6), 976-985.

APPENDIX A  
Neonatal Perception Inventory I  
(Broussard, 1970)

Identification Number \_\_\_\_\_

Date \_\_\_\_\_

NEONATAL PERCEPTION INVENTORY I

AVERAGE BABY

Although this is your first baby, you probably have some ideas of what most little babies are like. Please check the blank you think best describes the AVERAGE baby.

How much crying do you think the average baby does?

\_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
 a great deal      a good bit      moderate amount      very little      none

How much trouble do you think the average baby has in feeding?

\_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
 a great deal      a good bit      moderate amount      very little      none

How much spitting up or vomiting do you think the average baby does?

\_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
 a great deal      a good bit      moderate amount      very little      none

How much difficulty do you think the average baby has in sleeping?

\_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
 a great deal      a good bit      moderate amount      very little      none

How much difficulty does the average baby have with bowel movements?

\_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
 a great deal      a good bit      moderate amount      very little      none

How much trouble do you think the average baby has in settling down to a predictable pattern of eating and sleeping?

\_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
 a great deal      a good bit      moderate amount      very little      none

Identification Number \_\_\_\_\_

Date \_\_\_\_\_

NEONATAL PERCEPTION INVENTORY I

YOUR BABY

While it is not possible to know for certain what your baby will be like, you probably have some ideas of what your baby will be like. Please check the blank that you think best describes what your baby will be like.

How much crying do you think your baby will do?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much trouble do you think your baby will have feeding?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much spitting up or vomiting do you think your baby will do?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much difficulty do you think your baby will have sleeping?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much difficulty do you expect your baby to have with bowel movements?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none



How much trouble do you think that your baby will have settling down to a predictable pattern of eating and sleeping?

\_\_\_\_\_

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

APPENDIX B  
Neonatal Perception Inventory II  
(Broussard, 1979)

Identification Number \_\_\_\_\_

Date \_\_\_\_\_

NEONATAL PERCEPTION INVENTORY II

AVERAGE BABY

Although this is your first baby, you probably have some ideas of what most little babies are like. Please check the blank you think best describes the AVERAGE baby.

How much crying do you think the average baby does?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much trouble do you think the average baby has in feeding?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much spitting up or vomiting do you think the average baby does?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much difficulty do you think the average baby has in sleeping?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much difficulty does the average baby have with bowel movements?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much trouble do you think the average baby has in settling down to a predictable pattern of eating and sleeping?

\_\_\_\_\_

a great deal

\_\_\_\_\_

a good bit

\_\_\_\_\_

moderate amount

\_\_\_\_\_

very little

\_\_\_\_\_

none

Identification Number \_\_\_\_\_

Date \_\_\_\_\_

NEONATAL PERCEPTION INVENTORY II

YOUR BABY

You have had a chance to live with your baby for a month now. Please check the blank you think best describes your baby.

How much crying has your baby done?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much trouble has your baby had feeding?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much spitting up or vomiting has your baby done?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much difficulty has your baby had in sleeping?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much difficulty has your baby had with bowel movements?

_____	_____	_____	_____	_____
a great deal	a good bit	moderate amount	very little	none

How much trouble has your baby had in settling down to a predictable pattern of eating and sleeping?

\_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
a great deal      a good bit      moderate amount      very little      none

APPENDIX C  
Degree of Bother Inventory  
(Broussard 1970)

Identification Number \_\_\_\_\_

Date \_\_\_\_\_

## DEGREE OF BOTHER INVENTORY

Listed below are some of the things that have sometimes bothered other mothers in caring for their babies. We would like to know if you were bothered about any of these. Please place a check in the blank that best describes how much you were bothered by your baby's behavior in regard to these.

Crying	<u>a great deal</u>	<u>somewhat</u>	<u>very little</u>	<u>none</u>
Spitting up or	<u>a great deal</u>	<u>somewhat</u>	<u>very little</u>	<u>none</u>
Vomiting	<u>a great deal</u>	<u>somewhat</u>	<u>very little</u>	<u>none</u>
Sleeping	<u>a great deal</u>	<u>somewhat</u>	<u>very little</u>	<u>none</u>
Feeding	<u>a great deal</u>	<u>somewhat</u>	<u>very little</u>	<u>none</u>
Elimination	<u>a great deal</u>	<u>somewhat</u>	<u>very little</u>	<u>none</u>
Lack of predict- able schedule	<u>a great deal</u>	<u>somewhat</u>	<u>very little</u>	<u>none</u>
Others: (Specify)	<u>a great deal</u>	<u>somewhat</u>	<u>very little</u>	<u>none</u>
- - - - -	<u>a great deal</u>	<u>somewhat</u>	<u>very little</u>	<u>none</u>
- - - - -	<u>a great deal</u>	<u>somewhat</u>	<u>very little</u>	<u>none</u>
- - - - -	<u>a great deal</u>	<u>somewhat</u>	<u>very little</u>	<u>none</u>
- - - - -	<u>a great deal</u>	<u>somewhat</u>	<u>very little</u>	<u>none</u>



APPENDIX D  
Hospital Interview Guide

Hospital Interview Guide  
Maternal Perception Study

Identification Number \_\_\_\_\_

Date \_\_\_\_\_

Mother's age \_\_\_\_\_

Father's age \_\_\_\_\_

Gravida \_\_\_\_\_ Para \_\_\_\_\_ Spontaneous Ab. \_\_\_\_\_

Due Date \_\_\_\_\_ Delivery date \_\_\_\_\_ Baby's sex \_\_\_\_\_

Demographic Data

Marital Status \_\_\_\_\_

Mother's educational level \_\_\_\_\_

Father's educational level \_\_\_\_\_

Mother's occupation \_\_\_\_\_

Father's occupation \_\_\_\_\_

Pre-Natal Data

1. When during your pregnancy did you first seek medical care? \_\_\_\_\_  
\_\_\_\_\_

2. Once your pregnancy was confirmed, did you continue with regularly  
scheduled appointments? \_\_\_\_\_

a. If your answer to 2 is no, what were your reasons? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Was this a planned pregnancy? \_\_\_\_\_

## Hospital Interview Guide

4. Did you attend prepared childbirth education classes? \_\_\_\_\_  
(If your answer to question 4 is "No", omit questions 7 through 10.  
If your answer to question 4 is "Yes", omit question 5.)
5. If no, were you referred to classes? \_\_\_\_\_
6. Who referred you to the classes? \_\_\_\_\_
7. When during your pregnancy did you start attending the classes?  
\_\_\_\_\_
8. How many classes did you attend? \_\_\_\_\_
9. Did you complete the course before you delivered? \_\_\_\_\_
10. Was cesarean section information given during the classes? \_\_\_\_\_
11. What time did your labor start? \_\_\_\_\_
12. Did it start spontaneously? \_\_\_\_\_
13. Was labor induced? \_\_\_\_\_
14. If labor was induced, what reason were you given for it? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
15. What time was your baby born? \_\_\_\_\_
16. Did you and your physician agree on the type of anesthetic you  
would have before your labor started? \_\_\_\_\_
17. Did you have the type of anesthetic you had decided upon? \_\_\_\_\_
18. If you had a different type of anesthetic, what was the reason?  
\_\_\_\_\_  
\_\_\_\_\_
19. Did you plan on the baby's father being with you during labor? \_\_\_\_\_
20. Was he with you during labor? \_\_\_\_\_

## Hospital Interview Guide

21. If not, and he had planned to be with you, what caused you to change your plans? \_\_\_\_\_
22. Did you plan on the baby's father being in the delivery room during the baby's birth? \_\_\_\_\_
23. Was he in the delivery room during the baby's birth? \_\_\_\_\_
24. If not, and he had planned to be, what was the reason? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
25. How soon after the baby's birth did you see the baby? \_\_\_\_\_  
\_\_\_\_\_
26. Approximately how soon after the baby's birth did you get to hold the baby? \_\_\_\_\_
27. Approximately how long was the baby with you for the first time?  
\_\_\_\_\_

Cesarean Section Deliveries

28. How soon before your baby was born were you told that you needed a cesarean section? \_\_\_\_\_
29. Who told you? \_\_\_\_\_
30. Was the baby's father present? \_\_\_\_\_
31. Was he told before you were? \_\_\_\_\_
32. What reasons were you given for the needed cesarean section?  
\_\_\_\_\_  
\_\_\_\_\_

## Hospital Interview Guide

33. What were your concerns and feelings after being told that your baby would be delivered by cesarean section? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
34. Did the baby's father have the choice of being present in the delivery room or not? \_\_\_\_\_

Post Partum

35. Approximately how much time of the first 24 hours after birth was the baby with you? \_\_\_\_\_
36. Did this amount of time seem appropriate to you? \_\_\_\_\_
37. Did hospital personnel or policy influence the amount of time the baby was with you? \_\_\_\_\_
38. If yes, in what way? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
39. How soon after the baby's birth did you have the baby for a feeding? \_\_\_\_\_
40. Did you bottle feed or breast feed the baby? \_\_\_\_\_
41. Had you planned to feed the baby this way before delivery?  
\_\_\_\_\_
42. If not, what made you change your feeding method choice? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

APPENDIX E

Infant Log

## Thesis

Sylvia McSkimming R.N., B.S.

Please attach a log to the charts of all infants who themselves meet the admission criteria for this study and whose mothers meet the admission criteria. The criteria are as follows:

Mothers

1. The mother must be a primipara.
2. The mother is free from pre-existing handicapping conditions which would affect her ability to assume the caregiving role.
3. The mother experiences no complications from the labor or delivery that influences her ability to care for her infant, e.g. hemorrhage, respiratory distress, or surgical complications.
4. The mother plans to keep the baby.
5. The mother must have registered for and attended Prepared Childbirth Education Classes. She must have attended 70% or 5 of the 7 classes.
6. The mother's primary language must be English.

Infant

7. The baby must have a gestational age of at least 36 weeks as determined by a physician.
8. The infant's health must be such that it may be brought to its mother's bedside on request during the first 24 hours after birth.
9. The baby has no observable congenital anomalies.

Your assistance in keeping the logs for the infant's first 24 hours of life is very much appreciated. If you have any questions, please contact me at 255-4027.

Sylvia McSkimming R.N., B.S.





APPENDIX F

One Month Post Partum Interview Guide

One Month Post Partum Interview Guide  
Maternal Perception Study

Identification Number \_\_\_\_\_

Date \_\_\_\_\_

1. Did you stay in the hospital the expected number of days? \_\_\_\_\_
2. How long did you stay in the hospital? \_\_\_\_\_
3. Did you and your baby come home on the same day? \_\_\_\_\_
4. If not, what was the reason? \_\_\_\_\_  
\_\_\_\_\_
5. When did your baby come home from the hospital? \_\_\_\_\_
6. Did you have help at home when you came home from the hospital?  
\_\_\_\_\_
7. Who was the helper? (relationship to mother) \_\_\_\_\_
8. How long did your helper stay with you? \_\_\_\_\_
9. How much child care activity did you assume when your helper was with you? (be specific) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
10. How much child care activity did the baby's father assume when the helper was with you? (be specific) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
11. How much child care activity does the baby's father assume now? (be specific) \_\_\_\_\_  
\_\_\_\_\_

## One Month Post Partum Interview

12. Have you been to the doctor for your scheduled post partum check up? \_\_\_\_\_
13. Have you taken your baby for its first well baby check? \_\_\_\_\_
14. Have you telephoned your doctor for information regarding your physical condition? \_\_\_\_\_
15. Have you telephoned your doctor for information regarding your baby's physical condition? \_\_\_\_\_
16. Have you phoned other professional resources for information about your physical condition? \_\_\_\_\_
17. Have you phoned other professional resources for information about your baby's physical condition or needs? \_\_\_\_\_
18. Approximately how many calls do you think that you made to professional sources for information this past month? \_\_\_\_\_
19. Have you sought the above information from non professional sources? (friends, relatives, etc.) \_\_\_\_\_
20. Approximately how many contacts did you make with non professionals for this information this past month? \_\_\_\_\_

Child Birth Education Class Members

21. Were after delivery classes or reunions scheduled? \_\_\_\_\_
22. Did you attend? \_\_\_\_\_
23. Did you think they were useful or helpful? \_\_\_\_\_
24. If yes, in what way? \_\_\_\_\_  
\_\_\_\_\_
25. If not, what was the reason? \_\_\_\_\_

APPENDIX G

Consent Form for Human Research



UNIVERSITY OF OREGON  
HEALTH SCIENCES CENTER

GRADUATE STUDIES DEPARTMENT  
SCHOOL OF NURSING

Area Code 503 225-7838

69

3181 S.W. Sam Jackson Park Road

Portland, Oregon 97201

### INFORMED CONSENT

I, \_\_\_\_\_, herewith agree to  
(First Name) (Middle Name) (Last Name)

serve as a subject in the investigation named, "Compariaon of the Affect of the Type of Delivery Upon the Mother's Perception of Her Baby", conducted by Sylvia McSkimming, R.N., B.S., under the supervision of Wilma Peterson, R.N., Ph.D.

The investigation aims at discovering if the type of delivery experienced by the mother will affect how she perceives her baby. The procedures to which I will be subjected are: an in-hospital interview lasting approximately 30 minutes, filling out questionnaires while in the hospital which will require approximately 10 minutes, an interview in my home lasting approximately 30 minutes and conducted when my baby is about one month old, and filling out questionnaires during the home visit of the investigator. The nursery staff will also collect information on the amount of time my baby is in the nursery and in my room with me during its first 24 hours of life. Although I will not benefit directly, my participation in this study will help nurses learn more about how delivery experiences can affect the mother's perceptions of her infant. This information will aid nurses in providing better individualized care for new mothers and their babies in the future.

The information obtained by the investigator will be kept confidential. My name will not appear on the records and anonymity will be insured by the use of code numbers. Sylvia McSkimming has offered to answer any questions that I might have about my participation in this study. I understand I am free to refuse to participate or to withdraw from participation in the study at any time without effect on my relationship with or treatment at

and

---

(Childbirth Education Class)

---

(Name of Institution)

---

(Date)

---

(Subject's Signature)

---

(Witness's Signature)

Sylvia McSkimming is a regularly enrolled graduate student in the School of Nursing, University of Oregon Health Sciences Center. I will appreciate your cooperation in this study.

---

Wilma E. Peterson, R.N., Ph.D.  
Thesis Advisor  
Associate Professor - Project Director  
Family Centered Child Nursing  
Department of Graduate Studies

ABSTRACT

AN ABSTRACT OF THE THESIS OF  
SYLVIA A. McSKIMMING

For the MASTER OF NURSING

Date of Receiving this Degree: June 8, 1979

Title: COMPARISON OF THE EFFECT OF THE TYPE OF DELIVERY UPON THE  
MOTHERS'S PERCEPTION OF HER BABY

Approved: 

Wilma E. Peterson, Ph.D., Thesis Advisor

The measurement of maternal perception of the infant as compared to the average infant has been suggested as a way of screening for children who may develop psychosocial problems in childhood (Broussard and Hartner, 1970). The present study was undertaken to ascertain if the delivery experiences of the mother would affect the perception of her infant. The subjects were divided into three groups according to type of delivery experienced. Group I mothers (N=10) were mothers who had one hour or less prior knowledge that delivery would be by cesarean section. This group was also referred to as the emergency cesarean section group. Group II mothers (N=5) were aware before starting labor that cesarean section delivery was possible and were therefore named the non-emergency cesarean section group. Group III mothers (N=25) delivered their infants vaginally.

The hypotheses generated were that group I and group II mothers would score lower on the Neonatal Perception Inventory (NPI) than would group III mothers, and that group I mothers would score lower than group II and group III mothers. Data were collected with two interview instruments, the Infant Log, and the NPI I, NPI II, and Degree of Bother



Inventory. Maternal interviews were conducted 24-48 hours and 27-35 days post-partum.

Major findings of the study were:

1. The hypotheses generated were not supported by the findings.
2. Mothers who delivered by non-emergency cesarean section had a statistically higher NPI II score ( $p < .05$ ) than mothers who delivered vaginally.
3. Cesarean section mothers who had cephalic-pelvic disproportion scored higher on the NPI II than other cesarean section mothers.
4. Neither the time of the initial post-partum maternal-infant contact, nor the amount of time spent in contact during the first 24 hours post-partum affected the maternal perception score.

Research questions raised by this study relates to the above findings.