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ACKNOWLEDGMENTS

THE EFFECTS OF THE CHILDBIRTH PROCESS
ON THE ATTITUDES AND BEHAVIORS
OF NEW FATHERS

by

Janice Ryser

Appreciation is extended to the nursing staff at the Logan
Hospital who provided the setting for this study.
A special thanks is extended to my family for their patience,
help, and support during the completion of this thesis.
I would like to thank my committee members whose
encouragement and suggestions led to the quality and comple-
tion of this thesis: Rita W. Smith, chairperson; Dr. J. Craig Peery,
committee chairman; Dr. Jay D. Harnovick and Dr. John Keith,
committee members.

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Family and Human Development

ACKNOWLEDGMENTS

I would like to thank friends and committee members whose encouragement and assistance have added to the quality and completion of this thesis: Nita Weber, editing; Dr. J. Craig Peery, committee chairman; Dr. Jay D. Schvaneveldt and Dr. John Keith, committee members.

Appreciation is extended to the nursing staff at the Logan Hospital who assisted with data collection and to Jane Post who made programming and computerizing of data possible.

A special thanks is extended to my family for their patience, help, and persistent encouragement.

Janice Ryser

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ABSTRACT

The Effects of the Childbirth Process on the
Attitudes and Behaviors of New Fathers

by

Janice Ryser, Master of Science

Utah State University, 1981

Major Professor: Dr. J. Craig Peery
Department: Family and Human Development

Attitudes of 74 first-time fathers were studied as they varied by childbirth preparation and participation. A 50-variable questionnaire was used to tap fathers' attitudes towards their marital relationship and partner, their infants, themselves as fathers, and the pregnancy/childbirth experience.

Fathers agreed on being elated with fatherhood, wanting tactile, verbal, and extended home contact with their infants, planning on a partnership in parenting, and seeing their marriage at a high point. They saw pregnancy as a time of stress and adjustment and felt father participation was important. Their attitudes varied most on wife's performance and their own helpfulness through labor and delivery.

The variance and the numerous relationships of the 50 variables were consolidated through factor analysis. 2 x 2 ANOVA on eight factors revealed the effects of preparation and participation. It was found that participation increases the father's respect for his wife, gives him more purpose in the childbirth, and increases his

elation at becoming a father. The prepared and participating father realized the importance and responsibility of his participation and perceived his infant as being perfect.

A trend was seen between preparation and concerns with the infant time involvement, the pleasure with the news of pregnancy, and a desire to go through the childbirth experience again. Merit was also given to a lack of preparation and participation through the results of analysis on Factor II--The triad. The nonprepared nonparticipating fathers saw the marriage at a high point, showed tactile and visual engrossment, and planned on a parenting partnership more than any other group of fathers in the sample.

(90 pages)

CHAPTER I

INTRODUCTION

Margaret Mead's attitude of the fifties that "fathers are a biological necessity but a social accident" has been greatly changed in recent years through the discovery of and early involvements of fathers (Parke & Sawin, 1976, p. 365). Most influential in the current trends is the popularity of natural and/or shared childbirth practices. This study illuminates fathers' attitudes towards wives, infants, fatherhood, and the marital relationship through the experience of childbirth. It specifically focuses on the effects of childbirth preparation and participation on these attitudes.

Originating in Europe and Russia through the efforts of Dr. Fernand Lamaze and Dr. Fredrick Leboyer and adapted to the United States by Dr. Grantly Dick-Read, Dr. Robert Rutherford, and Dr. Robert Bradley, are the techniques and philosophies of preparation for and participation in childbirth by both parents. Involvement of the father with his "fathering" role before, during, and immediately after the birth of his child are coming to be considered very important aspects of the transition to fatherhood.

The partnership in birth process has forced many practitioners and facilities into adjusting longtime policies. Granting admission of fathers into the delivery room was a fought for privilege. This practice is applauded as a facilitator in the marriage relationship, in the attitudes and feelings towards the wife, the child, the birth

experience, and parenting; and in the incorporation of fathers into "fathering." Yet the effects of childbirth preparation and participation on the fathers' attitudes have not been adequately researched. Most of the available theories are only speculation. Studies that do deal with attitudes and behaviors of fathers are full of excuses for the inadequacy of the approach. Pederson and Robson (1969, p. 472) states: "It causes great embarrassment to report that the actual data on father participation were secured by interviewing the mothers."

Even those who have attempted to identify the father's purpose and role in childbirth do not agree. Wonnell (1971, p. 591) states: "the education and involvement of the expectant father for the childbirth is one of the most controversial innovations of the maternity scene today."

Dr. Robert Bradley (1965) expresses his stand on the purpose of father involvement in this statement:

Let us not lose sight of the great underlying principle that is fundamental to the concept of a husband as a participant in the birth process--preparation and training of both parents to achieve birth without the use of anesthetics rather than with the older medicated delivers. (p. 21)

James Barbour (1976) made the following comments at the 1976 Ninth Biennial Convention of the International Childbirth Education Association:

My study shows that a shared childbirth enhances the marital relationship. Even without the presence of the husband, a couple may draw closer together, but a shared experience increases this mutual respect. ... the main reason for the fathers participation is to give meaning to him and have a long term effect on his fathering rather than to aid the mother. (p. 129)

This controversy of the maternity scene is further emphasized when one separates childbirth preparation from participation.

Dr. Bradley (1965) states:

Husbands have no business being with their wives in labor unless: 1) the wife has been trained how to perform in labor and has physically prepared her birth giving muscles; 2) the husband has been prepared so that he understands how, why and what his wife is doing, enabling him to coach, guide, and encourage her in her ennobling work. (p. 21)

As practitioners seek a resolution to the controversy of regulations and reasons behind father involvement, an entirely independent theoretical basis is formed. This is the theory of attachment or bonding.

Kennell, Voos and Klaus (1976, p. 25) define attachment as "an affectional bond between two individuals that endures through time and space and serves to join them emotionally." Similar definitions emphasize the reciprocal aspects of the bond between individuals. Freud (1949), Bowlby (1969), and Ainsworth (1969) independently agree upon and stress that the mother-infant bond be developed and consistently maintained early in the life of the infant. If this bond is not developed in infancy and maintained in childhood, the child is thought to be deprived of a chance for normal, healthy development and social adjustment.

Although the theory of mother-infant bonding is not new, the isolation of a father-infant bond is. Greenberg and Morris (1974) took a serious look at the traditional mother-infant attachment theory and identified seven aspects applicable to fathers. They employ the term "engrossment" and define it as:

... a sense of absorption, pre-occupation, and interest in the infant. The potential for engrossment in ones' newborn is considered an innate potential, and it is hypothesized that it is the early contact with the infant which releases this potential for involvement. Engrossment thus refers to the link-up of father to newborn from the point of reference of the father. (p. 521)

The seven characteristics of engrossment identified by Greenberg and Morris (1974) include infant and paternal aspects. These characteristics include: 1) visual awareness of the newborn, 2) tactile awareness of the newborn, 3) a strong attraction to the newborn leading to a focusing of attention upon the infant, 4) extreme elation, often described as a "high," 5) awareness of distinct characteristics of the newborn, 6) the infant perceived as perfect, and 7) the father feeling an increased sense of self-esteem. In addition, they point out the father's response to his feelings of involvement with the newborn and the impact of normal reflex activity and behavior of the newborn on engrossment. Hence, the reciprocity noted in the definition of attachment.

Pertinent to the theory of bonding are the assumptions regarding factors that will enhance this bond. Researchers have attempted to determine what these factors are. Again there is much more researched in the maternal than the paternal area. There is considerable agreement on the necessity of close and early mother-infant interaction to enhance maternal attachment (Leifer, 1972; Ringler, Kennell, Jarvella, Navojosky, & Klaus, 1975; Bowlby, 1958). Klaus, Jerauld, Kreger, McAlpine, Steffa, and Kennell (1972) investigated the effects of separation of the infant from the mother after delivery and during the first two postpartum days. They determined that 16 extra hours of

contact and interaction between infant and mother in this early time period will positively affect the mother-infant bond and subsequent interactions with the infant.

Greenberg and Morris (1974) cited above have focused on early father-infant involvement as a facilitator to the engrossment process. Through questionnaire and interview data, it was determined:

... the fathers begin developing a bond to their newborn by the first three days after birth ... It is likely that the greater the early physical contact with the infant, the more likely it is that engrossment will occur. The first hour after birth may be the significant period and an important time for the father to have contact with the newborn ... Further studies would be necessary to determine ... whether the presence at the birth is highly significant contact in the development of engrossment. (pp. 526-527)

Leifer (1977) has gone one step beyond the early involvement principle. She studied early psychological changes occurring during the first pregnancy and early postpartum months. Her assumption was that adaptation to the maternal role follows developmental tasks requiring many adjustments during pregnancy and early motherhood. The resolution of and ability to cope with these tasks were predictive of the attitudes and adjustments to parenthood. From her results it is evident that the entire pregnancy can have predictable effects on mothering.

Coley and James (1976) discuss reactions of fathers during pregnancy. They cite studies that indicate that fathers undergo psychological and physiological stresses during pregnancy. These pregnancy stresses have a great effect on the father's attitudes and reactions to the delivery and to fatherhood. Examples of unusual father reactions emphasize how important the pregnancy period actually

is. Commitments are made or responsibilities rejected during pregnancy.

Whether in practice or in theory the debate over father attitudes, involvements and purposes in childbirth remains unresolved due to a lack of actual research. Perhaps the study of Cronenwett and Newmark (1974) has come closer than any other research in attempting to clarify the effects of childbirth preparation and participation upon fathers. With a nondirectional approach they investigated the joint and separate effects of preparation through formal education and participation through delivery room experience. Their study indicated no measurable differences in the paternal-child relationship resulting from variations in the father's delivery-associated experiences. They found positive influences on the couple's relationship through separate or joint preparation and participation. They also found an increase in positive responses to childbirth by the prepared attenders. They concluded that:

Fathers should be allowed to attend delivery whether or not they have had formal preparation for attendance, since an increase in the degree of positive responses to childbirth was obtained by attendance alone. If these positive feelings and a sense of self-growth and increased self-worth are associated with the childbirth, it is hard to imagine that this will not positively effect other aspects of assumption and enactment of the father role. (p. 216)

While the literature shows wide gaps in father research, current practices operate on the merits of assumptions alone. Obviously there is much to learn about fathers and their roles in pregnancy and childbirth. It is yet to be determined if father involvement

be for the benefit of the wife, the father, or the father-infant relationship. The actual association between preparation and participation is yet to be determined. The purpose of this study is to help fill these gaps and resolve these controversies. This can only be accomplished through tapping fathers' actual attitudes as close to the childbirth experience as possible. A four group separation of fathers according to preparation and/or participation can be employed to determine their veritable effects on fathers' attitudes.

Since this investigator is of the opinion that participation with or without preparation enhance the childbirth experience and overall attitudes a directional approach will be taken. It is hypothesized that preparation and/or participation will: 1) increase the father's respect for his wife, 2) give more purpose and direction to the father through childbirth, and 3) enhance infant engrossment.

CHAPTER II

METHOD

Subjects

The subjects were 74 first-time fathers drawn from a population of fathers of infants delivered at the Logan Hospital from August of 1978 to October of 1979. Fathers ages ranged from 19 to 39 years, mean age was 25 years. Education ranged from high school to post-doctorate, mean was 2 years of college. Occupations varied from professional to student with 31 of the subjects being students at Utah State University. Income ranged from under \$5,999 to \$29,999; mean was \$17,000. Only fathers with healthy term infants were included in the study. Infants with low Apgar scores or special considerations after delivery were excluded.

The Logan Hospital in Logan, Utah was the setting for this study. The large population of young married couples, facilitated by the State University in Logan and the predominant religious influence of the L.D.S. Church, which emphasizes families, contribute to a high birth-rate and positive thrust for parenting. Childbirth preparation classes for husbands and wives are offered by the Logan Hospital and the Cache Valley Childbirth Education Association (Lamaze). Father participation in delivery is not only allowed (regardless of the preparation of the father) but is encouraged by medical personnel. Father involvement is limited only when a Cesarean section is necessitated. Fathers are not

allowed to witness a C-section. During hospitalization fathers are as free to interact with their infants as are their wives.

Preparation for childbirth ranged from no prenatal classes to ten classes. Fathers attending less than three classes were considered nonprepared. Participation in childbirth included going with wives for check-ups, attending wives through labor and/or delivery, to no participation at all. Fathers who did not witness the birth were considered nonparticipants. Four groups were identified: 1) Prepared Participants (PP), 2) Nonprepared Participant (NP), 3) Prepared Nonparticipants (PN), and 4) Nonprepared Nonparticipants (NN). Demographic characteristics of the preparation participation groupings are shown in Table 1.

Data Collection

Each father having his first child was introduced to the study by the admitting delivery room nurse or the investigator. A brief written explanation of the purpose of the study was provided in the form of a flyer (Appendix A). If the father agreed to participate in the study, he was given a questionnaire shortly after the delivery of the infant. Questionnaires were returned to the delivery room by the fathers in a sealed envelope. Although the fathers and their wives signed the questionnaire as an indication of their agreement to the study, anonymity was assured and maintained. Names were used only to determine accuracy in the preparation and participation indicators.

Table 1

Demographic Profile of Sample Concerning Education, Socio-economic Status, Years Married, Preparation, and Participation

	Total	PP	PN	NP	NN
Education					
High School	23	10	7	4	2
College	43	23	7	10	3
Graduate Studies	8	4	1	2	1
Occupation					
Professional/Technical	15	8	2	4	1
Farmer/Rancher	4	2	1	1	0
Manager/Proprietor	4	1	1	2	0
Clerical Worker	1	1	0	0	0
Equipment Operator	4	0	2	0	2
Laborer	8	3	2	2	1
Sales Worker	2	1	0	1	0
Craftsman/Foreman	4	2	2	0	0
Student	31	19	5	4	2
Income					
Under \$4,999	6	3	1	1	1
\$5,000 to \$9,999	35	21	7	4	3
\$10,000 to \$14,999	17	9	3	4	1
\$15,000 to \$19,999	10	3	2	4	1
\$20,000 to \$29,999	4	1	2	0	0
\$30,000 to \$39,999	1	0	0	1	0
Years Married					
One year	46	24	8	9	5
Two years	14	5	5	3	1
Three to five years	12	7	2	2	0
Over five years	2	1	1	1	0
Preparation					
Lamaze/hospital	53	37	16		
No preparation (<3 classes)				15	6
Participation					
Check-ups	47	27	9	9	2
Labor	67	37	12	15	3
Delivery	52	37	0	15	0
Cesarean section	18	0	15	0	3
No participation	7	0	4	0	3

The Instrument

The instrument used to obtain attitudes of the fathers was a 50-question questionnaire, with a four-point Likert type scale. Questions were obtained from those used in the Cronenwett and Newmark (1974) study or are adaptations derived from a theoretical basis of engrossment or developmental tasks of pregnancy as presented in the introduction. A complete questionnaire is included in Appendix B. The questionnaire was preceded by background information and was concluded by an open-ended response provision.

To provide a more precise picture of the instrument to the reader, Table 2 has been prepared. Analysis of a 50-question questionnaire can be very cumbersome. Continuous cross-reference to the complete questionnaire in Appendix B is also very awkward to the reader. Table 2 outlines the theoretical basis of the questions and abbreviates them for further reference. A brief view of results are also included here so that the reader might familiarize himself with those questions which proved most significant.

A trial sampling of 20 fathers was used to test the face validity of the questionnaire. Discussion with these fathers provided information which helped to clarify the statements and contents. Reliability of the questionnaire is left to further investigation. This questionnaire has not previously been utilized in this same research design. Questions used from previous studies offer some evidence of between-researcher stability.

Table 2
 Fifty Variable Theoretical Basis, Abbreviated
 Reference and Statistical Effectiveness

1.	I am elated about becoming a father. Based on engrossment characteristic >Mean Factor I	Elated
2.	I felt increased stress during pregnancy. Based on pregnancy developmental task model <Mean No correlation No further significance	Pg. stress
3.	Childbearing is women's work. Childbirth and father participation attitudes Factor III	Woman's work
4.	My wife was beautiful during childbirth. Attitude toward wife (respect)* >Standard Deviation High correlations Factor I	Wife beautiful
5.	I am confused about my role as a father. Direction as a father Factor IV	Role confusion
6.	My wife was difficult to live with during pregnancy. Pregnancy developmental task model No correlation Factor VI	Wife difficult
7.	The baby already seems to have a personality of his/her own. Based on engrossment characteristic* No correlation Factor VII	Personality
8.	My wife and I have openly communicated our feelings during pregnancy. Based on pregnancy developmental task model Factor VI	Communication
9.	I didn't know what to do to help my wife during pregnancy. Based on pregnancy developmental task model and father involvement Factor V	Pg. help

Table 2

Continued

10.	My baby is perfect. Based on engrossment characteristic Factor III	Perfect
11.	I plan on a partnership in parenting responsibilities with my wife. Marital Relationship; parenting roles and attitudes >Mean Correlations Factor II	Partnership
12.	Pregnancy requires a major adjustment for expectant fathers as well as for mothers. Based on pregnancy developmental task model <Mean Negative correlation #11 Significance by Participation on Nonfactored Question Analysis	Pg. adjustment
13.	I felt that I didn't help anyone by being in labor (or delivery) Shows purpose and direction for the father* >Standard Deviation Numerous correlations Factor I	L & D help
14.	It is important to me to touch and hold my infant. Based on engrossment characteristic* >Mean Numerous correlations Factor II	Touch
15.	My wife did a great job in labor. Attitude toward wife (respect)* High correlations Factor I	Wife great job
16.	If I could so choose, -I would not be a father at this time Based on engrossment and father involvement >Mean No correlation No further significance	Not be a father
17.	I really felt close to my wife during labor (or delivery) Marital relationship and attitude toward wife* Numerous correlations Factor I	Close in L & D

Table 2

Continued

18.	I am afraid of my baby. Based on engrossment characteristic Negative correlation #12 Factor IV	Afraid of baby
19.	I feel there won't be much more responsibility as a father than there is as a husband Father involvement and acceptance of commitment Numerous correlations Factor III	Responsibility
20.	I was pleased with the news that my wife was pregnant. Attitude toward pregnancy Significance by Preparation on Nonfactored Question Analysis	Pleased with pg. news
21.	There are some things that I would change about my baby. Based on engrossment characteristic No correlation Factor VII	Change baby
22.	I was the person who helped my wife most during labor (or delivery). Shows purpose and direction for father* >Standard Deviation Factor I	Helped most in L & D
23.	I really felt pressured by my wife to parti- cipate during labor (or delivery). Father involvement attitude Factor VIII	Pressured
24.	I could watch my infant for hours. Engrossment characteristic >Mean Numerous correlations Factor II	Watch
25.	Pregnancy and childbirth are traumatic experiences. Attitude toward the pregnancy and childbirth experience* <Mean No correlation No significance on Nonfactored Question Analysis	Trauma
26.	My wife made me feel that I'd really helped. Marital relationship; wife attitude* Factor II	Wife made me feel

Table 2

Continued

27.	I have no desire to go through this experience again. Attitude toward childbirth and pregnancy No correlation No significance on Non- factored Question Analysis	Not again
28.	It will take a long time before I feel like a father. Father involvement attitude; engrossment characteristic >Standard Deviation Factor IV	Feel like father
29.	I feel confident in caring for my baby. Father involvement and infant engrossment Factor IV	Confident in care
30.	I feel that it is important for a father to participate with his wife in childbirth Father participation attitude* >Mean Factor III	Participation important
31.	My wife didn't cope as well as I thought she would with labor (or delivery). Attitude toward wife (respect)* >Standard Deviation Factor I	Wife cope
32.	The baby has some features that are just like mine/my wife. Based on engrossment characteristic* No significance	Features
33.	Childbirth has given a whole new aspect to my relationship with my wife. Marital relationship and childbirth attitude* Factor VII	New aspect
34.	Fathers are out of place in childbearing. Father participation attitude* Factor III	Fathers in childbirth
35.	It is difficult to know how I feel about my baby until I get to know him/her better Based on engrossment* Factor IV	Feel about baby

Table 2

Continued

36.	I often felt in the way during labor or delivery. Father participation attitude* >Standard Deviation Factor VIII	Father in way
37.	I was a great source of strength to my wife during pregnancy. Based on pregnancy developmental task model and father involvement* Factor II	Pg. strength
38.	I am concerned at the amount of time the baby will take. Father involvement and acceptance of commitment Significance by Preparation on Nonfactored Question Analysis	Baby time
39.	Fathers are influenced to participate in childbirth. Father involvement attitudes and commitment Correlations Factor III	Social compliance
40.	I feel that it is important for me to talk to my baby. Based on engrossment characteristic >Mean correlations	Verbalize
41.	I helped my wife feel more comfortable during contractions and/or delivery. Father participation attitude; purpose and direction* Numerous correlations Factor I	Wife comfortable
42.	My baby is more active and "alive" than I imagined he/she would be. Based on engrossment characteristic No significance on Nonfactored Question Analysis	"Alive"
43.	This is one of the highest points of my relationship with my wife Marital relationship and childbirth attitude* >Mean Numerous correlations Factor II	High point

Table 2

Continued

44.	Fathers and mothers play entirely different roles in the lives of their infants. Parenting role attitudes and direction as a father >Standard Deviation Factor V	Different roles
45.	I am anxious to have my baby home. Based on engrossment characteristic >Mean Factor VII	Home
46.	My wife is much more capable of child care than I am. Attitude toward wife and father role attitude <Mean No correlation No further significance	Child care
47.	My baby looks like all other babies. Based on engrossment characteristics* Correlations No further significance	Unique
48.	I am disappointed at how nonresponsive my baby is. Based on engrossment characteristic Factor II	Responsive
49.	Childbirth preparation courses could be geared more to help fathers. Based on pregnancy developmental task model and father preparation attitude Factor VI	CB preparation
50.	Pregnancy and childbirth are very positive experiences. Based on pregnancy and childbirth attitudes* >Mean Factor VI	Positive

*Cronenwett and Newmark, 1974.

Data Analysis

Means and standard deviations were generated for each question. Question correlations were obtained and relationships between the 50 variables were revealed. In order to reduce the number of variables that needed to be analyzed, to avoid Type I error in subsequent analysis of variance, factor analysis was done. Factor analysis also provides a multidimensional view unobtainable through correlations or simple variable analysis. Factor scores on eight factors accounted for 73.5% of the total variance. The factor scores for each subject on these eight factors were subsequently analyzed by a 2 by 2 (preparation/participation) analysis of variance.

CHAPTER III

RESULTS AND DISCUSSION

The presentation of the results of this study and discussion of the implications includes scoring questionnaires, question means and standard deviations, question correlations, factor analysis (eight factors), analysis of variance on eight factors, analysis of variance on nonfactored questions, and summary.

While the ultimate goal is to determine the effects of preparation and participation on fathers' attitudes, it is also advantageous to learn all that this study allows about the fathers' attitudes post-delivery. The presentation and discussion of means and standard deviations, correlations, and the eight factors and the nonfactored questions is accomplished.

Scoring Questionnaires

Questions were scored on a scale from 4 to 0, 4 representing the most positive response and 0 representing unanswered questions. There were a total of 52 questions unanswered in the sample. All of the questions were scored in a positive direction to eliminate confusion when comparing responses. The questionnaire in Appendix B presents scoring on each question.

Characteristics of Fathers' Responses

Question Means and Standard Deviations

The means and standard deviations for all 50 questions are shown

in Table 3. The means indicate overall positivity among fathers. Extremely high means (>3.8) manifest an obvious enthusiasm for becoming a father. The marital relationship is at a high point (#43)*. Fathers see participation as being important (#30) and plan on a partnership in parenting (#11). Engrossment is manifest through the aspects of tactile awareness of the newborn (#14), attraction to and focusing of attention on the newborn (#40 and #45) and extreme elation (#1). Extremely low means (<2.5) point toward the universal stress (#2) and adjustment of pregnancy (#12). Also indicated is an overall attitude that mothers are recognized as being more capable of child care than are fathers (#46).

Attitudes among the fathers vary most on questions dealing with husband and wife involvement and performance in labor and delivery (#4, #13, #22, and #36). Variance is also high in the areas of pregnancy trauma (#25), differing roles of fathers and mothers (#44) and the immediacy of the feeling of fatherhood (#28). Variance is lowest in the areas with high means specifically the engrossment aspects outlined above.

It is evident for these fathers that there is a definite birth impact. The marriage relationship, the acceptance of fatherhood and fatherinvolvement, and at least three characteristics of infant engrossment are affected. "That engrossment is a basic innate potential among all fathers" as hypothesized by Greenberg and Morris (1974, p. 527) is at least partially substantiated. Tactile awareness of the newborn, attention focusing on the newborn, and elation over the

*Indicates question numbers

Table 3

Means and Standard Deviations on 50 Questions

Variable	Mean	Standard deviation
1. Elated	3.82*	0.55
2. Pg. stress	2.20*	0.92
3. Woman's work	3.27	0.92
4. Wife beautiful	3.35	1.17*
5. Role confusion	3.40	0.75
6. Wife difficult	3.14	0.87
7. Personality	3.21	0.96
8. Communication	3.68	0.59
9. Pg. help	3.01	0.86
10. Perfect	3.54	0.74
11. Partnership	3.89*	0.31
12. Pg. adjustment	1.51*	0.70
13. L & D Help	3.48	1.03*
14. Touch	3.90*	0.29
15. Wife great job	3.64	0.88
16. Not be a father	3.86*	0.53
17. Close in L & D	3.64	0.86
18. Afraid of baby	3.56	0.72
19. Responsibility	3.51	0.74
20. Pleased with pg. news	3.64	0.62
21. Change baby	3.77	0.63
22. Helped most in L & D	2.83	1.17*
23. Pressured	3.35	0.89
24. Watch	3.68	0.52
25. Trauma	2.01*	0.99
26. Wife made me feel	3.66	0.53
27. Not again	3.54	0.77
28. Feel like father	2.98	1.01*
29. Confident in care	3.27	0.78
30. Part. important	3.85*	0.56
31. Wife cope	3.25	1.02*
32. Features	3.37	0.80
33. New aspect	3.54	0.64
34. Fathers in CB	3.68	0.68
35. Feel about baby	3.29	0.85
36. Father in way	3.22	1.00*
37. Pg. strength	3.47	0.64
38. Baby time	3.06	0.99
39. Social compliance	3.27	0.95
40. Verbalize	3.86*	0.34
41. Comfortable	3.44	0.90
42. "Alive"	2.93	0.98
43. High point	3.82*	0.41
44. Different roles	2.67	1.00*

Table 3

Continued

Variable	Mean	Standard deviation
45. Home	3.86*	0.53
46. Child care	1.93*	0.88
47. Unique	3.31	0.92
48. Responsive	3.70	0.59
49. CB preparation	2.79	0.96
50. Positive	3.75	0.43

*p < .01.

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birth are engrossment aspects that these 74 fathers universally manifest. Contrary to Greenberg and Morris (1974), visual awareness of the newborn, distinctness of characteristics of the newborn, perception of the infant as perfect, and increased self-esteem are not obvious universal characteristics based on the means alone.

The fathers feel that their wives are more capable of child care than they are. This could be based on a stereotypic model. These feelings should not be interpreted as inadequacy on the part of the fathers. A father can feel very capable of child care and still recognize that his wife is more capable than is he. This is a compliment to the wife and a recognition of her physiological abilities. There are high rates of breast-feeding in the Cache Valley population. A father cannot be expected to feel competent in this area. If his wife is breast-feeding, he will certainly have a feeling that she is more capable of child care than he is; since feeding occupies the large majority of a newborn's waking time.

That fathers differ in their role definitions and expectations is obvious from the large variance related to that question (#44). There are fathers who do not recognize different roles for fathers and mothers. At the same time a comparably low mean on this question reveals a certain agreement that roles do differ. The answer must lie in the degree of difference and could again have much to do with feeding patterns. The fathers do agree on and plan for a partnership in parenting. They also see father participation important. Perhaps the greatest revelation of the means and variances is right here in this combination of attitudes. Fathers realize they have roles in

parenting. These roles differ from those of their wives, but involvement in childbirth and in the lives of their infants is part of their role.

Fathers admit that pregnancy was a stressful adjustment. This trend suggests that the pregnancy experience has an influence on fathers' attitudes. It strongly suggests a developmental task model which needs further investigation. It was also learned that pregnancy and childbirth can be both traumatic and positive experiences. Fathers agreed on the positivity of the experience, while the trauma does differ in degree among fathers.

These initial evaluations offer insights about fathers' attitudes without consideration for other variables. A surface view of the variance, however, lends credence to the assumptions that the preparation and participation variables will make a difference. The variance in the areas of husband-wife performance in labor and delivery is the best example. Not all fathers feel helpful in labor and delivery, nor do they all have the same appreciation for their wife's performance. Further analysis of variance is required to determine if the assumptions of this study are correct in this area.

In summary, the responses of these 74 fathers have provided insights into the attitudes of first-time fathers post delivery. Attitudes towards the wives differ; a feeling of appreciation and respect is felt by some fathers more than others. Childbirth has brought the marriage relationship to a high point for all of the fathers. The importance of participation in childbirth is recognized by all, but there are differences in attitudes to the purpose and

direction of that participation. Three of the engrossment characteristics appear universal. Fathers are elated with fatherhood. They want to touch, hold, and talk to their infants. They are anxious to have their infants home. Pregnancy was viewed as a time of stressful adjustments. The pregnancy and childbirth experience is more traumatic to some fathers than others, but most see the experience as being positive. Current trends to shared childbirth and parenting are obvious among these fathers' attitudes. They also show a contemplating of roles and a planning for shared parenting responsibilities.

Fathers' Experience of Childbirth

Question Correlations

Correlations of .3 or above have probabilities of .01 or less ($p < .01$). With a 50 x 50 matrix the relating of three of the correlations are expected by chance. Correlations point out the inter-relatedness of attitudes and feelings of new fathers. Attitudes towards wives, fatherhood, engrossment, and the pregnancy/childbirth experience are not isolated in themselves but form three basic groups of relationships. To simplify the presentation of the correlations, these groupings are named and presented in separate tables. A complete correlation table is included in Appendix C.

The first group of correlations includes question relationships between the wife's performance and the purpose and direction of the father in labor and/or delivery (L & D). This grouping will be referred to as Husband-wife relationships in L & D. The second group includes question relationships between engrossment and the marriage relationship

and engrossment and the father's role in childbirth and child care. This will be referred to as Engrossment relationships. The third group includes relationships of questions dealing with the pregnancy/childbirth experience and other variables. This will be referred to as the Pregnancy/childbirth experience relationships.

Previous studies from which the questions were adapted, neglected to deal with correlations. Relationships were anticipated by this investigator through construction of the instrument. Correlations clearly cannot be overlooked. The three basic areas identified shed new light on the effects of the birth experience and reveal the need to carefully consider these relationships.

Husband-wife relationships in L & D. Thirteen questions dealing with the wife's performance and the husband's helpfulness through labor and delivery show significant correlations. These correlations are presented in Table 4.

The reader can identify from Table 4 the total extent of these correlations. Examples of those with the highest r values make the relationship clear. Question #17 (Close in L & D) shows the highest correlation with #15 (Wife great job) $r = .82$ and #41 (Wife comfortable) $r = .70$. Question #34 (Fathers in CB) also shows high correlation with #30 (Participation important) $r = .66$. Other examples include correlation of #13 (L & D help) with #15 (Wife great job) $r = .54$; #17 (Close in L & D) $r = .51$, #22 (Helped most in L & D) $r = .52$, and #41 (Wife comfortable) $r = .49$. Of the seven questions with standard deviations above 1.0, five of them are included in this grouping of correlations (#4, #13, #22, #31, and #36).

Table 4

The Correlation of Husband-Wife Labor and Delivery Interactions

	#1 Elated	#4 Wife beau.	#13 L & D help	#15 Wife great job	#17 Close L & D	#22 Helped Most in L & D	#23 Pressured	#30 Part. important	#31 Wife cope
#1 Elated	1.00								
#4 Wife beau.	.28	1.00							
#13 L & D help	.26	.35	1.00						
#15 Wife great job	.40	.56	.54	1.00					
#17 Close L & D	.38	.40	.51	.82	1.00				
#22 Helped Most in L & D	.22	.38	.52	.39	.42	1.00			
#23 Pressured	.09	.10	.34	.39	.38	.22	1.00		
#30 Participation	.04	.28	.33	.00	-.02	.37	.05	1.00	
#31 Wife cope	.27	.36	.25	.51	.41	.19	.16	-.05	1.00
#34 Fathers child-birth	.17	.25	.39	-.00	-.00	.33	.22	.66	-.02
#36 Father in way	-.02	.12	.31	.23	.12	.13	.38	.01	.33
#41 Wife comfortable	.15	.17	.49	.59	.70	.55	.40	-.00	.24
#50 Positive	.04	.35	.08	.23	.13	.05	.11	.29	.23

There is definite relationship between the father's attitudes towards his wife's performance and his own purpose in labor and/or delivery. The labor and delivery process itself has had a definite effect on the father's attitudes towards his wife. His role in the process, for example, making his wife more comfortable, is also related to how he feels about his wife's job performance. Causality cannot be determined but there is indication of a trend between the father's respect for his wife and his degree of involvement. This will be determined when preparation and participation are introduced as variables.

Engrossment relationships. Of the engrossment variables, seven show significant correlations with each other; seven correlate with marital relationship variables and three correlate with variables dealing with the father participation. Table 5 presents these correlations.

Correlation of engrossment questions such as #14 (Touch) with #24 (Watch) $r = .43$ and with #40 (Verbalize) $r = .41$ are very reasonable. Likewise, question #35 (Feel about baby) with #24 (Watch) $r = .33$ and #32 (Features) with #47 (Unique) $r = .31$ are understandable. Less predictable is the high correlation of #35 (Feel about baby) with #29 (Confident in care) $r = .53$.

These correlations show relationships in the engrossment aspects of tactile awareness, visual awareness, attraction to and distinct characteristics of the newborn. Engrossment theories also claim that the father will have an immediate attachment to his infant. It is interesting that this variable (#35, Feel about baby) has a

Table 5

Correlation of Engrossment Relationships

Engrossment Variables Alone

	#14 Touch	#24 Watch	#29 Confi- dent in care	#32 Features
#14 Touch	1.00			
#24 Watch	.43	1.00		
#35 Feel about baby	.16	.33	.53	.21
#40 Verbal	.41	.22	.13	.18
#47 Unique	.10	.28	.11	.31

Engrossment and Marital Relationship

	#11 Part- nership	#14 Touch	#24 Watch	#26 Wife made me feel	#33 New aspect	#35 Feel about baby	#40 Verbalize
#11 Partnership	1.00						
#14 Touch	.48	1.00					
#24 Watch	.29	.43	1.00				
#26 Wife made me feel	.43	.49	.45	1.00			
#33 New aspect	.15	.12	.38	.10	1.00		
#35 Feel about baby	.12	.16	.33	.16	.10	1.00	
#40 Verbalize	.37	.41	.22	.19	.08	.18	1.00
#43 High point	.48	.41	.31	.47	.40	.34	.30
#45 Home	.15	.26	.29	.27	.33	.17	.12
#47 Unique	.26	.10	.28	.16	.40	.19	.17
#48 Responsive	.34	.15	.27	.33	.03	.20	.27

Table 5

Continued

Engrossment and Father Participation

	#3 Woman's work	#5 Role confusion	#10 Perfect	#18 Afraid of baby	#19 Responsi- bility	#29 Confident in care	#30 Participation important	#34 Fathers in childbirth
# 3 Woman's work	1.00							
# 5 Role confusion	.15	1.00						
#10 Perfect	.22	-.21	1.00					
#18 Afraid of baby	-.02	.52	-.09	1.00				
#19 Responsi- bility	.03	-.05	.23	-.06	1.00			
#24 Watch	.00	-.05	.22	-.03	.31			
#28 Feel like father	.01	.23	-.13	.34	.02			
#29 Confident in care	.00	.39	-.08	.52	.15	1.00		
#30 Partici- pation important	.41	-.04	.45	-.02	.37	-.03	1.00	
#34 Fathers in childbirth	.46	.11	.33	.00	.48	.05	.66	1.00
#35 Feel about baby	.08	.19	.06	.27	.16	.53	-.04	.09
#39 Social compliance	.16	-.09	.37	-.12	.36	-.06	.40	.46
#40 Verbalize	.05	.05	.02	.09	.48	.23	.17	.11
#43 High point	.26	.01	.13	.06	.11	.31	.35	.19
#50 Positive	.20	-.07	.37	-.03	.22	-.04	.29	.11

relationship with how confident the father feels in child care (#29, Confident in care). Engrossment theory claims that the father feels more confident in child care through his engrossment with his infant. Advocates of childbirth preparation and participation claim that seeing the birth enhances the immediacy of the attachment, and preparation for fatherhood increases the father's confidence in his fathering role.

These engrossment correlations point out that there is an attraction or fascination with the infant on the part of the father. Four of Greenberg and Morris's seven characteristics show relationships which point in that direction (tactile awareness, visual awareness, attention focusing, and awareness of distinct characteristics). Also evident is that the father's feelings towards the infant are linked not only to this fascination but also to his confidence in providing care to the infant. Whether or not this confidence is elicited by the fascination, as engrossment theory predicts, or by actual preparation and/or participation in childbirth is yet to be determined. Assumptions of this study are based on the enhancements of preparation and participation.

Correlations of engrossment variables with those dealing with the marital relationship were less anticipated than those already discussed. Examples of these correlations include #14 (Touch) and #11 (Partnership) $r = .48$, #26 (Wife made me feel) $r = .49$ and #43 (High point) $r = .41$, and #24 (Watch) with #26 (Wife made me feel) $r = .45$, #33 (New aspect) $r = .38$ and #43 (High point) $r = .31$. Question #43 (High point) shows seven significant correlations with

engrossment questions (#14, #24, #35, #40) and with other questions dealing with the marital relationship (#11, #26, #33).

The correlation between engrossment and the marital relationship is noteworthy. Such relationships are not accounted for in the engrossment theory. It was previously pointed out (page 20) that three engrossment characteristics are universal among these fathers (tactile awareness, attention focusing, and elation). Correlations have shown four engrossment characteristics to be related to each other (see above). It is now evident that they are all related to either the husband-wife relationship in labor and/or delivery or to the marital relationship itself. Elation, for example, which showed no correlation to other engrossment characteristics, is related to the husband-wife relationship in labor and/or delivery. Tactile awareness and attention focusing are related to the marital relationship. The engrossment characteristic of the infant perceived as perfect is yet to show relationships with other variables.

Another cluster of correlations exist with engrossment questions. The characteristics of visual awareness, attention focusing, and perception of the newborn as perfect show relationships to father attitudes about his place and participation in childbirth. Question #19 (Responsibility) correlates with #24 (Watch) $r = .31$ and #40 (Verbalize) $r = .48$. Of even more interest is the correlation of #10 (Perfect) with #30 (Participation important) $r = .45$, #34 (Fathers in childbirth) $r = .33$, #39 (Social compliance) $r = .37$ and #50 (Positive) $r = .37$. Also included in this cluster are relationships of father participation attitudes themselves as shown through #3

Table 6

Pregnancy/Childbirth Experience Relationships

Pregnancy	#8 Communi- cation	#9 Pg. help	#11 Partner- ship	#12 Pg. adjust- ment	#14 Touch	#26 Wife made me feel	#38 Baby time	#39 Social compliance	#50 Pos- itive
# 8 Communication	1.00								
# 9 Pg. help	.01	1.00							
#11 Partnership	.40	.10	1.00						
#12 Pg. adjust- ment	.02	.12	.30	1.00					
#14 Touch	.29	.16	.48	.02	1.00				
#18 Afraid of baby	.03	.09	.15	.33	.06				
#20 Pleased with pg. news	.32	.13	.15	.01	.18				
#26 Wife made me feel	.18	.30	.43	.08	.49	1.00			
#34 Fathers in childbirth	-.00	.35	.09	.03	.05	.12			
#37 Pg. strength	.13	.13	.12	.17	.31	.31			
#43 High point	.27	.08	.48	.24	.41	.47	.16	.15	
#44 Different roles		.34	.01	.10	.21	.12	-.03	-.02	
#49 CB prepara- tion	.19	.23	.06	.29	.07	.02	.35	.32	.34

(Woman's work) with #30 (Participation important) $r = .41$ and #34 (Fathers in childbirth) $r = .46$.

The correlations of these last three father participation questions show a logical relationship between father participation variables. Fathers belong in childbirth and childbirth is therefore not woman's work alone. The correlation between father participation and the three engrossment aspects is similar to that of the marital relationship. Engrossment is a much more contingent theory than outlined. The aspect of infant perfection has been manifest only as it relates to father participation. The other relationships of engrossment indicate that this theory is not independent of other influences.

Pregnancy/childbirth experience relationships. Table 6 presents the correlations of variables about the pregnancy/childbirth experience. Those correlations not previously identified will be presented here. There are two negative correlations #12 (Pg. adjustment) with #11 (Partnership) $r = -.30$ and #18 (Afraid of baby) $r = -.33$. This is the first indication of a link between adjustments of pregnancy, engrossment, and plans for parenting. Question #8 (Communication) correlates with #11 (Partnership) $r = .40$ and #20 (Pleased with pg. news) $r = .32$. #9 (Pg. help) correlates with #16 (Wife made me feel) $r = .30$, #34 (Fathers in childbirth) $r = .35$ and #44 (Different roles) $r = .34$. Question #37 (Pg. strength) correlates with #14 (Touch) $r = .31$ and #26 (Wife made me feel) $r = .31$. All of these correlations give further indications of the importance of the pregnancy period on subsequent attitudes.

Question #49 (CB preparation) deals directly with the helpfulness of the preparation courses offered during pregnancy. It correlates with #38 (Baby time) $r = .35$, #39 (Social compliance) $r = .32$ and #50 (Positive) $r = .34$. The relationships between the childbirth course, time concerns and father participation are noteworthy. Involvements and time commitments begin during pregnancy for mothers and apparently also for fathers. Attitudes towards the positivity of the pregnancy/childbirth experience must also begin in pregnancy.

The Pg/CB correlations point out the relationship of the pregnancy period on the fathers' attitudes. A developmental task model is appropriate for fathers as they anticipate parenting roles. Working through the pregnancy period is a joint effort of husband and wife. It requires open communication and mutual helpfulness and appreciation. That fathers do attempt to resolve tasks is indicated through their attitudes about preparation for childbirth. Linked with the preparation are concerns for the time involvement for the infant and the positivity of the pregnancy childbirth experience as a whole. Further analysis of variance will serve to identify the direction of the effects of preparation and participation on these relationships.

Of the nine questions that show no correlations, three deal with the pregnancy/childbirth experience (#2, #6, and #25), three deal with engrossment (#7, #21, and #42), two deal with acceptance of fatherhood and desire for further such experience (#16 and #27), and one deals with husband/wife capabilities in child care (#46).

In summary, the 50 variable correlations point out important relationships of fathers' attitudes. Clusters of variables and

multidimensional interactions are indicated. The most obvious inter-relatedness is with the engrossment variables. Engrossment is linked with the L & D experience, the pregnancy experience, the marital relationship, and with fatherhood itself. The highest correlations are with variables dealing with the husband and wife performances in L & D. These same questions account for most of the question variance. Correlations of the pregnancy variables point out the importance of the pre-delivery period and the possibilities of a developmental task model.

Overall values and relationships have been analyzed. The question of preparation and participation must still be addressed. This is accomplished through factor analysis.

Factor Analysis

In order to illuminate qualitative relationships between questions and reduce the number of variables for the analysis of variance, a factor analysis of data was accomplished using Varimax rotation. Eight major factors emerged from this analysis accounting for a total of 73.5% of the variance (20.3%, 12.3%, 9.2%, 8.3%, 6.6%, 6.0%, 5.5%, and 5.2%, respectively). Factors accounting for less than 5% of the variance are not reported. Factor loadings for the eight factors are presented in Table 7.

The large number of variables and correlation relationships indicated that factor analysis was the method of choice for testing the preparation and participation hypotheses. To elucidate further the clusters of relationships that exist in the father's subjective world,

Table 7
Factor Loadings on Eight Factors

	Factor I	Factor II	Factor III	Factor IV	Factor V	Factor VI	Factor VII	Factor VIII
# 1 Cloned	0.39876	-0.07811	0.08044	-0.07378	0.37995	0.29194	0.06333	-0.05656
# 2 Women's work	0.20810	0.18557	0.48799	0.06524	0.12212	0.07491	0.03014	0.07904
# 3 Wife beautiful	0.49405	-0.08096	0.34662	-0.12779	0.01773	0.12573	0.26207	0.00749
# 4 Wife confident	0.11710	-0.06488	-0.01011	0.48004	0.03149	0.08113	-0.04304	0.09600
# 5 Wife difficult	-0.05431	0.20330	-0.01770	0.06708	0.12179	0.62373	-0.02589	-0.03473
# 6 Personality	0.02842	-0.18915	-0.06214	0.07618	-0.03444	-0.02084	0.41862	0.09830
# 7 Communication	0.07730	0.30706	0.00072	0.00682	-0.16336	0.30980	-0.04432	-0.08063
# 8 Pg. help	0.16768	0.17456	0.24731	0.25529	0.38358	0.18060	-0.23522	0.07649
#10 Perfect	-0.00737	0.07975	0.41331	-0.08080	-0.05492	0.05104	0.04687	-0.06815
#11 Partnershrp	-0.01353	0.60274	0.10186	-0.01548	-0.04724	0.28519	0.07510	0.02538
#13 L & h help	0.61685	0.00362	0.35209	0.04996	0.10748	-0.15913	-0.16626	0.18905
#14 Touch	0.10383	0.67521	-0.02047	0.02566	0.10561	0.09477	0.00223	0.00418
#15 Wife great job	0.80971	0.01452	-0.04047	-0.04974	0.01424	0.13950	0.16172	0.15091
#17 Close to L & D	0.89874	0.04174	-0.07397	-0.02287	0.09913	0.04617	0.04951	0.03174
#18 Afraid of baby	-0.05843	-0.01218	-0.09518	0.70806	-0.07573	0.10024	0.14357	0.01812
#19 Responsibility	0.04600	0.12550	0.44645	0.02255	0.07558	-0.09958	-0.04326	0.06879
#21 Change baby	-0.04115	0.00109	0.03939	0.14375	-0.11190	-0.05774	0.54090	0.11521
#22 Helped most in L & D	0.57583	0.19256	0.75458	0.16018	-0.01673	-0.16545	-0.13635	-0.03559
#23 Pressured	0.33923	0.11356	0.07625	0.03732	0.02688	-0.02340	-0.04861	0.19192
#24 Watch	0.01484	0.52729	0.12885	0.01244	0.16385	-0.08151	0.24120	0.03127
#28 Wife made me feel	0.14517	0.75706	0.05265	0.07653	0.11336	0.01877	0.04097	0.11242
#27 Not again	0.04488	-0.06486	0.02686	0.00720	0.05572	-0.00655	0.06599	0.31706
#28 Feels like father	0.07846	0.02035	-0.10985	0.38895	-0.13181	-0.05106	0.24001	0.03764
#29 Confident in care	-0.08812	0.21190	-0.03076	0.73596	0.12569	-0.05201	0.05610	-0.05346
#30 Participation important	0.05580	0.18266	0.79929	-0.07541	-0.12549	0.03286	-0.06814	-0.12357
#31 Wife cope	0.42392	0.07281	-0.01676	-0.05027	0.08182	0.34615	0.39063	0.24733
#32 New expect	0.09499	0.20225	0.11839	-0.12908	0.01051	0.12086	0.30528	0.14427
#34 Failure in childbirth	0.04820	0.04848	0.78850	0.09241	0.13734	-0.13472	-0.03979	0.16208
#35 Feel about baby	-0.07909	0.25812	0.06857	0.51405	0.13970	-0.05812	0.09557	0.06593
#36 Father in way	0.15477	0.08205	0.03468	0.01617	-0.15341	0.02054	0.02279	0.57904
#37 Pg. atough	0.15282	0.32147	0.03451	0.29823	0.04837	0.02884	-0.34441	0.11097
#38 Baby time	-0.00732	0.20036	0.18445	0.11233	-0.06251	0.25053	0.11374	0.23988
#39 Social compliance	-0.07187	-0.07174	0.59950	-0.06421	-0.02528	0.18058	0.00374	0.20964
#40 Verbalize	0.15229	0.32981	0.02483	0.13111	-0.06942	0.18617	-0.01470	0.18427
#41 Wife comfortable	0.75072	0.27893	-0.07134	0.06640	-0.02290	-0.12552	-0.24370	0.18460
#43 High point	0.01093	0.63460	0.24657	0.18152	-0.20397	0.11237	-0.01331	-0.08993
#44 Different roles	0.11420	0.08834	0.06230	0.06171	0.66653	0.01793	-0.06786	-0.05510
#45 Home	-0.05119	0.25997	-0.09862	0.09394	-0.00762	0.01079	0.53189	0.06013
#48 Responsive	-0.05653	0.35019	0.04847	0.10418	0.32180	0.00277	-0.00942	0.11649
#49 CB preparation	0.18657	0.07154	0.16102	0.16889	-0.03179	0.46113	-0.22754	0.20960
#50 Facile	0.13645	0.13955	0.13966	-0.05920	-0.23554	0.40238	0.08546	0.05157

a multidimensional approach was essential. The eight factors do illuminate qualitative relationships.

Factor I--The husband-wife duo. Factor I is referred to as the husband and wife duo. Questions loading on this factor illustrate a duo of interaction between the husband and wife in labor and delivery. The duo is brought out with wife appreciation and father purpose and direction attitudes. Question #17 (Close in L & D) at .89, #15 (Wife great job) at .86, #41 (Wife comfortable) at .75, #13 (L & D help) at .61, and #22 (Helped most in L & D) at .57 are the primary loaders. Question #4 (Wife beautiful) at .49 and #31 (Wife cope) at .42 are also included in the loading questions. Question #1 (Elated) at .39 accentuates the positivity of the father's mood.

The combination of variables in Factor I accentuates the dual effort of labor and delivery. Advocates of father preparation and participation have emphasized the importance of husband-wife interaction. Assumptions of this study are also based on this interaction. The relationships of fathers' attitudes shown here does elicit the feeling that the father has found purpose and pride in the L & D process and has recognized an appreciation for his wife.

It is also relevant that this same interaction affects the father's elation at being a father. The reader will remember that elation was identified as an engrossment characteristic. The inclusion of this variable on Factor I is more evidence of the trend which began with variable correlations. Engrossment characteristics are related to many other variables.

Factor II--The triad. Factor II is referred to as the triad. Questions loading on this factor involve the marriage relationship and three of the engrossment characteristics (tactile awareness, visual awareness, and attention focusing). A three-way relationship exists here. The primary loading questions include #26 (Wife made me feel) at .75, #14 (Touch) at .67, #43 (High point) at .61, #11 (Partnership) at .60, and #24 (Watch) at .52. Other loaders include #48 (Responsive) at .35, #40 (Verbalize) at .32, and #37 (Pg. strength) at .32.

The primary loading question #26 (Wife made me feel) cannot be identified as a father participation variable. The key is the phrase "my wife made me feel." The father's attitude here depends on his relationship with his wife. A father could do nothing, but his wife could still make him feel helpful. This question is clearly a marriage relationship indicator and fits neatly into this triad cluster. The lowest loading question, #37 (Pg. strength), could also be an indication of how the wife made the father feel during the pregnancy period. It does indicate the beginning of father involvement during pregnancy and is a definite reminder of the pregnancy period and a developmental process to childbirth.

Relationships between the marital relationship and infant engrossment aspects were not identified in the engrossment theory. In just two factors four engrossment aspects have connected with the L & D interaction and the marital relationship.

Factor III--Father participation. Factor III is referred to as father participation. Components of this factor reveal the fathers'

attitudes towards father participation in childbirth. It also includes an engrossment characteristic. Question #30 (Participation important) at .79, #34 (Fathers in childbirth) at .78, #10 (Perfect) at .61, #39 (Social compliance) at .59, #3 (Woman's work) at .48, and #19 (Responsibility) at .44 are loading questions.

The association between father participation and infant perfection is fascinating. Greenberg and Morris (1974) did not indicate such a relationship. If the assumption of this study is correct, participation will precipitate or enhance the perception of the infant as being perfect aspect. It seems only logical that the other constituents of this factor will be enhanced through preparation and/or participation.

Factor IV--Father initiation. Factor IV is referred to as the father initiation factor. Questions loading on this factor tap the fathers' attitudes towards fatherhood and initial reactions to his infant. Question #29 (Confident in care) at .73, #18 (Afraid of baby) at .70, #5 (Role confusion) at .68, #35 (Feel about baby) at .51, and #28 (Feel like father) at .38 are the loading questions.

While these variables do refer to claims made by Greenberg and Morris (1974), they are not directly a part of the engrossment construct. They most accurately test the value of father participation. Advocates of father participation feel that seeing the infant's birth instigates an immediate sense of fatherhood and appreciation for the infant. Greenberg and Morris (1974, p. 527) stated that "fathers who were present at their infant's birth were more comfortable in holding the babies ... and felt more hooked up or connected

with his newborn." This factor provides an excellent means of testing these benefits of preparation.

Factor V--Parenting roles. Factor V is called parenting roles. Only two questions are loaded on this factor, #44 (Different roles) at .66 and #9 (Pg. help) at .38. Both questions deal with roles or activities of fathers and mothers. Most pertinent is that it begins with the pregnancy.

This factor deals with the question of father involvement during pregnancy and subsequent role identity. The emphasis today is to get fathers involved during pregnancy. The reasoning behind this goal is that he might earlier identify a father role, that he might feel purpose in childbirth and that he might better help his wife through the entirety of the childbirth experience. If this goal is met, there should be a difference in attitudes between prepared and/or participating fathers on this factor.

Factor VI--Pregnancy. Factor VI is referred to as pregnancy. The questions of this factor are all related to the pregnancy experience. Question #6 (Wife difficult) at .62, #49 (CB preparation) at .44, #50 (Positive) at .40, and #8 (Communication) at .30 are the loading questions.

This factor concentrates on the total pregnancy experience. It includes the difficulty of the wife during pregnancy, the helpfulness of the childbirth preparation course, the positivity of the experience and the communication efforts between husband and wife. It definitely illustrates that pregnancy involves developmental tasks. It also provides an excellent means of evaluating the effects of preparation and/or participation on these tasks.

Factor VII--Baby impact. Factor VII is called baby impact. The loading questions involve the impact of the infant on the father. Question #45 (Home) at .55, #21 (Change baby) at .54, and #7 (Personality) at .41 are the questions involved.

This is the fifth factor to include engrossment characteristics. The engrossment theory says that the reflex activity and behavior of the newborn will enhance the father's engrossment. Recognition of the infant's personality and acceptance of the infant without change are fair indicators of this impact. The father's anxiousness to have the baby home also indicates the "hold" the infant has on the father.

Two other impact questions that could have loaded on this factor are #42 ("Alive") and #48 (Responsive). Question #48 does load on Factor II--The triad, but question #42 shows no correlation on factor loading. This factor would have been a more valuable tool if either or both had been included. The ineffectiveness of both questions is apparently due to wording difficulties of the questions themselves which allowed misinterpretation. A weakness in theory cannot be blamed.

Factor VIII--Ego. Factor VIII is referred to as ego. Questions loading on this factor indicate the father's feeling of accomplishment and pride at his choice. Question #23 (Pressured) at .71 and #36 (Father in way) at .57 are the two loading questions.

This factor indicates the father's sense of belonging in child-birth and his pride at participation. There are potential preparation and participation effects on this factor. There is also the

possibility that an after-the-fact effect exists. Now that this is over the father can feel that he wasn't pressured and that he wasn't in the way.

From the factor analysis, eight factors emerged. They clearly illustrate the complexity of the task of evaluating the effects of preparation and participation on fathers. They also show that significant variables are not clean-cut examples of existing theories or replicas of previous studies or practices. Examples of the interrelationships are more numerous than the number of factors.

The attitudes towards the wife and the purpose and direction of the father are so closely related that they combined into a duo of interaction variable. The purpose of fathers in childbirth also illustrated itself in a father participation variable. The pregnancy experience revealed itself as a developmental task model appearing in two factors. Infant engrossment aspects were included in five of the factors.

There is much yet to be determined about engrossment. While the characteristics of engrossment have appeared, they do not congregate into a well-defined construct as Greenberg and Morris (1974) outlined in their study. Instead they show numerous relationships with other birth experience variables. Fathers do manifest feelings of absorption and interest in their newborns. They show signs of elation and awareness. On the basis of the relationships found in this current data, however, it cannot be said that these feelings are directed to nor initiated solely by the father/infant relationship.

The characteristic of elation is related to the interaction of the father with his wife in labor and delivery (Factor I). The tactile awareness, visual awareness, and attention focusing characteristics are related to the marital relationship (Factor II). As was shown in question correlations, the characteristic of the infant being perceived as perfect appears only in relation to father participation variables (Factor III). The characteristic of awareness of distinct characteristics of the newborn does isolate in relation to the attention focusing characteristic (Factor VII). The characteristic of increased self-esteem is not manifested in factor analysis.

This author would give due credit to Greenberg and Morris's (1974) efforts in identifying a potential bonding between father and infant. At the same time the isolation of the seven distinct characteristics of that bond must be questioned. On the basis of this data, the feelings isolated as engrossment are too tightly interwoven with the overall childbirth experience and with the marital relationship to warrant valid description of a construct.

Effects of Preparation and Participation

Thus far the characteristics of father responses and the numerous relationships of their attitudes have been analyzed. The variables are reduced to eight factors which are described in the preceding section. The effects of preparation and participation can now be evaluated through 2 x 2 analysis of variance on each of the eight factors. Questions that did not load heavily on the factor analysis but did manifest substantial variance are also subjected to 2 x 2

ANOVA. The 2 x 2 ANOVA's on the eight factors are presented in Table 8.

2 x 2 ANOVA--The Husband-
Wife Duo, Factor I

Analysis of variance on the husband-wife duo factor revealed effects on fathers' attitudes by their participation. Although the relationship seems obvious, the data shows that the father's sense of accomplishment through his own participation and his respect for his wife's performance are enhanced by his participation in the delivery room. The means for the nonparticipation groups are significantly lower than are the means for the participation groups. Dispersion is higher within the nonparticipator groups. There are no significant interaction effects.

Analysis of variance on the husband-wife duo variable indicates that the attitudes of the fathers towards their wives and towards themselves through the delivery process are more positive if the husband actually participates in the delivery. Six of the twenty-two nonparticipators did not answer all of the questions loaded on this factor. This alone indicates that the fathers who did not participate did not share the same experience as those who did participate. It is reasonable that if the husband isn't there he doesn't see the purpose of his contribution and doesn't have the same measure of respect for his wife's performance. In view of the "maternity scene controversy" discussed in the introduction, Barbour (1976, p. 129) appears to be correct in his statement, "if you're not there, you don't appreciate your wife as much."

Table 8

2 x 2 ANOVA (Preparation x Participation) on the Eight Factors

Factor	Group	<u>N</u>	\bar{X} (factor score)	<u>S.D.</u>	<u>F</u>	p<
I (Duo)	NN	6	-.67	1.84		
	NP	15	.20	.49		
	PN	16	-.32	1.56		
	PP	37	.16	.43		
Simple Effects	Preparation				.30	
	Participation				5.90	.01
	Interaction				.51	
Main Effect					3.24	.05

II (Triad)	NN	6	.61	.66		
	NP	15	-.45	1.24		
	PN	16	.14	.70		
	PP	37	.02	.85		
Simple Effects	Preparation				.00	
	Participation				5.37	.05
	Interaction				3.29	.07
Main Effect					2.81	.06

III (Father part)	NN	6	-1.6	2.45		
	NP	15	-.21	.72		
	PN	16	.29	.40		
	PP	37	.22	.41		
Simple Effects	Preparation				26.30	.001
	Participation				8.50	.01
	Interaction				10.56	.00
Main Effect					15.01	.001

IV (Engrossment)	NN	6	-.06	1.32		
	NP	15	.11	.84		
	PN	16	.30	.70		
	PP	37	-.16	.96		
Simple Effects	Preparation				.03	
	Participation				.32	
	Interaction				1.53	
Main Effect					.20	

Table 8

Continued

Factor	Group	<u>N</u>	\bar{X} (factor score)	<u>S.D.</u>	<u>F</u>	<u>p</u> <
V (Roles)	NN	6	-.41	.73		
	NP	15	.11	.86		
	PN	16	.38	.66		
	PP	37	-.14	.97		
Simple Effects	Preparation				1.15	
	Participation				.00	
	Interaction				4.55	
Main Effect					.59	

VI (Pregnancy)	NN	6	.14	1.33		
	NP	15	-.10	.93		
	PN	16	.39	.77		
	PP	37	-.15	.85		
Simple Effects	Preparation				.14	
	Participation				2.37	
	Interaction				.33	
Main Effect					1.43	

VII (Baby unique)	NN	6	-.29	1.96		
	NP	15	-.27	.83		
	PN	16	.14	1.07		
	PP	37	.09	.66		
Simple Effects	Preparation				2.29	
	Participation				.00	
	Interaction				.33	
Main Effect					1.21	

VIII (Ego)	NN	6	.19	1.16		
	NP	15	-.11	.77		
	PN	16	.18	.88		
	PP	37	-.06	.89		
Simple Effects	Preparation				.00	
	Participation				1.17	
	Interaction				.01	
Main Effect					.63	

Wife appreciation through participation must not be extended too far. It cannot be said that fathers who do not participate have no appreciation for their wives. There are those nonparticipants who scored high on this factor. Collectively, however, those who do participate gain more of an insight into the delivery room struggle and emerge with a much greater sense of accomplishment and wife respect. On the basis of this data, the hypotheses that the delivery room experience will 1) increase the father's respect for his wife, and 2) will give him more purpose and direction through childbirth cannot be rejected. The preparation aspects of these hypotheses did not show the same effect and cannot be accepted.

2 x 2 ANOVA--The
Triad, Factor II

Participation also showed its effect on the triad. The direction of the significance was, however, just the opposite of that anticipated. It was the NN group that resulted in the highest mean, followed by the PN group, the PP group, and the NP group respectively. There are also interaction effects.

Factor analysis has illuminated a cluster of variables that have presented unexpected results. These results afford interesting discussion but pose more questions than answers. For some reason the nonprepared nonparticipants have more positive attitudes within this family triad than any other group. The reader might recall from the discussion on the means of the 50 variables that all of the fathers scored high on the individual questions included in this factor. Although feelings here are universally positive, some

consideration must be given to the reason that the NN group is the most positive of all.

This author feels that the key must lie somewhere in pre-existing conditions, as well as in the impact of the birth itself. The pregnancy time period and the marital relationship may certainly be contributing factors. If it is assumed that preparation and participation indicate a commitment and closeness in the marriage and in assuming the fatherhood role, then the NN group was not as committed to the process nor as involved during the pregnancy and birth as were the other groups. However, there is a feeling from the questions included on this factor, that the wife succeeded in making the husband feel helpful and important. The marital relationship is definitely involved. The other key aspect is the total birth impact. The apparently uninvolved father is most positively affected by the addition of the infant to the family. This could be the engrossment impact identified by Greenberg and Morris (1974) with the inclusion of three of their seven characteristics plus the addition of the marital relationship effect. These results are certainly not indicated nor predictable from engrossment theory nor advocates of preparation and participation. In fact, no one has described such merit for nonprepared nonparticipants.

2 x 2 ANOVA--Father Participation, Factor III

The father participation factor shows overwhelming relationship to both preparation and participation and interactions of the two.

A large standard deviation for the NN group indicates the variance of that group on this issue.

Fathers who were prepared and did participate have more positive feelings towards father participation in childbirth than do others. Most fathers agreed on the importance of fathers participating, but formal preparation for and actual participation in the delivery made the actual difference in attitudes. PP fathers want to participate, feel they belong in delivery, accept the responsibility of fatherhood, and perceive their infants as being perfect. Preparation and participation does make a difference in how fathers perceive their responsibilities and how they perceive their infant. On the basis of this data, the hypothesis (2) that preparation and participation will give the father more purpose and direction in labor and/or delivery cannot be rejected.

The large variance in the NN group suggests that not all of the NN fathers feel the same on this issue. The explanation might be found in the reasons for the lack of participation and preparation. The six NN fathers undoubtedly had different reasons or circumstances behind their lack of preparation and participation.

The results of the father participation factor are the most logical. Fathers who are prepared and do participate realize and proclaim the importance, freedom, and responsibility of this participation. The father who is not prepared and does not participate will not recognize the value therein. Even if he does recognize the value, he can't make the same proclamation. Most significant of all, he won't be as likely to see his infant as perfect either.

This engrossment characteristic seems to be entirely dependent on the father's participation and preparation.

The higher mean for the PN than the PP group indicates another interesting phenomenon. These fathers were built-up for the birth experience through preparation and commitment. The large majority of the PN group were then excluded from the delivery by force and not choice since the birth was by C-section and not natural. This presents a "forced-out" effect. They see participation in the delivery as a greatly important climax from which they were excluded. Perhaps there is merit to this exclusion since the participation was not as positive for some of the participants.

2 x 2 ANOVA--Father
Initiation, Factor IV

Father initiation analysis shows no effect by preparation or participation. Fathers can feel an identity and confidence in fatherhood and an immediate acceptance of the infant regardless of their preparation and participation. These feelings are immediate; they do not need the facilitator of time. Contrary to trends found by Greenberg and Morris (1974) and predictions of the advocates of father participation, these fathers did not need to see the birth nor be prepared for it to feel a confidence in fatherhood, overcome fears, or determine their feelings towards their infants.

2 x 2 ANOVA--Parenting
Roles, Factor V

There is an interaction effect of preparation and participation on the parenting roles factor. The advantages seem to be in being

prepared but not participating or in participating but not being prepared. It would appear that the goal of early involvement through CB preparation is only met if the father does not participate. It also gives reason for allowing nonprepared fathers into the delivery room. Effects of stereotypic attitudes or pure physiological functioning (as discussed on page 23, #44) could have considerable effect on the results of this factor analysis. Another alternative is that Factor V is a defense against the anxiety ambivalent father. A distance from the infant is maintained due to the father's insecurities. The results of this and Factor III indicate that perhaps childbirth preparation does not reach the goal it has defined. Childbirth preparation must not be judged too harshly on these findings alone.

2 x 2 ANOVA--Pregnancy, Factor VI

The developmental task model indicated in the pregnancy factor is not significantly altered by preparation or participation. There is no effect on the pregnancy tasks illustrated here by preparation or participation.

It is possible that preparation courses need to be more aware of the difficulties of pregnancy. Perhaps there are some struggles that fathers face that courses don't approach. It must be remembered that the courses don't begin until well into the pregnancy. It is not entirely fair to judge preparation courses on the opinions of fathers who have not had a course. The total implications of this factor are difficult to interpret. Of most value is the emphasis it places on giving consideration to the pregnancy period.

2 x 2 ANOVA--Baby
Impact, Factor VII

The baby impact factor is not affected by the father's preparation or participation. The engrossment theory of infant reflex activity and behavior is apparently valid for all fathers. This aspect of their theory is worth much more consideration and investigation than the scope of this study has allowed.

2 x 2 ANOVA--Ego, Factor VIII

This ego indicator is not altered by preparation or participation. Fathers can have a sense of belonging and feel pride at participating regardless of the preparation or participation. These results should not, however, diminish the results found on the father participation factor which is a much more valuable tool on the merit of its numerous components. This author feels that an after-the-fact effect does exist on this factor (ego) and that the attitudes are altered through the completion of the childbirth process.

2 x 2 ANOVA on Nonfactored Questions

Questions that did not load heavily on the factor analysis but manifested substantial variance were subjected to 2 x 2 ANOVA by preparation and participation. There were ten questions included. Table 9 presents these analyses with means and standard deviations for the four groups. Four of the questions deal with the pregnancy/childbirth experience (#12, #20, #25, and #27); two deal with the infant (#38 and #42); and one deals with capabilities in child care (#46).

Table 9

2 x 2 ANOVA (Preparation x Participation) on Nonfactored Questions

Question	Group	N	\bar{X}	S.D.	F	p<
Pg. adjust. (12)	NN	6	1.00	0		
	NP	15	1.60	.63		
	PN	16	1.43	.72		
	PP	37	1.59	.76		
Simple Effects	Preparation				1.17	
	Participation				3.60	.06
	Interaction				1.23	
Main Effect				2.06		
Pg. news (20)	NN	6	3.66	.51		
	NP	15	3.26	.70		
	PN	16	3.81	.54		
	PP	37	3.72	.60		
Simple Effects	Preparation				3.09	.08
	Participation				1.94	
	Interaction				.83	
Main Effect				3.13	.05	
Not again (27)	NN	6	3.16	1.16		
	NP	15	3.33	.89		
	PN	16	3.56	.51		
	PP	37	3.67	.74		
Simple Effects	Preparation				2.79	.09
	Participation				.40	
	Interaction				.01	
Main Effect				1.44		
Baby time (38)	NN	6	2.50	1.04		
	NP	15	2.80	1.01		
	PN	16	3.31	1.13		
	PP	37	3.16	.89		
Simple Effects	Preparation				4.37	.04
	Participation				.07	
	Interaction				.64	
Main Effect				2.20		

Table 9

Continued

Question	Group	<u>N</u>	<u>\bar{X}</u>	<u>S.D.</u>	<u>F</u>	<u>p<</u>
Child care (46)	NN	6	1.66	.51		
	NP	15	2.00	1.00		
	PN	16	2.00	.73		
	PP	37	1.91	.95		
	Preparation				.24	
	Participation				.24	
	Interaction				.66	
Main Effect					.20	

Trauma (25)	NN	6	1.50	.83		
	NP	15	2.20	1.08		
	PN	16	1.93	.92		
	PP	37	2.05	1.02		
	Preparation				.26	
	Participation				2.04	
	Interaction				1.04	
Main Effect					1.04	

Alive (42)	NN	6	3.16	.98		
	NP	15	2.86	1.18		
	PN	16	3.18	.83		
	PP	37	2.81	.96		
	Preparation				.00	
	Participation				1.44	
	Interaction				.01	
Main Effect					.73	

Question #46 (Child care) shows no relationship to preparation or participation. Nor is there a relationship found with #25 (Trauma), or #42 (Alive). Four of the questions did show relationships. Question #12 (Pg. adjustment) is related to participation. The NP group had the highest mean followed by the PP, PN, and NN groups in descending order. The NN group shows total agreement (no variance) that the pregnancy was an adjustment. Question #20 (Pleased with pg. news) has a preparation effect. The NP group has a low mean; the PP and NN groups have equal means which are slightly lower than the PN group, indicating a participation relationship which was not statistically substantiated.

Preparation also shows a relationship with questions #27 (Not again) and #38 (Baby time). PP and PN groups have more positive means than do the NP and NN groups for willingness to repeat the experience. Concern with the amount of time the baby will take is evidenced less by prepared fathers than nonprepared fathers. The PN group has the highest mean with PP, NP, and NN groups following in descending order.

The most agreement of any group on any question or factor is found in the NN group response that pregnancy requires a major adjustment for fathers as well as mothers. This appears to agree with the idea that fathers are affected by preexisting conditions in the marital relationship as discussed in the triad factor. Pregnancy does affect the fathers' attitudes. It could also be a contributor to how involved the father wants to get and whether or not he seeks formal preparation. Since means for all of the groups

are low, all of the fathers appear to suggest adjustment. However, actual participation in the delivery room seems to alleviate or ease the difficulty of adjustment in a way different from those who do not participate. Perhaps one of the benefits of seeing the birth is that it makes the pregnancy seem more worthwhile, or completes a developmental task of pregnancy. As one father stated: "It's good to see pregnancy ends in a fruitful product."

It appears that if a father is pleased with the news of pregnancy he will be more inclined to prepare for the culmination of that pregnancy. Furthermore, the positive relationship between preparation and a desire to go through the experience again indicates that the prepared father is more pleased with what has transpired. Preparation also appears to lead to acceptance of involvement with the infant through time commitment. Preparing for childbirth lessens concerns with the amount of time the infant will take.

Analysis on nonfactored questions show preparation to be related to being pleased with the news of pregnancy, being concerned with the time involvement of the infant, and a willingness to repeat the same experience again. While this does give indication that the prepared father may be more committed to the infant and more excited about fatherhood, it does not tell us that he will be a better father. He does show indications that he is working towards that goal. Participation is shown to be related to the father's attitude about the pregnancy adjustment. While pregnancy is an adjustment for most of the fathers, the delivery room experience will make it more worthwhile.

Lack of relationships on the other questions may be due to limitations of the questions themselves. For example, Question #42

was designed on engrossment theories that the father would see the infant as being very much "alive." Insertion of the word "imagined" into the phrase (much more alive than I imagined) created misleading results. Many of the fathers actually imagined that the infant would be very "alive" and were indeed engrossed with him. Yet they responded negatively to the question. The same ambiguity arose in the use of the term "nonresponsive" in question #48.

Background Correlations

While there are obvious correlations between age of the father and education, occupation, age of mother, income, and years married, there were no indications that these variables would account for variance related to delivery and preparation. These variables were, therefore, not considered in the analysis of variance. There were significant relationships between mother's age and the classes attended, father's education and participation with his wife during visits to the physician, father's occupation and the classes attended, and physician visits and labor and delivery participation.

Open-ended Responses

Responses to the open-ended questions are presented in Appendix D. Sixty-four of the fathers in the study responded with their own comments at the end of the questionnaire. Except for the father who merely stated "no comment," enthusiasm, supreme excitement, and high emotion is indicated from their remarks. Twenty of the fathers admitted the experience was stressful, and five of them expressed

concern over finances, changes in life-style, and loss of attention from their wives.

Most of the fathers mentioned their love and appreciation for their wives. The PN group stressed that it was difficult to see their wives suffer. This is probably a surgical intervention phenomenon, since C-sections predominated delivery among this group. These fathers also expressed regret at being deprived of seeing the birth. None of the NN group mentioned their wives.

Most of the fathers expressed engrossment consistent with the findings scaled on the questions. Twelve of the fathers also expressed concern about the new responsibilities they face, but only two expressed any reluctance towards them. Two of the fathers outlined expectations for their children.

Four of the nonprepared fathers mentioned feelings of inadequacy through labor and delivery, while thirteen prepared fathers mentioned their pride at having helped. Four of the NP group also mentioned relief that their fears had not materialized. At the same time they felt the experience was harder than they had imagined it would be. Five of the fathers from the prepared group made comments about the difficulty of the pregnancy.

Summary of Findings

A careful look at the means and standard deviations of the 50 variables provided valuable insights into first-time fathers. Differences were found in attitudes towards the wife and the purpose and direction of the father in childbirth. Importance of father

participation was recognized by all as was an elevation of the marital relationship. Engrossment aspects of tactile awareness, attention focusing on the newborn and elation were universal. A contemplating of roles and planning on a parenting partnership indicated efforts to work through the stresses and adjustments of pregnancy which the fathers recognized.

Correlations of the 50 variables reveal multi-dimensional interactions. Relationships of attitudes are found in three basic areas: 1) husband-wife relationships in labor and delivery, 2) engrossment relationships, and 3) pregnancy/childbirth relationships. From these relationships the engrossment theory takes on new dimensions and the pregnancy period takes on increased importance.

The effects of preparation and participation were introduced through factor analysis on eight factors and through analysis of variance on nonfactored questions. The eight factors were named and their contents identified before analysis of variance was discussed. The introduction of preparation and participation variables divided the fathers into four groups: Prepared Participators (PP), Prepared Nonparticipators (PN), Nonprepared Participators (NP), and Nonprepared Nonparticipators (NN). The differences and similarities of the groups as revealed through the analysis of variance were both obvious and unexpected.

The ANOVA on the husband-wife duo, Factor I and father participation, Factor III both showed participation effects. In addition, Factor III also revealed preparation effects. Fathers who do witness the birth do feel that they have contributed and do recognize a

greater appreciation for their wives. On this basis, the hypotheses that 1) feelings towards the wife will be enhanced through participation and 2) preparation and participation will give more purpose and direction to the father through labor and/or delivery cannot be rejected.

That lack of preparation and participation also has merit was the unexpected result of the ANOVA on the triad, Factor II. This infant engross/marital relationship variable shows NN fathers scoring higher than any other group. Although the reasons for these results are unclear, the message must not be ignored. Perhaps medical personnel, wives, and childbirth educators are too insistent with nonprepared nonparticipants in striving for their preparation and/or participation. It is apparent that there are reasons to leave such a father to his own preference.

Although other ANOVA's did not reveal statistical significance, there were some interesting trends. The parenting roles, Factor V showed an interaction effect most easily explained by stereotypic attitudes and physiological difference of fathers and mothers. The adjustments of pregnancy and news of pregnancy are somewhat affected by participation. Initial excitement and the concerns with infant time involvement and desire for further pg/CB experience are slightly affected by participation.

Although the data of this study does not substantiate all of its hypotheses, it does contribute to the directions for further study and increases the knowledge and understanding available on new fathers. It also challenges or accentuates that which has been done in the past.

Fathers' responses on the pregnancy variables and responses to the open-ended question reveal that pregnancy requires a major adjustment. The increased interest of fathers to early preparation and participation indicates an effort or desire to work through this task. It is also possible that the adjustments of pregnancy discourage fathers from preparing and participating. The effect of the pregnancy on fathering is unclear. If the Leifer study (1977) has the same implications for fathering as it does for mothering, further investigation is indicated.

While this study has recognized the stress of pregnancy and the indications of developmental tasks, it does not address the longitudinal effects on fathering. It appears from responses to the birth experience and the engrossment characteristics that an immediate resolution of the pregnancy adjustments occurs as the baby is born. Participation only slightly affects the responses regarding that adjustment and preparation shows no effect at all. It remains to determine how long the birth impact will last or if the initial elation wears off as adjustments continue.

Contributions of this study towards resolving the delivery room controversy are many. Bradley's (1965) argument that husbands find and serve a purpose in childbirth is certainly validated. His contention that both husband and wife must be prepared for participation was not substantiated. The nonprepared father should not be excluded on the grounds that he has not had a class. However, the formal preparation may better qualify the father for participation and assistance cannot be ignored. It is also true that preparation is linked with the father's acceptance of the pregnancy, increases

his desire for further childbirth experience and helps alleviate his concerns for infant time involvement.

Barbour's (1976) conclusions that participation draws the couple closer together and enhances mutual respect has been strengthened. But the marital relationship can be enhanced without participation. The long-term effects on fathering which Barbour (1976) suggests must be studied further. At the same time, his contention that participation will "give meaning to him (the father)" is very evident by the father's pride at his participation in the process and his attitudes of "belonging" in childbirth.

The Cronenwett and Newmark (1974) study found more evidence for their hypothesis that participation leads to a positive birth experience. Lack of confirmation in this study may be due to sampling problems. Finding nonprepared nonparticipants in an area of high participation in childbirth is difficult. The nonparticipation cells were difficult to fill for two reasons: 1) fathers themselves want to participate, and 2) hospital personnel encourage fathers to participate. The nonprepared nonparticipation cell was more difficult to fill because so many of these fathers refused to answer a questionnaire. These fathers are just not participants. Another sampling problem is the inclusion of C-sections in the nonparticipant groups. If the father was planning to go into the delivery room, his anticipation might carry him through the experience or his exclusion could make him feel less involved than he actually is.

Further significant aspects of this study are the clarifications regarding the engrossment theory. Greenberg and Morris (1974) stated:

... fathers begin developing a bond to their newborn by the first three days after the birth and often earlier. Furthermore, there are certain describable characteristics of this bond, which we call engrossment. (p. 526)

The data of this study reveal that there is an attraction or fascination with the newborn on the part of the fathers. However, Greenberg and Morris's (1974) subsequent statement regarding "describable characteristics of that bond" cannot be validated. The interrelatedness of these characteristics to other aspects of the birth experience pose serious doubt to the validity of their construct.

SUMMARY

From the attitudes of 74 first-time fathers, numerous characteristics were revealed. All of the fathers were elated about becoming a father, planned on a partnership in parenting, wanted to touch, hold, and verbalize with their infants, saw their marriage relationship at a high point, and felt that their participation in childbirth was important. Although they recognized the trauma involved, they viewed the pregnancy and childbirth experience as being positive. They varied most in their attitudes towards their wives and their own purpose and performance in labor and delivery.

The father's experience of childbirth is obviously multifaceted. It was determined that attitudes about the childbirth experience begin with the first news of pregnancy. Pregnancy is viewed as a stressful adjustment time by the majority of fathers. Pregnancy does seem to evolve through developmental tasks for fathers. Some fathers are lead into preparation and/or participation for childbirth and others remain less involved.

Numerous relationships of attitudes were determined. A strong relationship was found between attitudes towards the wife's performance and the husband's helpfulness through labor and delivery. Engrossment characteristics displayed close relationship to the marital relationship and the father's participation in childbirth. These relationships logically lead to a factor analysis approach.

Factor analysis provided the multidimensional view that was necessary to draw proper conclusions regarding the effects of

father preparation and participation. Two by two analysis of variance on eight factors showed three to be statistically significant. Factor I--The husband-wife duo measured the wife performance and husband helpfulness in labor and delivery along with his elation with fatherhood. Factor II--The triad measured the marital relationship and tactile and visual engrossment characteristics. Factor III--Father participation measured father participation and perception of the infant as being perfect.

Analysis of variance on the husband-wife duo showed the participating fathers had more respect for their wives and felt more purpose through their own involvement in labor and delivery. Non-participating fathers did not show this degree of wife appreciation or self purpose and direction. Also in relation to their respect and involvement, participating fathers were more elated at becoming fathers. Preparation did not show the same effects as participation.

Analysis of variance on the triad revealed most unpredictable results. The total lack of preparation and participation has merit not before assumed or recognized. The NN group of fathers saw the marital relationship at a high point, wanted to touch and hold their infants, and were more visually engrossed with their infants more than any other group.

Analysis of variance on the father participation factor showed that both preparation and participation alone and in interaction enhance the father's attitudes towards his participating and in perceiving the infant as being perfect. There is a relationship

between the perception of perfection in the infant and in the father's participation which has not been previously identified.

Engrossment characteristics are seen in five of the eight factors. This reveals instabilities and causes questions regarding validity of the theory. There is evidence of an attraction to and a bonding between father and infant. The characteristics of that bond are not isolated to the infant alone. There are numerous contingencies including the wife's performance in labor and delivery, the father's participation and helpfulness in labor and delivery, the marital relationship, the pregnancy experience, and perhaps most important, the activity and behavior of the infant himself. This author feels that there is a birth impact and an infant impact which need separate consideration. There is an initial attraction or bond to the infant through the overwhelming effect of just becoming a father and/or being involved in any way with the birth. The characteristics and long-lasting aspects of that bond need much further investigation.

Analysis of variance on nonfactored questions helped to further clarify reasons for father preparation and participation. It was seen that preparation increased the father's feeling of helpfulness, reduced his concerns over infant time involvement, and made him more positive about repeating the childbirth experience. Participation reduced the negativity of pregnancy stresses and adjustments as well as giving the father a sense of accomplishment and increasing his respect for his wife. There is not enough evidence to warrant eliminating fathers from participation due to a lack of preparation. Nor

does the data allow identification of one reason over another to rationalize father participation.

There are limitations of this study which became clear as the results were interpreted. Questionnaire research can be too limiting and misinterpretation of questions themselves can alter the results. Other means of data collection, such as interviews and observations, would perhaps be more effective tools. Various time periods, such as pregnancy itself, seem to be the key to what fathers are really experiencing. A longitudinal approach would therefore provide more insights. The study design caused difficulties as nonprepared nonparticipants also proved to be rare subjects or refused to participate in the study. However, these are the very fathers that need to be included. Perhaps other methods of data collection would gain their cooperation. Major suggestions would be to maintain a similar design but include the pregnancy period, reevaluate means of data collection, and give must more careful consideration to the engrossment characteristics.

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APPENDICES

Appendix A

The Flyer

UTAH STATE UNIVERSITY
DEPARTMENT OF FAMILY & HUMAN DEVELOPMENT
UMC 29
LOGAN, UTAH 84322

CONGRATULATIONS



YOU'RE
A
FATHER

Dear Father,

You are to be congratulated on becoming a father. You might have had this experience before or this may be your very first. You have been selected to participate in a study on fathering in early infancy. This study is being conducted through the Department of Family Life and Human Development at Utah State University and in cooperation with the Logan Hospital.

If you agree to participate in this study, you will be asked to respond to two short questionnaires designed to reflect your opinions towards being a new father. The first questionnaire is to be completed as soon after delivery as possible and the second is to be completed just prior to your wife's release from the hospital.

Your responses will be completely anonymous. You are asked to not put your name on the questionnaires but for outline purposes only identify them with your mother's maiden initials.

Your cooperation is greatly appreciated as this study would be impossible without your help.

Janice E. Nyser, R.N.
Graduate Student
Family and Human
Development

Dr. Jay D. Schwaneveldt
Department Head-Family and Human Develop.
Utah State University

Ms. Lois Weagle, R.N.
Director of Nursing
Logan Hospital

Roster Information

If you are interested in follow-up information related to this study please fill out this information, detach this portion, and place in the box provided at the nurses station to the delivery room.

Name

Address

City

Zip Code

Telephone Number

Appendix B

Questionnaire

UTAH STATE UNIVERSITY · LOGAN, UTAH 84322
COLLEGE OF FAMILY LIFE

DEPARTMENT OF
FAMILY AND
HUMAN DEVELOPMENT
UMC 29

PLEASE READ CAREFULLY AND SIGN BELOW

Dear Father,

Thank you for your participation. We are very interested in learning more about new fathers. We feel that the best way to do so is to ask you, as a new father, for your opinions and reactions.

This is the first of two questionnaires to which you are asked to respond. The background information will help us with interpretation of responses. The statements utilized in the questionnaire represent some commonly held opinions. We are interested in the degree to which you agree or disagree with each. There are no right or wrong answers. Please respond to every statement. The final question gives you an opportunity to express your feelings in your own words. Please return this questionnaire to the delivery room nurse upon completion.

You will be given the second questionnaire just prior to your wife's departure from the hospital. Even though we need your name for matching the questionnaires, your responses will be completely confidential. In order to further our understanding of the relationships between the processes of child-birth, the effects of hospitalization, and fathering, we will also need limited information from your wife's delivery room record. This information pertains to the sex of the infant, the length of labor, the length of delivery, the mode of delivery and drugs used during labor and delivery.

We need your permission for our data collection.

FATHER'S PERMISSION

I hereby give my consent to participate in the fathering project involving human subjects. I understand the procedures to be followed. Information obtained from this study will be used for educational and scientific purposes only, with the understanding that my name and the names of my family members will never be publicized in connection therewith. I will receive answers to any inquiries regarding the project and am free to withdraw my consent and discontinue participation in the project at any time.

Signature _____

Date _____

If you have further questions, we will be happy to discuss them with you.

Thank you,

J. Craig Peery Ph.D.
Jan Ryser R.N.
Department of Family and
Human Development
752-4100 ext. 7611

QUESTIONNAIRE #1 BACKGROUND INFORMATION

1. Age _____ yrs. 2. Wife's age _____ yrs.
3. Please indicate the years of schooling that you have completed:
- | | |
|------------------|--------------------------|
| _____ Highschool | _____ Graduate studies |
| _____ College | _____ Technical training |
4. What is your occupation? (check space)
- | | |
|----------------------------------|--------------------------|
| _____ Professional and technical | _____ Equipment Operator |
| _____ Farmer/Rancher | _____ Laborer |
| _____ Manager/Proprietor | _____ Sales Worker |
| _____ Clerical Worker | _____ Craftsman/Foreman |
| | _____ Student |
5. If currently a student please give college major _____
6. What is your approximate family income?
- | | |
|----------------------------|----------------------------|
| _____ Under \$4,999 | _____ \$15,000 to \$19,999 |
| _____ \$5,000 to \$9,999 | _____ \$20,000 to \$29,999 |
| _____ \$10,000 to \$14,999 | _____ \$30,000 to \$39,999 |
| | _____ \$40,000 or more |
7. Is your wife employed? _____ yes _____ no
8. How much of the family income does your wife contribute? (check space)
- | | |
|---------------------|-------------------|
| _____ less than 25% | _____ 50% to 75% |
| _____ 25% to 50% | _____ 75% or more |
9. Indicate the number of years married.
- | | |
|-----------------|---------------------------|
| _____ one year | _____ three to five years |
| _____ two years | _____ over five years |
10. Your preparation for childbirth included: (check all that apply)
- | |
|--------------------------------|
| _____ Lamaze class |
| _____ Hospital pre-natal class |
| _____ Other _____ |
| _____ No preparation |
11. What was your preference for the sex of your infant?
- | | | |
|------------|--------------|---------------------|
| _____ male | _____ female | _____ no preference |
|------------|--------------|---------------------|
12. Your childbirth participation included: (check all that apply)
- | |
|---|
| _____ Accompanying wife to the doctor for check-ups |
| _____ Assisting wife through labor |
| _____ Attending wife during delivery |
| _____ Other _____ |
| _____ No participation |

QUESTIONNAIRE # 1

Respond to all of the following statements by marking an X in the column that best represents your opinion of each statement.

Key:

Strongly Agree(SA) Mildly Agree(MA) Mildly Disagree(MD) Strongly Disagree(SD)

	SA	MA	MD	SD
1. I am elated about becoming a father.	4	3	2	1
2. I felt increased stress during pregnancy.	1	2	3	4
3. Childbearing is women's work.	1	2	3	4
4. My wife was beautiful during childbirth.	4	3	2	1
5. I am confused about my role as a father.	1	2	3	4
6. My wife was difficult to live with during pregnancy.	1	2	3	4
7. The baby already seems to have a personality of his/her own.	4	3	2	1
8. My wife and I have openly communicated our feelings during pregnancy.	4	3	2	1
9. I didn't know what to do to help my wife during pregnancy.	1	2	3	4
10. My baby is perfect.	4	3	2	1
11. I plan on a partnership in parenting responsibilities with my wife.	4	3	2	1
12. Pregnancy requires a major adjustment for expectant fathers as well as for mothers.	1	2	3	4
13. I felt that I didn't help anyone by being in labor (or delivery)	1	2	3	4
14. It is important to me to touch and hold my infant.	4	4	2	1
15. My wife did a great job in labor.	1	2	3	4
16. If I could so choose, I would not be a father at this time.	1	2	3	4

QUESTIONNAIRE # 1

	SA	MA	MD	SD
17. I really felt close to my wife during labor (or delivery).	4	3	2	1
18. I am afraid of my baby.	1	2	3	4
19. I feel there won't be much more responsibility as a father than there is as a husband.	1	2	3	4
20. I was pleased with the news that my wife was pregnant.	4	3	2	1
21. There are some things that I would change about my baby.	1	2	3	4
22. I was the person who helped my wife most during labor (or delivery).	4	3	2	1
23. I really felt pressured by my wife to participate during labor (or delivery).	1	2	3	4
24. I could watch my infant for hours.	4	3	2	1
25. Pregnancy and childbirth are traumatic experiences.	1	2	3	4
26. My wife made me feel that I'd really helped.	4	3	2	1
27. I have no desire to go through this experience again.	1	2	3	4
28. It will take a long time before I feel like a father.	1	2	3	4
29. I feel confident in caring for my baby.	4	3	2	1
30. I feel that it is important for a father to participate with his wife in childbirth.	4	3	2	1
31. My wife didn't cope as well as I thought she would with labor (or delivery).	1	2	3	4
32. The baby has some features that are just like mine/my wife.	4	3	2	1
33. Childbirth has given a whole new aspect to my relationship with my wife.	4	3	2	1

QUESTIONNAIRE # 1

	SA	MA	MD	SD
34. Fathers are out of place in childbearing.	1	2	3	4
35. It is difficult to know how I feel about my baby until I get to know him/her better.	1	2	3	4
36. I often felt in the way during labor or delivery.	1	2	3	4
37. I was a great source of strength to my wife during pregnancy.	4	3	2	1
38. I am concerned at the amount of time the baby will take.	1	2	3	4
39. Fathers are influenced to participate in childbirth more by social compliance than by free choice.	1	2	3	4
40. I feel that it is important for me to talk to my baby.	4	3	2	1
41. I helped my wife feel more comfortable during contractions and/or delivery.	4	3	2	1
42. My baby is more active and "alive" than I imagined he/she would be.	4	3	2	1
43. This is one of the highest points of my relationship with my wife.	4	3	2	1
44. Fathers and mothers play entirely different roles in the lives of their infants.	1	2	3	4
45. I am anxious to have my baby home.	4	3	2	1
46. My wife is much more capable of child care than I am.	1	2	3	4
47. My baby looks like all other babies.	1	2	3	4
48. I am disappointed at how non-responsive my baby is.	1	2	3	4
49. Childbirth preparation courses could be geared more to help fathers.	1	2	3	4
50. Pregnancy and childbirth are very positive experiences.	4	3	2	1

QUESTIONNAIRE # 1

WOULD YOU PLEASE EXPRESS YOUR THOUGHTS AND FEELINGS AT THIS TIME OF
BECOMING A NEW FATHER:

Appendix CCorrelation Coefficients

Table 10
Correlation Coefficients

	#1 Elated	#3 Woman's work	#4 Wife beautiful	#5 Role confused	#8 Commu- nication	#9 Pg. help	#10 Perfect	#11 Partner- ship
#1 Elated	1.00000							
#3 Woman's work	0.30533	1.00000						
#4 Wife beautiful	0.28344	0.26395	1.00000					
#5 Role confused	0.07364	0.15422	-0.06990	1.00000				
#8 Communication	0.20466	0.20425	0.07992	0.07068	1.00000			
#9 Pg. help	0.23133	0.29516	0.04899	0.28344	0.03477	1.00000		
#10 Perfect	-0.06514	0.22256	0.21853	-0.17691	-0.01757	0.09464	1.00000	
#11 Partnership	0.04670	0.24427	0.03022	-0.04380	0.40596	0.10643	0.07802	1.00000
#12 Pg. adjustment	0.02347	-0.02658	0.15905	-0.13835	-0.13640	0.12249	-0.06419	-0.30319
#13 L & D help	0.26819	0.28920	0.35236	0.11178	0.02640	0.23615	0.20500	-0.04683
#14 Touch	0.14754	0.14519	0.01817	-0.00996	0.29877	0.16577	-0.01352	0.46229
#15 Wife great job	0.40156	0.21835	0.56956	0.05209	0.10221	0.09570	-0.06148	0.15833
#17 Close in L & D	0.38049	-0.15404	0.40509	0.05303	0.05095	0.18866	-0.04134	0.09596
#18 Afraid of baby	-0.08904	-0.02765	-0.12502	0.52488	0.03356	0.09676	-0.09433	0.15396
#19 Responsibility	-0.04367	0.03436	0.18228	-0.05845	-0.03676	0.20106	0.23396	0.18287
#20 Pleased with Pg. news	0.13404	0.14179	0.20637	-0.04200	0.32650	0.13432	-0.05700	0.15254
#22 Helped most in L & D	0.22846	0.23052	0.38042	0.24521	0.14295	0.25834	0.03912	0.06373
#23 Pressured	0.09756	0.23019	0.10707	0.13016	0.07898	0.20475	-0.06764	0.13715
#24 Watch	0.09227	0.00813	0.09120	-0.05814	0.12587	0.03968	0.22720	0.29522
#26 Wife made me feel	0.02814	0.21625	0.01721	0.10691	0.18149	0.30751	0.08725	0.43743
#28 Feel like father	-0.19809	0.01854	-0.04195	0.23933	0.15193	-0.06208	-0.13556	0.01856
#29 Confident in care	-0.10954	-0.00767	-0.19424	0.39107	-0.08199	0.13590	-0.08981	0.06515
#30 Participation important	0.04634	0.41767	0.28560	-0.04927	0.14571	0.17154	0.45404	0.29514
#31 Wife cope	0.27265	0.24432	0.36890	0.07615	0.13312	0.08877	0.13942	0.17395
#32 Features	-0.00247	-0.12057	-0.14227	0.01457	0.07720	-0.10534	-0.09452	0.11022
#33 New aspect	0.15330	0.18180	0.17868	-0.14631	0.22954	-0.13556	0.06791	0.15787
#34 Fathers in childbirth.	0.17885	0.46091	0.25809	0.11491	-0.00502	0.35488	0.33627	0.09739
#35 Feel about baby	-0.06127	0.08737	-0.06441	0.19202	0.04944	0.28962	0.06490	0.12178
#36 Father in way	-0.02487	0.12426	0.12842	0.14462	0.05254	0.12256	-0.04030	0.08048
#37 Pg. strength	0.04368	0.08110	-0.04146	0.21885	0.13824	0.13508	0.05935	0.12103
#38 Baby time	-0.00299	0.14307	0.17805	0.12647	0.08200	0.25206	0.02395	0.24333
#39 Social compliance	0.06462	0.16410	0.21939	-0.05627	-0.01889	0.16079	0.37005	0.05331
#40 Verbalize	0.08870	-0.05576	0.05124	0.05541	0.19340	0.07791	0.02169	0.37158
#41 Wife comfortable	0.15666	0.14783	0.11191	0.11194	0.03184	0.27016	-0.09806	0.07558
#43 High point	-0.01870	0.26632	-0.04000	0.01172	0.27354	0.08228	0.13359	0.48236
#44 Different roles	0.18957	0.02181	0.12058	0.06693	-0.10181	0.14946	-0.05530	0.01762
#45 Home	0.01123	0.10279	0.20846	-0.03218	0.08189	-0.11470	-0.02959	0.15809
#47 Unique	-0.05227	0.04474	0.03696	-0.08501	0.02873	-0.19395	-0.08869	0.26117
#48 Responsive	0.08878	0.14895	-0.02507	0.08944	0.12326	0.19503	-0.00337	0.34290
#49 CB preparation	0.08564	0.07749	0.28106	0.17031	0.19892	0.23234	0.09751	0.06260
#50 Postive	0.04763	0.20085	0.35947	-0.03132	0.18147	0.04543	0.37223	0.20835

Table 10

Continued

	#12 Pg. adjustment	#13 L & D help	#14 Touch	#15 Wife great job	#17 Close in L & D	#18 Afraid of baby	#19 Responsi- bility	#22 Helped most in L & D
# 1 Elated								
# 3 Woman's work								
# 4 Wife beautiful								
# 5 Role confused								
# 8 Communication								
# 9 Pg. help								
#10 Perfect								
#11 Partnership								
#12 Pg. adjustment	1.00000							
#13 L & D help	-0.00909	1.00000						
#14 Touch	-0.02666	-0.02666	1.00000					
#15 Wife great job	0.09553	0.54858	0.08115	1.00000				
#17 Close in L & D	0.16431	0.51277	0.08261	0.82113	1.00000			
#18 Afraid of baby	-0.33680	-0.04445	0.06256	-0.04815	-0.07098	1.00000		
#19 Responsibility	-0.03938	0.20425	0.16197	0.04901	0.02867	-0.06532	1.00000	
#20 Pleased with Pg. news	0.01081	-0.04940	0.18783	-0.02802	-0.07878	-0.12785	-0.04823	
#22 Helped most in L & D	0.01923	0.52855	0.27261	0.39486	0.42898	-0.03543	0.22251	1.00000
#23 Prenatal	-0.05074	0.34355	0.17911	0.39987	0.38950	0.06843	0.21813	0.22433
#24 Watch	-0.08134	0.05546	0.43010	-0.00241	0.02786	-0.03437	0.31079	0.11826
#26 Wife made me feel	-0.07895	0.17832	0.49372	0.18183	0.15533	0.05246	0.09837	0.24337
#28 Feel like father	0.00982	0.03241	-0.05021	0.10182	0.05688	0.34709	0.02747	0.17130
#29 Confident in case	-0.10586	-0.02924	0.17202	-0.05904	-0.03989	0.52478	0.15838	0.04855
#30 Participation important	-0.08053	0.33513	0.16102	0.00371	-0.02416	-0.02534	0.37874	0.31471
#31 Wife cope	0.08052	0.25560	0.08183	0.51185	0.41278	0.00401	-0.04966	0.19572
#32 Features	-0.03114	-0.14134	0.09511	-0.06090	-0.08161	-0.02097	0.21962	-0.16639
#33 New aspect	-0.10635	-0.11181	0.12856	0.09754	0.14829	-0.16749	-0.07264	-0.08187
#34 Fathers in childbirth	-0.03384	0.39168	0.05628	-0.00185	-0.00188	0.00150	0.48113	0.33112
#35 Feel about baby	0.12912	-0.02629	0.16739	-0.05931	-0.00499	0.27705	0.16557	0.07613
#36 Father in way	0.10205	0.31329	0.07471	0.23224	0.12590	0.04452	0.06173	0.13748
#37 Pg. strength	-0.17921	0.22447	0.31033	0.07924	0.08068	0.06264	0.17167	0.28402
#38 Baby time	0.08608	0.03400	0.16184	0.08956	0.02782	0.05803	0.22922	0.13506
#39 Social compliance	0.17710	0.10096	-0.05194	-0.06456	0.08227	-0.12599	0.36071	0.12549
#40 Verbalize	-0.21757	0.14834	0.41251	0.15721	0.11415	0.09224	0.48819	0.18286
#41 Wife comfortable	0.04380	0.49350	0.26202	0.59986	0.20386	-0.01521	0.06182	0.55819
#43 High point	-0.24718	0.04192	0.41997	0.01608	0.01637	0.06257	0.11792	0.19322
#44 Different roles	0.10232	0.07437	0.21808	0.08570	0.16561	0.01168	0.07889	0.07088
#45 Home	-0.06794	-0.05304	0.26697	0.13091	0.10158	0.14656	-0.02991	0.00832
#47 Unique	-0.12232	-0.00272	0.10989	0.02195	-0.03794	-0.07120	0.00378	-0.01615
#48 Responsive	-0.12169	-0.19468	0.15106	0.09710	-0.04628	0.03561	0.22729	0.12745
#49 CB preparation	0.25526	0.11361	0.07418	0.23675	0.17572	0.02972	0.18697	0.17666
#50 Positive	0.10062	0.08431	0.13962	0.23986	0.13445	-0.03638	0.22327	0.05637

Table 10

Continued

	#23	Pressure	#24	Match	#26	Wife helpful	#29	Confident in care	#30	Participation important	#31	Wife cope	#32	Features
#1 Elated														
#3 Woman's work														
#4 Wife beautiful														
#5 Role confused														
#8 Communication														
#9 Pg. help														
#10 Perfect														
#11 Partnership														
#12 Pg. adjustment														
#13 L & D help														
#14 Touch														
#15 Wife great job														
#17 Close in L & D														
#18 Afraid of baby														
#19 Responsibility														
#20 Pleased with pg. news														
#22 Helped most in L & D														
#23 Pressured		1.00000												
#24 Watch		0.06088		1.00000										
#26 Wife made me feel		0.19501		0.45691		1.00000								
#28 Feel like father		0.12570		-0.08581		0.01687								
#29 Confident in care		-0.0053		0.17532		0.15712		1.00000						
#30 Participation important		0.05028		0.07341		0.14985		-0.03182		1.00000				
#31 Wife cope		0.16917		0.07474		0.10756		-0.10530		-0.05159		1.00000		
#32 Features		0.05372		0.28369		0.01732		0.18340		-0.08527		-0.06974		1.00000
#33 New aspect		-0.07222		0.38410		0.10059		-0.02203		0.18565		0.05677		0.25995
#34 Fathers in childbirth		0.22583		0.14857		0.12244		0.05704		0.66070		-0.02156		-0.13224
#35 Feel about baby		0.05830		0.33269		0.16388		0.53361		-0.04894		-0.05720		0.21207
#36 Father in way		0.38154		0.03370		0.17397		-0.06296		0.01275		0.33026		-0.04132
#37 Pg. strength		0.15833		0.27979		0.31278		0.34034		0.00760		-0.06204		0.07256
#38 Baby time		0.24837		0.14624		0.27659		0.04653		0.13939		0.17098		-0.01520
#39 Social compliance		0.17526		0.14346		-0.08766		-0.06249		0.04049		-0.00190		-0.08129
#40 Verbalize		0.28868		0.22071		0.19663		0.23946		0.17682		0.21699		0.18687
#41 Wife comfortable		0.40969		0.09414		0.28831		0.00156		-0.00252		0.24397		-0.10263
#43 High point		0.02074		0.31215		0.47060		0.31552		0.35201		-0.02128		0.07816
#44 Different roles		0.05193		0.14435		0.12525		0.13013		-0.10969		0.08198		0.03509
#45 Home		-0.04264		0.29101		0.27288		0.22088		0.06891		0.14043		0.08898
#47 Unique		-0.00134		0.28963		0.16184		0.11013		0.08994		-0.07149		0.31944
#48 Responsive		0.01885		0.27410		0.31081		0.20614		0.02992		0.19648		0.06590
#49 CB preparation		0.13076		0.09088		0.02495		0.09181		0.06652		0.20648		-0.07331
#50 Positive		0.11740		0.08547		0.11468		-0.04606		0.29845		0.23669		-0.04680

Table 10

Continued

	#33 New aspect	#34 Fathers in childbirth	#35 Feel about baby	#38 Baby time	#39 Social compliance	#40 Verbalize
#1 Elated						
#3 Woman's work						
#4 Wife beautiful						
#5 Role confused						
#8 Communication						
#9 Pg. help						
#10 Perfect						
#11 Partnership						
#12 Pg. adjustment						
#13 L & D help						
#14 Touch						
#15 Wife great job						
#17 Close in L & D						
#18 Afraid of baby						
#19 Responsibility						
#20 Pleased with pg. new						
#22 Helped most in L & D						
#23 Pressured						
#24 Watch						
#26 Wife made me feel						
#28 Feel like father						
#29 Confident in care						
#30 Participation important						
#31 Wife cope						
#32 Features						
#33 New aspect	1.00000					
#34 Fathers in childbirth	-0.01770	1.00000				
#35 Feel about baby	0.10194	0.09022	1.00000			
#36 Father in way	-0.19001	0.18664	-0.01686			
#37 Pg. strength	0.03555	0.08966	0.18825			
#38 Baby time	-0.05753	0.27329	0.16869	1.00000		
#39 Social compliance	0.09314	0.46791	0.13498	0.26809	1.00000	
#40 Verbalize	0.08671	0.11057	0.18477	0.06684	0.02928	1.00000
#41 Wife comfortable	0.00379	0.07209	0.03856	0.05697	-0.06185	0.23910
#43 High point	0.40841	0.39084	0.34000	0.36049	0.15510	0.30926
#44 Different roles	0.06261	0.01078	0.14503	-0.03239	-0.02153	-0.04907
#45 Home	0.33561	-0.04191	0.17928	0.12071	0.01895	0.12131
#47 Unique	0.40528	-0.08417	0.19412	0.00665	0.12128	0.17762
#48 Responsive	-0.03985	0.14178	0.20439	0.05781	0.04726	0.27138
#49 CB preparation	0.09041	0.07044	0.25648	0.35596	0.12383	0.16388
#50 Positive	0.18335	0.11202	0.01302	0.10223	0.29433	0.23656

Appendix D

Open-ended Question and Positivity Scale

Table 11

Open-ended Question and Positivity Scale

Subjects	Mean	Overall Reaction	Wife	Infant	Self
1. NN	3.02	Excited			Inadequate
2. NN	3.12	Excited		Afraid to hold	
3. NN	2.98	Exhilaration			
4. NN	2.88	Very proud		Love him	
5. NN	3.16				
6. NN	3.18	Happy			
1. NP	3.04	Worth it all	Beautiful	Aware	Tired
2. NP	3.42	Happy	Proud	Proud of	Determined
3. NP	3.38				
4. NP	2.66				
5. NP	3.64	Happy; proud	Beautiful	Lovely	Neat feeling
6. NP	3.10	Happy		Can take on ambitions	
7. NP	3.44	Cloud nine		Love	
8. NP	3.34	Hard to believe	Proud of	Love it	Felt helpless
9. NP	3.00	Grew up fast			
10. NP	3.72		Can rest now	Want	Ready for parenting
11. NP	3.62	Great			
12. NP	2.92	Lots of fun			
13. NP	3.48	Great feeling	Hard on	Touch and watch gt.	I feel great
14. NP	3.12	Marvelous		Love and care	Ready for this
15. NP	3.56	Gratifying	Confident in	Protective of	Fears didn't materialize
1. PN	3.26	Difficult to see	Pain		Love fatherhood
2. PN	3.74	Thankful		Challenge	
3. PN	3.68	Happy; blessed	Complete marr.	Complete	Anxiety worth it

Table 11

Continued

Subjects	Mean	Overall Reaction	Wife	Infant	Self
4. PN	3.46	Exciting	Pain		I helped
5. PN	3.06	Excited	High point	Like me	Proud/excluded
6. PN	2.94	Disappointed at not seeing	Good mom	Happy with	Concerned at providing for
7. PN	3.42	Great	Great	Great	Lonely
8. PN	3.86	Pleased; happy	High point		
9. PN	3.54	Happy; grateful	Great	Great	Important job ahead
10. PN	3.58	Appreciative	Missed not being included in delivery		
11. PN	2.74	No comment			
12. PN	3.40	Proud; happy	Proud of		
13. PN	3.30	Happy	Glad of	Pleased	Happy/excluded
14. PN	3.32	Increased love Eg. hard	Strength		Excited with role
15. PN	3.38	Glad it's over	Good to have back		
16. PN	3.40	Happy and proud	Partner		Worried with responsibility
1. PP	3.74				
2. PP	3.36	Utter ecstasy	Special	Special	Jubilant
3. PP	3.62	Excited, happy	Share		
4. PP	3.10				
5. PP	3.62	WOW!			
6. PP	3.14				
7. PP	3.54	Emotional	Love	Functions	Tallest man on earth
8. PP	3.44				
9. PP	3.30	Remarkable; awed by	Proud	Alive	
10. PP	3.42	Happy	"I've become the happiest dad around but I sure am glad the becoming is done.		

Table 11

Continued

Subjects	Mean	Overall Reactions	Wife	Infant	Self
11. PP	3.28	Happy	Close		I helped but feel unsure
12. PP	3.32	Emotional high	Love	Love him	Will lose wife's attention
13. PP	3.46	Overjoyed		Anxious to get to know	
14. PP	3.40	Highlight of life	Closer love	Watch	Participate
15. PP	3.50				
16. PP	3.18	Excited	Devotion	Responsible	Change life style
17. PP	3.32				
18. PP	3.40	Fantastic			
19. PP	3.54	Very excited			
20. PP	3.54	Special; important		Great	Love being a father
21. PP	3.26	Delighted, happy			Fulfilled
22. PP	3.62	Excited; beautiful		More	
23. PP	3.32	Excited; happy			Nervous; glad it's over
24. PP	2.96	Tired; pg. fruitful		A dream	Exhausted
25. PP	3.10	Exciting, frightening		A dream	Exhausted
26. PP	3.24	Couldn't be happier			Exhausted
27. PP	3.38	WOW, happy, wonder	Feelings strong	Love him	Busy; preparing and learning
28. PP	3.64	Happy, excited	Appreciate	Miracle	Gt. responsibility
29. PP	2.80	Wasn't easy	Love	Love	Worth it
30. PP	3.20	Hard to believe		Special	
31. PP	3.46	Elated		God send	Relieved; long wait through pg.
32. PP	3.14	Great challenge		Miracle	Gt. responsibility

Table 11
Continued

Subjects	Mean	Overall Reactions	Wife	Infant	Self
33. PP	3.62	Great	Love	Love; like us	Responsibility
34. PP	3.39	Fears disappeared	Close to	Love; hold	Proud
35. PP	3.38	with birth	Proud	Part of us	Ask in a year or 2
36. PP	3.30	Excited; proud			
37. PP	3.48	Neater than imagined Happy and motivated			