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COMFORTING-TOUCH BEHAVIORS IN CHILDBIRTH

THE UNIVERSITY OF ARIZONA

M.S. 1984

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COMFORTING-TOUCH BEHAVIORS IN CHILDBIRTH

by

James Marris Pobrislo

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A Thesis Submitted to the Faculty of the

COLLEGE OF NURSING

In Partial Fulfillment of the Requirements  
For the Degree of

MASTER OF SCIENCE

In the Graduate College

THE UNIVERSITY OF ARIZONA

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This thesis has been approved on the date shown below:

Margarita A. Kay

MARGARITA A. KAY  
Professor of Nursing

19 November 1984

Date

To my family.

#### ACKNOWLEDGMENTS

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TABLE OF CONTENTS

	Page
LIST OF TABLES . . . . .	vii
ABSTRACT . . . . .	xi
1. INTRODUCTION . . . . .	1
Statement of the Problem . . . . .	3
Statement of the Purpose . . . . .	3
Sginificance of the Problem . . . . .	3
Definition of Terms . . . . .	8
Conceptual Framework . . . . .	8
2. REVIEW OF LITERATURE . . . . .	16
Crisis . . . . .	16
Touch . . . . .	20
Summary . . . . .	24
3. DESIGN AND METHODOLOGY . . . . .	26
The Setting . . . . .	26
The Sample . . . . .	26
Methodology . . . . .	27
Research Design . . . . .	27
Method of Data Collection . . . . .	28
Assumptions . . . . .	29
Limitations . . . . .	30
Observational Tools . . . . .	30
Observational System . . . . .	31
Reliability and Validity . . . . .	31
Analysis of Data . . . . .	32
4. RESEARCH FINDINGS AND DATA ANALYSIS . . . . .	35
Characteristics of Recipients of Touch . . . . .	35
Field Problems in Data Collection . . . . .	37
Data Summaries . . . . .	37
Highlights of Collective Comforting	
Touch by All Caregivers . . . . .	38

TABLE OF CONTENTS--Continued

	Page
Highlights of Comforting Touch by Family Members . . .	48
Highlights of Comforting Touch by Nurses . . . . .	58
Highlights of Comforting Touch by Physicians . . . . .	65
Highlights Comforting Touch by the Nurse-midwife . . .	71
Comparison of Comforting-touch Behaviors of the Various Caregivers . . . . .	79
5. CONCLUSIONS AND RECOMMENDATIONS . . . . .	84
Summary . . . . .	84
Conclusions . . . . .	86
Discussion and Implications for Nursing . . . . .	88
Recommendations for Further Study . . . . .	91
APPENDIX A: PATIENT DISCLAIMER FOR STUDY (IN ENGLISH AND SPANISH) . . . . .	93
APPENDIX B: DATA COLLECTION TOOL . . . . .	96
APPENDIX C: COLLEGE OF NURSING ETHICAL REVIEW SUB- COMMITTEE OF THE RESEARCH COMMITTEE MEMORANDUM REGARDING APPROVAL OF THE HUMAN SUBJECTS COMMITTEE . . . . .	102
APPENDIX D: LETTER OF APPROVAL TO CONDUCT STUDY FROM PROTOCOL REVIEW COMMITTEE OF KINO COMMUNITY HOSPITAL . . . . .	104
APPENDIX E: LETTER FROM DEPARTMENT OF HEALTH & HUMAN SERVICES TO USE OBSERVATIONAL TOOL . . . . .	106
REFERENCES . . . . .	108

LIST OF TABLES

Table	Page
1. Summary of reliability check between researcher and co-observer in 11 categories . . . . .	33
2. Characteristics of the recipients of comfort touch and type of caregiver . . . . .	36
3. Frequencies, totals, and percentages of all comfort-touch types by caregiver on each listed body part of the childbearing woman . . . . .	39
4. Frequencies and totals of comfort-touch types by caregiver's hand on each listed body part of the childbearing woman . . . . .	40
5. Frequencies and totals of comfort-touch types by caregiver's fingers on each listed body part of the childbearing woman . . . . .	41
6. Frequencies and totals of comfort-touch types by caregiver's arm on each listed body part of the childbearing woman . . . . .	42
7. Frequencies and totals of comfort-touch types by caregiver's lips on each listed body part of the childbearing woman . . . . .	43
8. Frequencies and totals of comfort-touch types by caregiver's trunk on each listed body part of the childbearing woman . . . . .	44
9. Frequencies and totals of comfort-touch types by caregiver's head on each listed body part of the childbearing woman . . . . .	45
10. Total touch frequencies and percentages by caregiver's to women at rest and during contractions . . . . .	46
11. Frequencies, totals, and percentage of all comfort-touch types by family members on each listed body part of the childbearing woman . . . . .	49

TABLE OF CONTENTS--Continued

Table	Page
12. Frequencies and totals of comfort-touch types by family member's hand on each listed body part of the childbearing woman . . . . .	50
13. Frequencies and totals of comfort-touch types by family member's fingers on each listed body part of the childbearing woman . . . . .	51
14. Frequencies and totals of comfort-touch types by family member's arm on each listed body part of the childbearing woman . . . . .	52
15. Frequencies and totals of comfort-touch types by family member's trunk on each listed body part of the childbearing woman . . . . .	53
16. Frequencies and totals of comfort-touch types by family member's lips on each listed body part of the childbearing woman . . . . .	54
17. Frequencies and totals of comfort-touch types by family member's head on each listed body part of the childbearing woman . . . . .	55
18. Total touch frequencies and percentages by family members on the parturient at rest and during contraction . . . . .	56
19. Frequencies, totals, and percentages of all comfort-touch types by nurses on each listed body part of the childbearing woman . . . . .	59
20. Frequencies and totals of comfort-touch types by the nurse's hand on each listed body part of the childbearing woman . . . . .	60
21. Frequencies and totals of comfort-touch types by the nurse's fingers on each listed body part of the childbearing woman . . . . .	61
22. Frequencies and totals of comfort-touch types by the nurse's arm on each listed body part of the childbearing woman . . . . .	62

TABLE OF CONTENTS--Continued

Table	Page
23. Frequencies and totals of comfort-touch types by the nurse's trunk on each listed body part of the childbearing woman . . . . .	63
24. Total touch frequencies and percentages by nurses on the parturient at rest and during contractions . . . . .	64
25. Frequencies, totals, and percentages of all comfort-touch types by physicians on each listed body part of the childbearing woman . . . . .	66
26. Frequencies and totals of comfort-touch types by the physician's hand on each listed body part of the childbearing woman . . . . .	67
27. Frequencies and totals of comfort-touch types by the physician's fingers on each listed body part of the childbearing woman . . . . .	68
28. Frequencies and totals of comfort-touch types by the physician's arm on each listed body part of the childbearing woman . . . . .	69
29. Total touch frequencies and percentages by the physicians on the parturient during contractions and at rest . . . . .	70
30. Frequencies, totals, and percentages of all comfort-touch types by certified nurse-midwife on each listed body part of the childbearing woman . . . . .	72
31. Frequencies and totals of comfort-touch types by certified nurse-midwife's hand on each listed body part of the childbearing woman . . . . .	73
32. Frequencies and totals of comfort-touch types by certified nurse-midwife's fingers on each listed body part of the childbearing woman . . . . .	74
33. Frequencies and totals of comfort-touch types by certified nurse-midwife's arm on each listed body part of the childbearing woman . . . . .	75

TABLE OF CONTENTS--Continued

Table	Page
34. Frequencies and totals of comfort-touch types by certified nurse-midwife's trunk on each listed body part of the childbearing woman . . . . .	76
35. Total touch frequencies and percentages by the certified nurse-midwife on the parturient during contractions and at rest . . . . .	77
36. Percentage comparison (rounded off) of body part used in giving comforting touch of each caregiver . . . . .	80
37. Percentage comparison (rounded off) of the parturient's body part touched by caregiver . . . . .	81
38. Frequency and comparison of the various types of comforting touch given by the various caregiver's hands . . . . .	82
39. Comparison of percentages (rounded off) of comforting touch done during rest and contraction . . . . .	83

## ABSTRACT

This study described and categorized differences and commonalities of family members, nurses, nurse-midwives and physicians while providing comforting touch to women in labor. Comforting touch was defined as any physical contact with the parturient that imparts the communication of care, comfort and protection. The study concentrated on how and where touch was administered by various care-providers; the meaning and effects of comforting touch were reviewed.

Comforting touch observed was given to women experiencing active labor without medication for analgesia or anesthesia. Data from 1,701 touch contacts were noted and categorized into various locations, frequencies, and types. Data analysis reveals such procedures (among 19 conclusions) as the abdomen and back most frequently touched, most often during contraction, with the nurse-midwife giving most frequent comforting touch. The study supports judicious use of comforting touch to help relieve labor crises and their sequelae.

## CHAPTER 1

### INTRODUCTION

The function of nursing has been described as threefold: curative, caring, and technical (Clark and Affonso, 1979). Quite often, however, these functions do not receive equal amounts of attention.

Obstetrical nursing has become highly technical today, aiming to reduce many perinatal mortalities and morbidities. Fetal monitors, laboratory techniques, labor inductions, infusion pumps, ultrasound, aminocentesis, and many other technical interventions abound. Such proliferation is not without hazards; our caring functions are forgotten in the rush to keep up with this technological plethora.

The danger of this skewing in the function of nursing is a distancing from the central premise of nursing, the premise of "care." Ever since Nightingale's time, the concept of nursing has been defined as concern with the principles of health and caring for people when they cannot care for themselves (Aamodt, 1979). Krueger (1957) defined nursing as experiencing feelings and attending to others, assisting or protecting, providing needs, and maintaining a sense of tenderness and respect. Recently Leininger (1977) examined the dimensions of the meaning of care and found such concepts as survival, self-actualization, support activities, humanistically oriented service, and behavior that facilitates interaction. Specifically, her model of health care encompasses the concepts of comfort, support, compassion, empathy, helping

behaviors, coping, specific stress abbreviation, touching, nurture, succor, surveillance, protection, restoration, stimulation, health maintenance, health instruction, and health consultation.

In this care model, an interrelationship of concepts was determined. Comfort, support, compassion, and empathy were communicated by a special mode of communication, namely, touch, to aid others in coping with stress abbreviation to find restorative and health maintenance. This special mode of communication, this special type of touch, may be called "comforting touch."

Scientists have long recognized that these concepts are interrelated, that they are necessary for growth, development, and maintenance of health. In an environment destitute of these concepts, a phenomenon of socio-cultural dwarfism or failure to thrive occurs, characterized by wasting, lassitude, and greater susceptibility toward illness (Gardner, 1975).

Of the concepts of care, comforting touch may be the most powerful and basic in communicating the construct of care. Touch is the basic primal mode of communication. From the moment of birth, it is the sense of touch that communicates comforting, empathy, and love. Montagu (1971) described touch as a two-way mode of communication: demanding, sending, and receiving for both persons. Touch is the most massive highly developed sense the human body has, with receiving components throughout the body.

Touch, via the concept of laying on of hands, has been suggested as having healing properties through transfers of energies.

Recent research with Kirlian photography and a study by Krieger (1975) at New York University, among others, lends support to the healing properties of touch.

Whether through the transfer of energy, or through communications of basic human needs consistent with the construct of care, touch, has a great but little understood impact on nursing care. The literature, although supporting the need for touch during labor, does not describe how we meet these tactile needs. This thesis describes and categorizes comforting touch as given to women during childbirth.

#### Statement of the Problem

This study was designed to describe the comforting-touch behaviors of caregivers to women in active labor and to determine differences that may exist between the comforting-touch behaviors of various caregivers.

#### Statement of the Purpose

The purpose of this study was to describe the:

1. Types, location, and frequency of comforting touch given to women in active labor.
2. Differences among family members, nurses, nurse-midwives, and physicians in giving comforting touch.

#### Significance of the Problem

Our technological society increasingly has become more impersonal. Primary social relationships give way to more secondary contacts. The warmth, trust, and mutual aid characteristic of an earlier, simpler

society is hard to come by today. Familiar supports and the feeling of safety may not be present for the woman during childbirth. She is isolated, stripped of her personal belongings and clothing. She reveals her body to strangers. Often she may find the messages her body sends her in conflict with those from the medical and nursing staff. A case in point is the urge to push prior to complete dilation (Clark and Affonso, 1979). These kinds of stresses tend to increase the client's susceptibility to crisis. Rapoport (1962) determined several important aspects of crisis. Both stress and crisis are often used interchangeably, but stress is a negative concept that people survive, but crisis as produced by stress is conceived as having growth-promoting potential.

A definitive discussion of labor as a crisis by Affonso (1971) gave insight to these concepts. The stresses were physical/environmental and psychological. The environmental stresses included the alarm-producing stimuli of ruptured membranes, bloody show, contractions, strange people and sounds, uncomfortable positions, hospital routines and equipment, vaginal examinations, bedrest, removal of personal belongings, lack of privacy, and fatigue. The psychological stresses were pain and anxiety brought about by: a threat to biological integrity by disruption of homeostasis, contractions, dilation, descent; threats to self-esteem due to unmet expectations, unmet ego support, and threatened values; and, lastly, fear of harm to self and infant, as well as fear of the unknown.

The woman in childbirth experiences stress factors that may predispose her to crisis. What then are the effects of these stressors on her labor and fetus?

Grantly Dick-Read (1959, cited in Mozingo, 1978), the famous advocate of natural childbirth, originated the conceptual model of the fear-tension-pain cycle. Fear in the laboring woman produced tension in her muscles which in turn heightened her pain perception. Upon this model, most psychoprophylactic techniques for labor are based (Mozingo, 1978). Clients who are near crisis or in crisis then experience greater pain and tension. Unless appropriate intervention occurs, this cycle will continue until delivery. This cycle can often lead the client into a negative conceptualization and affect future pregnancies and birth.

Investigators recently have discovered that anxiety and fear in the woman during childbirth lead to weaker contractions, longer labors, higher C-section rates, higher forcep deliveries, and higher catecholamine levels (Levinson and Shnider, 1979).

Psychologic stress produces a biological response demonstrated by a marked increase in catecholamine release from the adrenal medulla and increased sympathetic nervous system activity. Because the physiology of labor is largely under the dominance of the parasympathetic nervous system, this increase of sympathetic activity interferes with labor and increases the length of labor. The increased catecholamine levels cause a trend of problems consisting of uterine vasoconstriction, decreased placental perfusion, and fetal hypoxia resulting in fetal

acidoses. Levinson and Shnider (1979) concluded that maternal anxiety predisposed the neonate to unusually high morbidity and the mother to longer labor.

Because a crisis state is short, usually lasting a few weeks, intervention must begin without delay. This is especially true in labor and delivery where weeks are exchanged for hours. The outcome of a crisis is governed by the nature of the interaction received and the help received during this period (Aguilera and Messick, 1974).

How then does the concept of touch relate to crisis intervention? Help received or interactions between caregivers and clients depend on communication, communications of trust, feelings, acceptance, and support.

Touch plays a critical role in communication and behavior. Although touch is never superceded, it is elaborated by language. In many interpersonal relations, tactile "language" may be more expressive and effective than vocal language (Barnett, 1972). Touching is a basic form of communication. Before birth, contractions of the uterus activate vital systems of the fetus through massive cutaneous stimulation. Montagu (1971) called the contractions of labor the beginning caressing of the infant. From touch we learn to send and receive messages from our parents. We begin our social interactions with touch. We learn of love and responsibility from the touching we receive as infants (Goodykoontz, 1979).

The hospitalized client becomes dependent upon the people who care for her and resorts to earlier modes of interactions (LeShan,

1969). This may explain why, when unable to express herself on the conceptual or verbal level, the client often attempts to reestablish human contact by more primitive methods, such as touch (Ruesch, 1961). Hall (1966) noted that intimate distance is reserved for love-making, wrestling, comforting, and protecting. It is the function of comforting, a premise of nursing, that promotes the concept of the efficiency in the use of touch during labor. Rubin (1963) noted that in periods of intense personal stress no other modality of communication compares with the immediacy of the effects of touch in comforting and quieting. Touch represents, as no other modality can, a sense of acceptance and care (McCorkle, 1974). McCorkle demonstrated that the use of touch aids in establishing rapport in a short time and that anxiety can be reduced in crisis situations.

The stresses of childbearing can be crisis provoking, leading to a greater degree of maternal and fetal morbidities. Yet, it is possible that through the simple and judicious use of touch, crisis may be alleviated and a high level of equilibrium reached for the woman experiencing labor and delivery. Much has been written on the meaning and effects of touch, however, little investigation has been conducted on how we, the care providers, utilize touch in our ministrations. This thesis describes the spontaneous comforting touch of caregivers to women in active labor.

### Definition of Terms

This study on the tactile channel of nonverbal communications of support and comforting, as used by caregivers during the caregiving process, required the following definitions:

1. Comforting touch: Any physical contact with the parturient that imparts the communication of care, comfort, and protection is defined in this study as:
  - a. holding (gripping or supporting with hands);
  - b. massaging (moderate-to-heavy manipulation of tissue with hands);
  - c. kissing (contact with lips on body parts of subjects);
  - d. hugging (embracing body parts of subjects with arms);
  - e. stroking (light movement of hands on body parts of subjects);
  - f. patting (up and down intermittent contact on body parts of subject);
  - g. tickling (light skin contact on body parts of subject using finger tips only).
2. Caregiver: Any person who seeks to administer psycho-emotional comfort: family, nursing staff, or medical staff.
3. Active labor: Cervical dilation greater than 3 centimeters and less than 7 centimeters, and contractions every 5 minutes or less.

### Conceptual Framework

As previously described, the parturient in labor is affected by multiple stressors that predispose her to crisis. Yet, basic intervention and communication through the use of comforting touch may provide for

the needs of the woman in labor resulting in no crisis and better control.

A theory of crisis and crisis intervention was proposed by Aguilera and Messick (1974). This theory was based on the significance of balancing factors to avert crisis. Once stresses cause an emotional disequilibrium, it is the presence of these factors that resolve the situation into noncrisis, or the absence of them that result in crisis. The balancing factors are: realistic perception of the event, situation support, and use of coping mechanisms.

The perception of an event is dependent on the meaning that the event has to the person; that is, how he feels the event will affect his past, present, or future. It must also be asked whether he perceives that event realistically or in a distorted manner (Aguilera and Messick, 1974; Figure 1). Situational support derives from those persons in the environment upon whom the client can depend for help. Without those supports, the individual is left in a vulnerable position and is subject to crisis. The activities a person uses to resolve a problem are coping mechanisms. These may be covert or overt and may be used to reduce tension and anxiety. The use of these mechanisms determines the level of crisis.

The basic strand to be developed in this section is that as the stressors in labor continue to evolve, nearing the point of crisis, there is a resulting human need for skin-to-skin contact with others, providing and communicating comfort, nurturance, and security. Touch

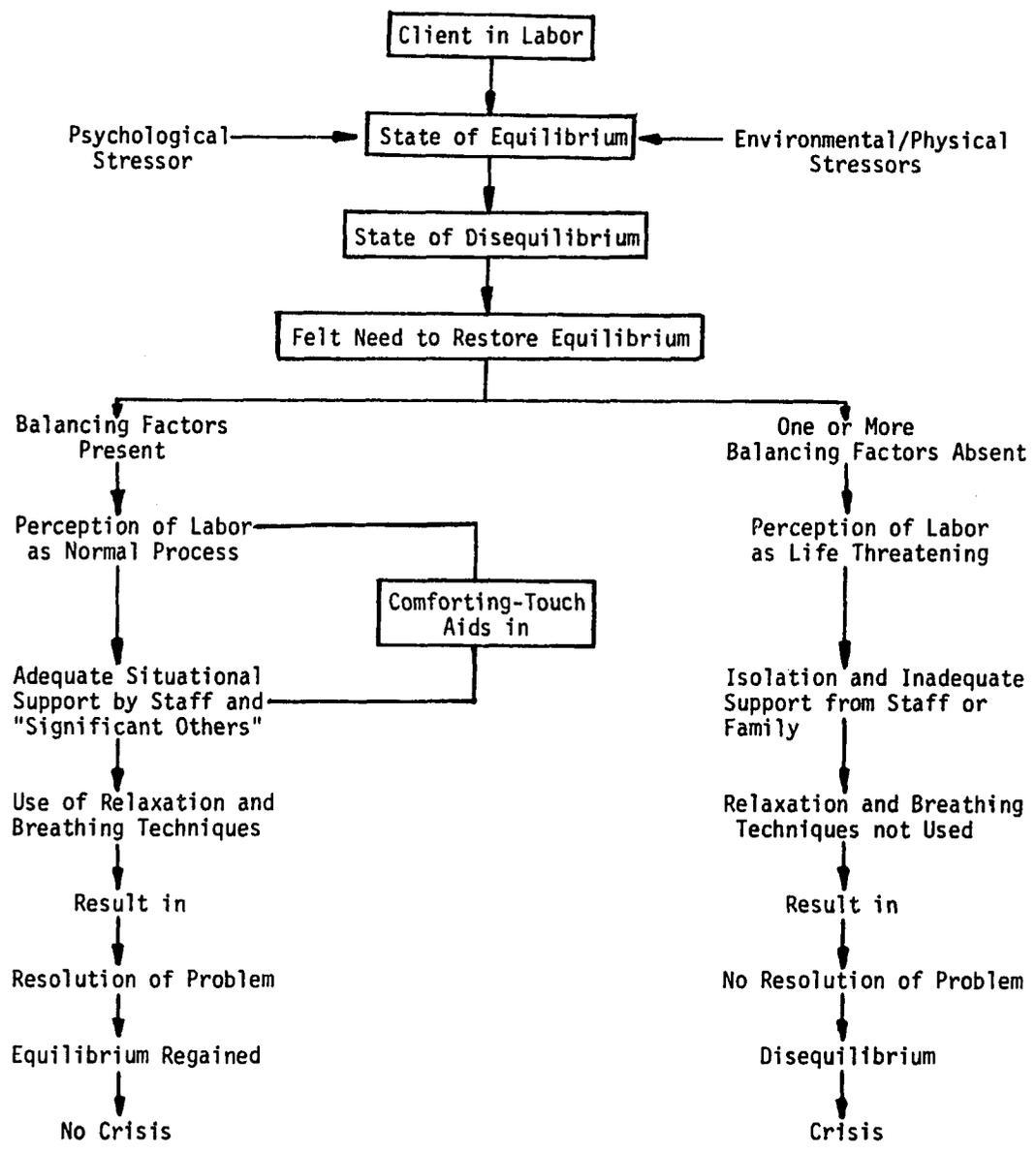


Figure 1. The role of comforting touch in crisis evaluation.-- Modified from Aquilera and Messick (1974, p. 61).

provides an avenue for intervention in the stresses of labor, averting or resolving crisis and its sequelae.

When a stressful event impinges upon one's emotional equilibrium, a state of disequilibrium develops, predisposing one to crisis. This is followed by a felt need to restore emotional equilibrium. Restoration is dependent on the presence of several balancing factors. Among these are a realistic perception of the event, adequate situational supports, and adequate coping mechanisms. Presence of these factors results in resolution of the problem, restoration of emotional equilibrium, and no crisis. However, if one or more factors are missing, the problem remains unresolved and crisis ensues. The stressors the woman in childbirth may encounter have been identified by Affonso (1971, pp. 27-29).

Characteristically, upon admission to the hospital the client is isolated from familiar supports. Dressed in a hospital gown, she is confronted by a new and bewildering environment. She must reveal her body to unknown medical and nursing staff. Intense uterine contractions come closer and closer together. She is unable to control them. Suddenly she feels the need to bear down; she is frightened because she may be incontinent with urine or stool. She is embarrassed by her incontinence. She is anxious and in pain and is unable to communicate with ease. This description is typical of many clients experiencing hospitalized childbirth.

When the woman in labor experiences these stressors, a state of emotional disequilibrium follows. She feels the need to restore

equilibrium. She is able to do this if she has a realistic perception of labor and delivery as not being life-threatening and a temporary state, if she has adequate support from staff and/or a significant other, and if she is able to use coping mechanisms such as relaxation and breathing. However, if one or more of these balancing factors is not present, a state of emotional disequilibrium results and a state of crisis occurs (Aguilera and Messick, 1974).

This emotional upset has profound effects upon both mother and fetus. Research has demonstrated that maternal anxiety causes an increase in maternal and fetal morbidities characterized by long labors, poor uteroplacental blood perfusion, fetal hypoxia, and acidosis (Levinson and Shnider, 1979). A somewhat parallel study in Guatemala by Sosa et al. (1980) demonstrates that the presence of a person giving tactile and verbal support substantially reduced these maternal and fetal morbidities. Sosa et al.'s study dramatically demonstrates the critical importance of support. With adequate support it may be possible to change a distorted perception of childbirth and to effect adequate coping mechanisms.

During periods of acute stress no other modality communicates security or acceptance better than that of touch (Durr, 1971). Lorenson (1978) was able to demonstrate that touching by the caregiver reduced pain perception during labor and that the person giving touch was to be identified as a significant other. Rapoport (1962) indicated that the person in crisis is more susceptible to the influence of significant others and the degree of help offered need not be great.

Therefore, as with the Guatemala study, it may be the communication of support and care that is the critical factor in dealing with the stresses of labor, leading to successful coping activities. The significant other, through the closeness of touch, may provide security and comforts, aiding in the development of a realistic view of labor and delivery.

The person in time of crisis turns inward, focusing on his problem, creating a form of isolation. A profound sense of aloneness may tend to augment the anxiety and fear besieging the individual. The need for support from others is great in order that coping mechanisms may begin, yet this isolation cannot be bridged without help from the outside (Rapoport, 1962). Childbirth is a life crisis in which the woman turns inward, focusing on herself, and to feel alone at this time aggravates her normal anxiety (Deutsch, 1945).

Through tactile contact, a bridge is formed. Touch, as no other modality, can provide a sense of acceptance and convey a sense of reality (McCorkle, 1974). "A person who is strongly reacting emotionally as in acute fear or pain, or grief, may be able to recover his physiological equilibrium through close tactile contact with another sympathetic person" (Frank, 1957, p. 214).

Reality orientation can be connected with the concept of "aloneness" in stress situations. The combination of stress and isolation can impart a sense of unreality to the situation. Human contact through touch can help overcome this feeling. The person in profound stress can maintain contact with reality through the physical bond of touch with another person (Frank, 1957).

When a person is placed in a strange environment, he resorts to previously successful modes of communication (LeShan, 1969). As infants, humans develop confidence in the world through touch. Rubin (1963) described how during infancy we learn of love, comforting, and reassurance through touch. Touch, therefore, is a primal mode of communication. No other form of communication is more comforting and provides a greater sense of security than touch in periods of personal stress (Rubin, 1963; Durr, 1971). This may explain why man, when under periods of intense stress, attempts to establish human contact by the primal mode of touch (Ruesch, 1961). Richardson (1979) found that with the progression of labor women actively sought an increase in tactile contact.

Once this sense of security, acceptance, and reality is provided via the intimacy of touch, the identified significant other is able to impart some simple but important coping techniques such as relaxation and breathing techniques to the laboring parturient. The appropriate use of touch may aid in the communication of verbal concepts, assist the parturient in reassessing her perception of labor, and may aid in the develop and utilization of coping mechanisms (see Figure 1).

As a significant other, the caregiver using comforting touch may be able to aid the client in obtaining the balancing factors needed to avert or resolve the crisis of childbirth. Before evaluating the function of comforting touch, one needs to describe and categorize it. Among various caregivers, is there a difference, e.g., in the manner in which touch is given? Are there commonalities among various caregivers regarding the comforting touch that is given? From an intuitive point

of view, one would be inclined to say yes. To study comforting touch, however, a start must be made with the analysis of categorization and description.

## CHAPTER 2

### REVIEW OF LITERATURE

The purpose of the present study was to gather data and to describe comfort-touch behavior of caregivers toward women in active labor. The purpose of the review of literature is to explore the concepts of crisis and touch. A review of each of these areas is provided as a basis for understanding the purpose, design, and need for this study.

#### Crisis

The concept of crisis and crisis intervention is relatively recent although it has become extensively used and is receiving increasing attention in the literature.

The classic and ground-breaking study on crisis was by Lindemann in 1944. He focused on 101 subjects who had lost relatives in the catastrophic Coconut Grove fire in Boston. Lindemann was able to point out four major points on which crisis intervention is based. They are:

1. Acute grief in definite syndrome with psychological and somatic symptomatology.
2. This syndrome may appear immediately after a crisis; it may be delayed, exaggerated, or apparently absent.
3. In place of the typical syndrome, distorted responses may appear.

4. By use of appropriate techniques, these distorted responses can be transformed and resolved.

Upon this historic paper, Caplan (1961) was able to define crises and develop a crisis theory. He was able to define crisis simply as an upset in an emotional steady state. His theory on crisis was based on the premise that the individual attempts to maintain a state of emotional equilibrium with the goal of maintaining or returning to that state. When customary problem-solving techniques do not or cannot solve a problem, the steady state is upset. The individual strives for a new equilibrium by problem solving or adapting to a nonsolution resulting in positive or negative health. In this situation one can observe a rise in frustration, signs of anxiety, and a disorganization of function, resulting in a protected emotional upset. This state is referred to as a crisis.

A study in crisis theory by Rapoport (1962) was able to elucidate several important aspects of crisis. Both stress and crisis are often used interchangeably, but stress is a negative concept that people survive, while crisis is conceived to have growth-promoting potential. Rapoport was able to develop three sets of interrelated factors that can produce a state of crisis: (1) a hazardous event which poses a threat, (2) when instinctual needs are threatened, and (3) when a loss occurs. She was able to further describe four items for crisis intervention which facilitate and help maintain an emotional equilibrium: (1) problem identification, (2) acceptance by the caregiving person for expression and management of feelings, (3) use of interpersonal

resources so that the client may receive comfort, support, and need satisfaction, and (4) a minimal degree of help (the person in crisis becomes susceptible to the influence of the caregiver and minimal help may have maximal results).

Another theory of crisis and crisis intervention was proposed by Aguilera and Messick (1974). This theory was based on the significance of balancing factors to overt crisis. Once stresses cause an emotional disequilibrium, it is the presence of these factors that resolves the situation into noncrisis, or the absence of them that results in crisis. The balancing factors are: realistic perception of the event, situational support, and use of coping mechanisms.

The perception of an event is dependent on the meaning that the event has to the person; i.e., how that person feels the event will affect his or her past, present, or future. It must also be asked whether he or she perceives that event realistically or in a distorted manner (Aguilera and Messick, 1974; Figure 1). Situational support derives from those persons in the environment upon whom the client can depend for help. Without those supports, the individual is left in a vulnerable position and is subject to crisis. The activities a person uses to resolve a problem are coping mechanisms. These may be covert or overt and used to reduce tension and anxiety. The use of these mechanisms determines the level of crisis.

There are two types of crises: maturational and situational. Maturational crisis occurs as a part of normal growth and development at critical stages such as school age, adolescence, and adulthood.

Situational crisis evolves when events occur in the environment which are stressful and may evoke crisis (Aguilera and Messick, 1974). Although childbearing is commonly considered a maturational crisis (Clark and Affonso, 1979), the stress of labor and delivery lend themselves to situational crisis by definition (Affonso, 1971).

Affonso's (1971) definitive discussion as to the stress factors predisposing the woman in childbirth to a crisis is concerned with both physical/environmental stresses includes the alarm-producing stimuli of ruptured membranes, bloody show, contractions, strange people and sounds, uncomfortable positions, hospital routines and equipment, vaginal examinations, bedrest, removal of personal belongings, lack of privacy, and fatigue. The psychological stresses involve pain and anxiety as produced by: a threat to biological integrity by disruption of homeostasis, contractions, dilation, descent; threats to self-esteem due to unmet expectations, unmet ego-support, and threatened values; and, lastly, fear of harm to self, infant, as well as fear of the unknown.

The concept of parturition as a hazardous event is determined by personal, social, and cultural factors. A client's own personality affects her perception of labor and delivery. A client's "locus of control," as discussed by Willmuth (1975), determines her attitude toward this event. If externally controlled, a dependent client may passively experience pregnancy, and when labor begins she may perceive childbirth as threatening and stress provoking, thus increasing her susceptibility to crisis. Yet, an internally controlled client, one

who has an independent personality, may perceive childbirth as a challenge for fulfillment and prepares herself accordingly, minimizing her susceptibility to crisis. The social content in which parturition is perceived also determines its threatening nature. Anderson (1977) describes how American medicine has changed the birth experience into a pathological event requiring active management and intervention via inductions of labor, amniocentesis, monitors, forceps, and analgesics. This change forces many clients into the "sick role" upon admission to labor and delivery, increasing their susceptibility to crisis. Culture also affects the perception of parturition. A study conducted by Newton (1970) reviewed the various cultural attitudes toward childbirth. They found that the patterning of birth differed greatly from culture to culture. The Cuna Indians of Central America viewed pregnancy as a time of anxiety and increasing fear of birth. Labor was characterized as a time of crisis; women experienced isolation and labor tended to be prolonged. In contrast, the Siriono Indians of Bolivia viewed childbirth as an easy open process aided by more communal support with short, easy labors. Childbirth consists of many factors that may predispose one to crisis; yet, as will be documented in the next section, crisis may be alleviated and growth may occur through the help of comforting touch.

#### Touch

The anthropologist Mongagu (1971) has reviewed the importance of tactile experience and the types of skin stimulation necessary for

healthy physical and behavioral development. He was concerned with the significance of the skin and its underappreciated aspects of communication. Montagu proposed that what one perceives through other senses is dependent upon touch for confirmation as real, and that a measure of development as a healthy individual is commensurate to that individual's ability to embrace another. The developmental aspects of touch are supported by several studies. Both Montagu (1971) and Frank (1957) thought that touch was the earliest sense to be developed and to be utilized by the fetus.

Harlow (1961), noticed that the young monkey would hang onto its mother's fur until it got hold of a nipple to suck. He thought that there must be two different characteristics which the young seek in a mother, the fur and the milk. In order to determine which was more important, the touch of fur or the food value of milk, he developed artificial mothers with these isolated maternal characteristics. One artificial mother gave a sense of touch, one just food. His studies with rhesus monkeys established that body contact in mammals is necessary for species survival as well as health development. Those monkeys deprived of the sense of touch developed the severe neurotic behavior of isolationism, self-clutching, rocking behavior, thumb, toe, penis sucking, and an inability to successfully interact with other monkeys.

Schaller (1963) studied gorilla behavior and came to the same observational conclusion as Harlow (1961); experimentally, he concluded that it is essential to physical and emotional well being as well as social integration to receive touch during infancy.

Touch is the primal mode of communication among human beings. Both the mother and child communicate by this means throughout gestation and into the child's early years. Throughout childhood, in the Anglo culture, touching is gradually replaced by words in the communication process (Barnett, 1972). LeShan (1969) determined that upon hospital admission a patient becomes dependent upon the people who care for him. When an adult encounters a stranger or is placed in an unfamiliar situation, he resorts to his past for previously successful modes of human interaction. This may explain why, when unable to express one's self on the verbal level, man attempts to reestablish human contact by more primal methods such as touch (Ruesch, 1961).

Clay (1968) conducted a field study of normal tactile interpersonal behavior of 45 mother-child pairs in public places. Three social classes and four age groups were distinguished. Clay found that toddlers received the most contact and that touch was used more for care and control than for affection.

Hollender (1970), in an exploratory study of the need or wish to be held, found that the need to be touched was significantly high among women. The body contact they sought provided them with feelings of being loved, comforted, or protected. This need appeared to be strongest during depression, anxiety, or aloneness. This has been supported in a study by Richardson (1979). Richardson's descriptive study of the approach and avoidance behavior by women in labor demonstrated that as labor progressed women sought an increase in tactile contact. Richardson's research divided the behavior of laboring women into four

categories: visual, verbal, postural, and tactual. All observed behaviors were interpreted and classified as communicating either a desire for approach or desire for avoidance by the laboring women for others in the environment. Richardson (1979) stated that inner tension of pain within an organ "asks for contact" either with the hand or with the external world. This need for comfort and help from another person for the relief of pain would, in that case, lead to approach behavior. On the other hand, chronic and unrelieved pain (interpreted by the laborer as rejection), Richardson reasoned, leads to avoidance behavior and the effort by the women to limit social contact and unnecessary sources of external stimuli. She found that as labor progressed (as pain intensified), there were dramatic changes in types of behavior. The women increasingly sought contacts with others through verbal and tactual approach behavior (e.g., calling out or grasping). Throughout the three phases of labor in Stage I, verbal and tactual approach behaviors occurred three times more often than avoidance behaviors. Contact, visual, and postural approach behaviors decreased as labor progressed.

Touch is the simpler mode of communication and is more effective in stress situations (Frank, 1957). Touch provides physical comfort and mothering needs in stress periods (Hilliard, 1968). A closely related study concerns the need for presence, just being there (Lesser and Keane, 1956). Psychiatry suggests that an individual in time of crisis turns inward, focusing on his problem, thus creating a form of isolation from other people. A profound sense of aloneness may tend to augment the anxiety and fear besieging the individual at this time.

His need for support of other persons to help him cope with the crisis is great; yet he cannot bridge this isolation without help from the outside (DeThomaso, 1971). Childbirth is a life crisis in which the woman turns inward, focusing on herself, and to feel she is alone at this time aggravates her normal anxiety (Deutsch, 1945; Lesser and Keane, 1956). "A person who is strongly reacting emotionally as in acute fear or pain, or grief, may be able to recover his physiological equilibrium through close tactual contacts with another sympathetic person" (Frank, 1957, p. 214). In Lesser and Keane's (1956) study, 66 women stated they gained the most support from nurses who went beyond the routine care and utilized extra amounts of touch in their ministrations to the patient.

Mintz (1969) cited two other functions of touch. First, it serves to convey a sense of acceptance, and second, it helps convey a sense of reality. The reality orientation can be connected with the concept of "aleness" in stress situations. The combination of stress and isolation can impart a sense of unreality to the situation. Human contact through touch can help overcome this feeling. The person is able to maintain contact with reality through the physical bond with another person (Mintz, 1969).

#### Summary

Touch, then, as an avenue of communication and as a method of meeting women's needs during the stress of labor, is potentially of critical importance. The current literature, although supporting the

need for touch during labor, has not described fully how we meet these tactile needs of the woman experiencing childbirth.

This study, therefore, is a beginning step in the research of comforting touch. It attempts to describe and categorize the comforting-touch behaviors of caregivers to women in active labor.

## CHAPTER 3

### DESIGN AND METHODOLOGY

The setting of the study, the sample, design of the study, method of data collection, assumptions, and method of data analysis are discussed in this chapter.

#### The Setting

This study took place at a local community hospital in the southwestern part of the United States. This hospital serves a largely indigent population, as well as some patients who are able to pay for hospital services. The patients are mostly Hispanic. It is also a teaching facility for interns and residents in medicine.

The labor and delivery unit averages 100 deliveries per month. It is currently a Level II perinatal unit able to care for women and infants of moderate risk. This hospital does not offer an epidural anesthesia service. The only analgesics offered are narcotics. The labor and delivery unit consists of three single-bed labor rooms, each equipped with a fetal monitor, oxygen, and suction. The unit incorporates open visiting policies. Up to three visitors at a time may be present during labor and delivery.

#### The Sample

A convenience sample of 10 women in active labor was selected for this study according to the following criteria:

1. Experiencing active labor.
2. Previous experience with childbirth (parity) of 3 or less.
3. No narcotics received in the last 3 hours.
4. Without documented physical or psychological handicaps prior to labor.

The comforting-touch behaviors of various caregivers who interacted with these women were analyzed and categorized for comforting-touch behavior. The caregivers studied were family members, nurses, nurse-midwives, and physicians.

#### Methodology

Hinshaw (1979) established guidelines to address when planning for logical consistency among research structure. These guidelines are: theoretical structure, research problem or purpose, design structure, data collection method, and analysis.

The theoretical structure, research problem and purpose were set forth earlier. The research design, data collection methods, and data analysis follow.

#### Research Design

An elementary descriptive design was formulated. "A descriptive study observes, describes and perhaps classifies. Careful and deliberate descriptions are often essential as a foundation for the development of theories" (Polit and Hungler, 1978, p.24). Careful analysis may reveal relevant factors or relationships that were undetected prior to the investigation (Polit and Hungler, 1978).

The present study was designed to describe the comforting-touch behaviors, commonalities, and differences given to the parturient by the various caregivers, occurring during 1 hour of active labor. It required that the investigator approach women meeting criteria of the study upon their admission to Labor and delivery and obtain their verbal consent after giving them a description of the proposed study and having them read a written disclaimer (Appendix A). If Spanish speaking only, the subject was given a disclaimer written in Spanish (Appendix A). There were no known risks or discomforts involved with participation, and each woman was free to withdraw at any time. The investigator would then enter the labor room, situate himself in an area allowing maximum visibility, and for 1 hour record the comforting-touch interaction occurring between the childbearing woman and the caregivers (see Data Collection Tool, Appendix B). Each subject received a code number to ensure that her identity remained confidential. The study was approved by the Human Subjects Committee of The University of Arizona (Appendix C) and by the Protocol Committee of the hospital where the study took place (Appendix D).

#### Method of Data Collection

The investigator approached women upon their admission to Labor and Delivery who met the criteria of the study. This meant that these women would be in varying phases of active labor. The description of the study and the written disclaimer were presented to these women. Staff physicians and family members were also apprised of the study and were introduced to the investigator.

Once verbal consent was given, the investigator positioned a chair to a far corner of the labor room and was seated with the recording tool and pen. At times, as the view of the investigator became blocked, the investigator would need to stand in order to maintain observation of touch interaction. The investigator maintained as low a profile as possible. It was believed that the observer soon became part of the labor room's environment.

After a period of time, varying from 15 to 30 minutes, the observer began to collect data for a period of 1 hour as per the observational tool protocol. Later, charts were audited for demographic data. To limit investigator bias, 5 subject observations were collected by another trained observer.

During the 1 hour of data collection, family members would come and go (the hospital has an open labor room visiting policy) along with physicians and nurses. The only caregiver to maintain continuous presence was most often the nurse-midwife who is trained to labor sit.

#### Assumptions

The following assumptions were made in this study:

1. Comforting touch is used to aid women in coping with the stresses of labor.
2. Behaviors of the parturients and caregivers were not affected by the presence of the observer.
3. The parturients and caregivers did not intentionally interact in a way they believed was desirable to meet the approval of the investigator.

4. Sex of the caregiver did not affect use of comforting touch.
5. Ethnicity of caregiver did not affect use of comforting touch.

#### Limitations

The limitations of the study were:

1. This was not a study of behaviors of clients to elicit touch, nor did it encompass response to touch. The unit of analysis of this study was touch itself.
2. This study did not investigate ethnicity regarding comforting touch.
4. This study did not investigate the sex of the caregiver in regard to comforting touch.
5. The closeness of relationships among family members and the laboring women were not studied.

#### Observational Tool

The observational tool used was developed by using a previously utilized recording format. The primary tool (Anderson and Standley, 1977) employed for the methodological procedure was developed. Permission to use this tool was given (Appendix E). Components of this instrument were contraction and rest only. It was determined to have a high degree of interrater reliability and has been used several times in other studies (Klein et al., 1981; Nichol森 et al., 1979). The secondary instrument used was borrowed from Heims' (1974) tactile contact behavior field recording format, a tool developed for a master's

thesis. This device focuses on touch, and much of the data were supplied by it.

In summary, much of the methodology of this study came from the instrument devised by Anderson and Standley (1977), and the areas to be recorded came from the Heims' model.

#### Observational System

The observation system was designed to time-sample for 1 hour the woman's physical state and all interactions in the hospital labor room that involve the laboring woman. The time-sampling cycle was composed of a 30-second observing period followed immediately by a 30-second recording period. A stopwatch was used to indicate the continuing cycles of 30 seconds, observe; 30 seconds, record; 30 seconds, observe; 30 seconds, record; etc. The recording sheet (Appendix B, p. 97) was designed so that 20 observe/record cycles (i.e., 10 minutes of real time) were entered on each sheet, which resulted in 6 recorded sheets per subject.

#### Reliability and Validity

Although Anderson and Standley's (1977) instrument and that of Heims' (1974) were judged to be accurate and to have high degrees of reliability, a pilot study was done on the combination of the two-- which was the instrument, or tool, of the present study. The pilot study consisted of 3 subjects using aforementioned methods and criteria.

It is accepted that where observation is the method of data collection, observer bias is a potential source of error. For that

reason, a second observer was trained during this pilot study. During the pilot study, both collectors were seated side-by-side and used the same stop watch. Conclusions were that the instrument used for the present study:

1. Had an interrater reliability of .90 or more in all areas,
2. Was able to document behavior changes of women in labor,  
and
3. Could document location, frequency, and intensity of touch  
interaction.

The only point of concern raised by the pilot study was that 30 seconds for recording caused a somewhat tight schedule. However, it was determined that a few seconds more for recording (there was a 40-second average for recording) would not interfere greatly with the study's accuracy.

No assumption as to expected findings were made prior to observation, eliminating one source of bias.

The sample size was adequate for providing variability of comforting touch. However, this convenience sample was not adequate for generalizability to the population in whole.

#### Analysis of Data

Following the collection of data, the information was counted for presentation on behavioral frequency charts. A single occurrence in a 30-second observation cycle was counted as a frequency of 1.

Table 1. Summary of reliability check between researcher and co-observer in 11 categories

Category	Agree (%)	Disagree (%)
Contraction	98	2
Breathing	92	8
Tension	90	10
Vocalization	94	6
Movement	96	4
Positions	98	2
Caregiver	100	0
Caregiver's body part	94	6
Parturient's body part	92	8
Frequency	94	6
Type	90	10

Tables presented are of:

1. Demographic characteristics of subjects.
2. The collective types, location, and frequencies of comforting touch.
3. The types, location, and frequencies of comforting touch by individual class of caregiver (family, nurse, nurse-midwife, physician).

The specific details of each segment of analysis are explained in the next chapter.

## CHAPTER 4

### RESEARCH FINDINGS AND DATA ANALYSIS

Descriptions of the sample, field problems encountered in data collection, findings, and analysis of data are set forth in this chapter.

#### Characteristics of Recipients of Touch

The sample consisted of all the touch behaviors provided to 10 women who met the study's established criteria. Their ages ranged from 19 to 26 years; 6 of the 10 were married and 4 were unmarried; 6 were Mexican-American, 3 were Anglo, and 1 was Black. Four women and their coaches had attended some sort of prepared childbirth education. Six of the women had had no formal childbirth preparation. Of the 10 subjects, 2 were primiparous, experiencing their first birth; 6 were experiencing their second childbirth; and 2 were having their third child. Nurse-midwives delivered 6 of the subjects and 4 were delivered by physicians. These characteristics are outlined in Table 2. It is of interest to note that 1 of the nurse-midwives was male and 1 of the physicians was female (no analysis of this is contained in the study). It is also of importance to note that, when comparing the data, the nurse-midwife "labor sits" and had a previously established relationship while the physidian did not.

Table 2. Characteristics of the recipients of comfort touch and type of caregiver.--CNM = Certified Nurse-midwife; MD = Medical Doctor.

Sub- ject	Age (yr)	Marital Status	Ethnicity	Child- birth Classes	Parity at Birth	Care Provider
1	19	Unmarried	Mexican-American	No	0	CNM
2	22	Married	Mexican-American	No	1	CNM
3	19	Married	Anglo	No	1	MD
4	26	Married	Mexican-American	Yes	2	CNM
5	22	Married	Mexican-American	Yes	2	CNM
6	22	Married	Mexican-American	No	1	MD
7	20	Unmarried	Black	No	0	MD
8	25	Unmarried	Anglo	Yes	1	CNM
9	21	Married	Anglo	No	1	MD
10	22	Unmarried	Mexican-American	Yes	1	CNM

### Field Problems in Data Collection

Obtaining permission from the prospective subjects to observe the touch behavior of their caregivers in active labor was more difficult than anticipated. At the hospital where data collection took place, approximately 90% of the deliveries per month are by physicians and approximately 10% are by nurse-midwives. Perhaps because those women who received their care through the county system and by physicians have so little choice as to what happens to them and who cares for them, when they were approached by an observer for their permission to be included in this study the great majority declined. Interestingly, of the nurse-midwife clients approached, 100% accepted. This is reflected in the sample characteristics. It should be noted that data collection took more time than originally expected. The process of observing for 30 seconds and recording for 30 seconds resulted in the loss of some data (while recording). Observing, recording, coding, and counting required approximately 6 to 8 hours per client.

### Data Summaries

The analysis of data for descriptive study of touch behaviors of caregivers toward women in active labor was divided into three sections:

1. Collective description of the touch frequencies and touch by all caregivers to women in active labor.
2. Separate categories of caregivers: family members, nurse, nurse-midwife, and physician. Analysis was identical to that used in the first section.

3. The four classifications of caregivers were compared with each other and with the caregiving population as a whole. Again, analysis consisted largely of frequencies, percentages, and frequency tables describing location and types of comforting touch.

The body parts listed in all of the following tables are from the study of Heims' (1974) and are part of the data collection tool. The types of touch were defined earlier in this study as examples of comforting touch.

#### Highlights of Collective Comforting Touch by All Caregivers

The collective data are displayed in Tables 3 through 10. Table 3 sets forth the frequencies, totals, and percentages of comforting touch by all caregivers on each body part of all the parturients. Tables 4 and 9 show the frequencies and totals for each touch type on each body part of the woman in active labor. Table 10 compares the total frequencies and percentages of comforting touch given when the woman in childbirth is at rest and during contractions.

All the body parts as defined by this study on both the women in active labor and the caregivers were considered. During the 10 hours of recorded observation, the women in active labor were touched 1,701 times or 2.83 times per minute by the various caregivers (Table 3).

As may be expected in Western society, the hands with their highly developed tactile senses (Montagu, 1971) were the most often used body part by the caregiver. The caregiver gave comforting touch 74% of the time with the hands, or 1,266 times out of 1,701 total

Table 3. Frequencies, totals, and percentages of all comfort-touch types by caregiver on each listed body part of the childbearing woman

Parturient Body Part	Caregiver Body Part						Total	Percent- age
	Hand	Head	Lips	Trunk	Arm	Fin- gers		
Head	153	18	2	4	18	8	203	12.0
Face	121	0	14	9	0	21	165	10.0
Lips	0	0	52	0	0	18	70	4.0
Hand	273	0	8	0	0	0	281	16.0
Arm	223	4	0	0	0	38	265	16.0
Abdomen	208	0	0	0	0	97	305	18.0
Upper Back	18	0	0	0	0	0	18	1.0
Lower Back	171	0	0	0	13	0	184	11.0
Legs	59	0	0	7	42	9	108	6.0
Feet	40	0	0	14	48	0	102	6.0
Total	1,266	22	76	34	121	182	1,701	100.0
Percentage	74.0	1.0	4.0	2.0	7.0	10.0	100.0	

Table 4. Frequencies and totals of comfort-touch types by caregiver's hand on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact	
Head	18	0	0	0	58	29	0	48	153
Face	18	0	0	0	49	27	0	27	121
Lips	0	0	0	0	0	0	0	0	0
Hand	19	5	0	0	18	52	0	5	273
Arm	147	9	0	0	39	21	0	7	223
Abdomen	37	91	0	0	47	19	0	19	208
Upper Back	7	11	0	0	0	0	0	0	18
Lower Back	0	162	0	0	0	0	0	9	171
Legs	32	16	0	0	8	3	0	0	59
Feet	23	12	0	0	0	5	0	0	40
Total	470	306	0	0	219	156	0	115	1,266

Table 5. Frequencies and totals of comfort-touch types by caregiver's fingers on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact	
Head	0	3	0	0	4	0	1	0	8
Face	0	8	0	0	9	0	4	0	21
Lips	0	0	0	0	11	4	0	3	18
Hand	0	0	0	0	0	0	0	0	0
Arm	0	0	0	0	11	0	23	4	38
Abdomen	0	27	0	0	2	0	67	1	97
Upper Back	0	0	0	0	0	0	0	0	0
Upper Back	0	0	0	0	0	0	0	0	0
Legs	0	0	0	0	0	0	0	0	0
Feet	0	0	0	0	0	0	0	0	0
Total	0	38	0	0	37	4	95	8	182

Table 6. Frequencies and totals of comfort-touch types by caregiver's arm on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Comfort	
Head	4	0	0	12	0	0	0	2	18
Face	0	0	0	0	0	0	0	0	0
Lips	0	0	0	0	0	0	0	0	0
Hand	0	0	0	0	0	0	0	0	0
Arm	0	0	0	0	0	0	0	0	0
Abdomen	0	0	0	0	0	0	0	0	0
Upper Back	0	0	0	0	0	0	0	0	0
Lower Back	4	4	0	0	0	0	0	5	13
Legs	39	0	0	0	0	0	0	3	42
Feet	41	0	0	0	0	0	0	7	48
Total	88	4	0	12	0	0	0	17	121

Table 7. Frequencies and totals of comfort-touch types by caregiver's lips on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact	
Head	0	0	2	0	0	0	0	0	2
Face	0	0	14	0	0	0	0	0	14
Lips	0	0	52	0	0	0	0	0	52
Hand	0	0	8	0	0	0	0	0	8
Arm	0	0	0	0	0	0	0	0	0
Abdomen	0	0	0	0	0	0	0	0	0
Upper Back	0	0	0	0	0	0	0	0	0
Lower Back	0	0	0	0	0	0	0	0	0
Legs	0	0	0	0	0	0	0	0	0
Feet	0	0	0	0	0	0	0	0	0
Total	0	0	76	0	0	0	0	0	76





Table 10. Total touch frequencies and percentages by caregiver's to women at rest and during contractions

Physical State	Frequency	Percentage
Contraction	953	56
Rest	748	44

comforting-touch contacts. A study of Table 4 suggests the progression of body parts used by the caregiver in giving comforting touch is from hands to fingers to arms to lips to trunk to head. For the most part, it appears to be a progression from the most tactile sensitive parts to the least.

Of the 11 body parts listed for the woman in active labor, the 4 most frequently touched parts are the abdomen, hand, arm, and lower back. Here, too, it is interesting to note that 2 of these points, the abdomen and lower back, are areas where most discomfort is felt by the parturient during labor; the hand and arm are not only one of the most tactilely sensitive areas (Montagu, 1971) but are culturally permissible body parts to touch, and they are the tools for exploration of the outside world (Mintz, 1969).

The kinds of comforting touch are described next. Certain types of touch are not generally practical for body parts as, e.g., hands are not used to kiss, tickle, or hug; therefore, zeros are placed in these columns.

Caregivers most frequently used their hands to hold or grasp the hand or arm of the parturient (Table 4). The next most frequent use of the hand was to massage the lower back of the woman in active labor and then to massage her abdomen. Here it should be noted that in collecting data, despite the common description of effleurance as a light fingertip massage, light finger touch was coded as tickling. The next type of touch done most often by the hand of the caregiver was to stroke the head, face, and abdomen. Patting was used least frequently, usually on the hand, head, and face.

Fingers came next as the most often used body part of the caregiver (Table 5). Caregivers used their fingers to tickle (42%) in order to impart comfort. They most frequently tickled the abdomen and arm. The fingers of the caregiver were then used to massage. The two most frequent areas were the abdomen and perineum of the woman in active labor.

Caregivers used their arm most often (71.8%) to hold or support the feet or legs (Table 6).

Caregivers used their lips exclusively to kiss (Table 7). The lips and face were the body parts most often kissed.

The trunk of the caregiver was most often used in a manner not defined in this study (Table 8). A general body hug of the head took

place 4 times, and for hiding the face of the parturient 9 times. It was used for support of the legs and feet 15 times.

The head of the caregiver was used altogether in an undefined manner; it was a vehicle of touch contact with the woman in childbirth 22 times (Table 9). This contact was in the form of touch with the head or arm of the parturient.

A final description of this section centers on the amount of touch women received during contractions compared to rest (Table 10). Caregivers gave comforting touch most often during a contraction (56%) as compared to a resting state (44%).

#### Highlights of Comforting Touch by Family Members

Data concerning the comforting touch of family members are displayed in Tables 11 through 18. Table 11 displays the frequencies, totals, and percentages of the family member's body parts used in giving comforting touch to body parts of the parturient. Tables 12 through 17 list the frequency and totals of touch types on body parts of the parturient, and Table 18 shows a comparison of comforting touch given during contraction and at rest.

Comforting touch by family members constituted approximately 36% (631) of the total touch given to the woman in active labor (Table 11). Family members gave some form of comforting touch 1.1 times per minute. Family members touched every listed part of the parturient's body.

Table 11. Frequencies, totals, and percentages of all comfort-touch types by family members on each listed body part of the child-bearing woman

Parturient Body Part	Family Member Body Part						Total	Percent- age
	Hand	Head	Lips	Trunk	Arm	Fin- gers		
Head	54	18	2	3	10	5	92	14.2
Face	47	0	9	8	0	10	74	11.7
Lips	0	0	49	0	0	14	63	10.1
Hand	111	0	8	0	0	0	119	18.2
Arm	86	4	0	0	0	14	104	16.5
Abdomen	42	0	0	0	0	27	69	10.9
Upper Back	7	0	0	0	0	0	7	1.1
Lower Back	51	0	0	0	7	0	58	9.4
Legs	9	0	0	2	14	0	25	4.1
Feet	4	0	0	2	14	0	20	3.7
Total	411	22	68	15	45	70	631	100.0
Percentage	65.1	3.5	10.8	2.4	7.1	11.1	100.0	

Table 12. Frequencies and totals of comfort-touch types by family member's hand on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Comfort Contact	
Head	12	0	0	0	32	6	0	4	54
Face	8	0	0	0	34	0	0	5	47
Lips	0	0	0	0	0	0	0	0	0
Hand	96	4	0	0	0	10	0	1	111
Arm	58	4	0	0	18	5	0	1	86
Abdomen	0	19	0	0	19	4	0	0	42
Upper Back	2	5	0	0	0	0	0	0	7
Lower Back	0	42	0	0	0	0	0	9	51
Legs	7	2	0	0	0	0	0	0	9
Feet	3	1	0	0	0	0	0	0	4
Total	186	79	0	0	103	25	0	20	411

Table 13. Frequencies and totals of comfort-touch types by family member's fingers on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact	
Head	0	4	0	0	0	0	0	1	5
Face	0	6	0	0	0	0	4	0	10
Lips	0	0	0	0	0	0	0	14	14
Hand	0	0	0	0	0	0	0	0	0
Arm	0	5	0	0	0	0	7	2	14
Abdomen	0	8	0	0	0	0	17	2	27
Upper Back	0	0	0	0	0	0	0	0	0
Lower Back	0	0	0	0	0	0	0	0	0
Legs	0	0	0	0	0	0	0	0	0
Feet	0	0	0	0	0	0	0	0	0
Total	0	23	0	0	0	0	28	19	70

Table 14. Frequencies and totals of comfort-touch types by family member's arm on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact	
Head	9	0	0	0	0	0	0	1	10
Face	0	0	0	0	0	0	0	0	0
Lips	0	0	0	0	0	0	0	0	0
Hand	0	0	0	0	0	0	0	0	0
Arm	0	0	0	0	0	0	0	0	0
Abdomen	0	0	0	0	0	0	0	0	0
Upper Back	0	0	0	0	0	0	0	0	0
Lower Back	3	2	0	0	0	0	0	2	7
Legs	14	0	0	0	0	0	0	0	14
Feet	14	0	0	0	0	0	0	0	14
Total	40	2	0	0	0	0	0	3	45



Table 16. Frequencies and totals of comfort-touch types by family member's lips on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact	
Head	0	0	2	0	0	0	0	0	2
Face	0	0	9	0	0	0	0	0	9
Lips	0	0	49	0	0	0	0	0	49
Hand	0	0	8	0	0	0	0	0	8
Arm	0	0	0	0	0	0	0	0	0
Abdomen	0	0	0	0	0	0	0	0	0
Upper Back	0	0	0	0	0	0	0	0	0
Lower Back	0	0	0	0	0	0	0	0	0
Legs	0	0	0	0	0	0	0	0	0
Feet	0	0	0	0	0	0	0	0	0
Total	0	0	68	0	0	0	0	0	68



Table 18. Total touch frequencies and percentages by family members on the parturient at rest and during contraction

Physical State	Frequency	Percentage
Contraction	385	61
Rest	246	39

Conforming as may be expected to the total caregiver population of this study, family members used their hands most often to impart comfort (65% of the time) (Table 11). The body parts of the parturient most often touched by the hands of this caregiver, in order of frequency, were the hands, the arms, the head, lower back, face, the abdomen, legs, upper back, and the feet (Table 11).

Family members used their hands 74% of the time to touch the woman in childbirth above her waist (Table 12). They used their hands most often to hold the hands or arms of the parturient (154 times out of a total of 186 touches). The next most frequent use of the family member's hand was to stroke the head or face of the parturient. After that, family members used their hands to massage the parturient's lower back (Table 12).

The fingers of family members were then used to give comforting touch (11.1%) (Table 11). Fingers were used most often to tickle (28 times) or to massage (23 times). The body part of the parturient most often contacted with the fingers of a family member was the abdomen (17 times) and the arm (14 times). It is noted that the fingers of family members were used to touch the parturient in a manner not defined in this study. Family members touched the parturient 14 times on her lips with their fingers (Table 13).

The lips of the family members were next used most frequently to impart comforting touch (10.8% of the time) (Table 11). The use of lips by family members accounts for 89.5% of all the use of lips to give comforting touch (76 times) (Table 13). The family members most often kissed in this order of frequency: the lips, face, hands, and head of the parturient (Table 14).

The family member's arm was used 7.1% of the time. Family members used their arms to hold the legs, feet, and head of the parturient most often (Tables 11 and 15).

The family member's head was used in a manner not defined in this study 22 times. The family member's head touched the parturient's head 18 times and the arm 4 times (Table 17).

The least frequently used body part for comforting touch by family members was the trunk (Table 16). It was used 2.4% of the time mostly for holding or giving support (Table 11).

Finally, comforting touch was given 69% of the time when the parturient was experiencing a contraction and 31% of the time when she was at rest (Table 18).

#### Highlights of Comforting Touch by Nurses

Data concerning comforting touch by nurses are shown in Tables 19 through 24. Table 19 indicates the frequencies, totals, and percentages of the nurse's body parts used in imparting comforting-touch to parturients. Tables 20 through 23 give the frequency and totals of touch types on the body part of the parturient. Table 24 displays a comparison of frequency and percentages of comforting touch given during rest and contraction.

Nurses gave comforting touch .81 times per minute. This touch was approximately 27% (467) of the comforting touch given to the woman in active labor during the observed hour. Nurses touched every defined body part of the parturient except her lips (Table 19). Again, as may be expected, nurses used their hands most frequently (83%) to impart comforting touch.

The hands of the nurses were used most often to hold the hand of the woman in active labor (Tables 19 and 20). The nurses next most frequently used their hands to hold and stroke the arms of the parturient (Tables 19 and 20).

After touching the arms of the parturient, the nurse most frequently used the hands to hold and/or stroke the head and face of her patient (Tables 19 and 20). Next, the nurse's hands most often touched the parturient's lower back and abdomen. The touch types most often

Table 19. Frequencies, totals, and percentages of all comfort-touch types by nurses on each listed body part of the childbearing woman

Parturient Body Part	Nurse Body Part						Total	Percent- age
	Hand	Head	Lips	Trunk	Arm	Fin- gers		
Head	56	0	0	0	6	1	63	13.0
Face	48	0	2	0	0	6	56	12.0
Lips	0	0	0	0	0	0	0	0.0
Hand	72	0	0	0	0	0	72	16.0
Arm	58	0	0	0	0	12	70	15.0
Abdomen	52	0	0	0	0	24	76	16.0
Upper Back	9	0	0	0	0	0	9	2.0
Lower Back	53	0	0	0	4	0	57	12.0
Legs	22	0	0	2	5	0	29	6.0
Feet	16	0	0	5	14	0	35	8.0
Total	386	0	2	7	29	43	467	100.0
Percentage	83.0	0.0	0.4	1.4	6.0	9.2	100.0	

Table 20. Frequencies and totals of comfort-touch types by the nurse's hand on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact	
Head	29	1	0	0	22	4	0	0	56
Face	4	0	0	0	39	0	0	5	48
Lips	0	0	0	0	0	0	0	0	0
Hand	69	0	0	0	0	0	0	3	72
Arm	41	0	0	0	14	3	0	0	58
Abdomen	0	0	0	0	12	18	0	22	52
Upper Back	0	0	0	0	0	0	0	0	0
Lower Back	0	52	0	0	0	0	0	1	53
Legs	18	2	0	0	0	2	0	0	0
Feet	15	1	0	0	0	0	0	0	16
Total	176	65	0	0	87	27	0	31	386

Table 21. Frequencies and totals of comfort-touch types by the nurse's fingers on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact	
Head	0	1	0	0	0	0	0	0	1
Face	0	1	0	0	5	0	0	0	6
Lips	0	0	0	0	0	0	0	0	0
Hand	0	0	0	0	0	0	0	0	0
Arm	0	0	0	0	0	0	11	1	12
Abdomen	0	0	0	0	0	0	22	2	24
Upper Back	0	0	0	0	0	0	0	0	0
Lower Back	0	0	0	0	0	0	0	0	0
Legs	0	0	0	0	0	0	0	0	0
Feet	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	5	0	33	3	43

Table 22. Frequencies and totals of comfort-touch types by the nurse's arm on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch									Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact		
Head	2	0	0	4	0	0	0	0	4	
Face	0	0	0	0	0	0	0	0	0	
Lips	0	0	0	0	0	0	0	0	0	
Hand	0	0	0	0	0	0	0	0	0	
Arm	0	0	0	0	0	0	0	0	0	
Abdomen	0	0	0	0	0	0	0	0	0	
Upper Back	0	0	0	0	0	0	0	0	0	
Lower Back	3	1	0	0	0	0	0	0	4	
Legs	5	0	0	0	0	0	0	0	5	
Feet	14	0	0	0	0	0	0	0	14	
Total	24	1	0	0	0	0	0	0	29	



Table 24. Total touch frequencies and percentages by nurses on the parturient at rest and during contraction

Physical State	Frequency	Percentage
Contraction	280	60
Rest	187	40

used in contacting these areas were massage, stroking, and patting (Tables 19 and 20).

Consistent with the total population of caregivers, nurses next most frequently used the fingers (9.2% of the time) to impart comforting touch (Table 19). The nurse's fingers most frequently touched the patient's abdomen (16% of the time) (Table 19). The nurse used her fingers mostly to tickle the abdomen of the parturient (Table 21). The next most touched body part of the parturient was the arm. Here, too, the nurse used the fingers to tickle the arm of her patient. Next, the nurse's fingers were used to touch the patients face and lower back (Tables 19 and 21).

Nurses used their arms 6% of the time to touch their clients (Table 19). In order of frequency, the feet, head, legs, and lower

back were given comforting touch by the arms. During this study, nurses used their arms exclusively to hold the feet of the parturient, to hug and hold the head of the parturient, to hold the legs, and to hold or massage the client's lower back (Table 22).

The trunk of the nurse was used 1.4% of the time to touch the client's legs or feet. This touch was used generally to hold or give support (Table 19 and 23).

Twice the nurse was observed kissing the client on her forehead, accounting for 0.4% of the comforting touch.

Finally, the nurse most often touched her client during a contraction or 60% of the time and 40% of her touch was given while the patient was at rest (Table 24).

#### Highlights of Comforting Touch by Physicians

Data concerning comforting touch by physicians are shown in Tables 25 through 29. Table 25 displays the frequencies, totals, and percentages of body parts contacted. Tables 26 through 28 show touch types used to contact the parturient's body part, and Table 29 compares comforting-touch frequencies and percentages during contraction and at rest.

The physician touched (in order of frequency) the parturient's hand, abdomen, arm, legs, and head (Table 25). The physician did not touch the parturient's back, feet, face, or lips. The physician used only his hands, fingers, and arms to give comforting touch. Physicians gave comforting touch .5 times a minute. At this point, it is important to note that the physicians cared for only 4 of the 10 subjects;

Table 25. Frequencies, totals, and percentages of all comfort-touch types by physicians on each listed body part of the childbearing woman

Parturient Body Part	Physician Body Part						Total	Percent- age
	Hand	Head	Lips	Trunk	Arm	Fin- gers		
Head	2	0	0	0	0	0	2	1.8
Face	0	0	0	0	0	0	0	0.0
Lips	0	0	0	0	0	0	0	0.0
Hand	37	0	0	0	0	0	37	34.2
Arm	22	0	0	0	0	0	22	20.4
Abdomen	32	0	0	0	0	0	32	29.6
Upper Back	0	0	0	0	0	0	0	0.0
Lower Back	0	0	0	0	0	0	0	0.0
Legs	8	0	0	0	7	0	15	14.0
Feet	0	0	0	0	0	0	0	0.0
Total	113	0	0	0	7	0	108	100.0
Percentage	93.5	0.0	0.0	0.0	6.5	0.0	100.0	

Table 26. Frequencies and totals of comfort-touch types by the physician's hand on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact	
Head	0	0	0	0	1	0	0	1	2
Face	0	0	0	0	0	0	0	0	0
Lips	0	0	0	0	0	0	0	0	0
Hand	29	0	0	0	0	7	0	1	37
Arm	4	0	0	0	0	18	0	0	22
Abdomen	4	0	0	0	0	13	0	15	32
Upper Back	0	0	0	0	0	0	0	0	0
Lower Back	0	0	0	0	0	0	0	0	0
Legs	7	1	0	0	0	0	0	0	8
Feet	0	0	0	0	0	0	0	0	0
Total	44	1	0	0	1	38	0	17	101





Table 29. Total touch frequencies and percentages by the physicians on the parturient during contractions and at rest

Physical State	Frequency	Percentage
Contraction	48	44
Rest	60	56

therefore; only 240 min were observed with physicians. Physician comforting touch accounted for 7% of the total observed touches (Table 28).

As observed earlier, the physician, as other caregivers, used his hand the majority of the time (93.5%) to impart comforting touch. His hand most often held the hand of the parturient. After holding, the physician was observed patting the parturient's hand most frequently (Tables 25 and 26). The physician next most often used his hands to touch the patient's abdomen. The doctor usually was found patting the parturient's abdomen (Tables 25 and 26). After the patient's abdomen, the physician used his hand most frequently to touch the parturient's arm. Again, patting was the most frequently observed type of comforting touch (Tables 25 and 26). Thereafter, the physician used his hand to give comforting touch by massaging the parturient's perineum (Tables 25

and 26). The physician also used his hands to hold the parturient's legs and to pat her head.

The physician's arms were used 6.5% of the time. The physician's arms gave support to the parturient's legs 100% of the time (Tables 25 and 28).

Lastly, the physicians touched their patients most often when they were at rest, without contractions. They touched the patient 56% of the time when she was at rest and 44% of the time while she was experiencing a contraction (Table 29).

#### Highlights of Comforting Touch by the Nurse-midwife

Data concerning the comforting-touch behavior of nurse-midwives are presented in Table 30 through 35. Table 30 includes the frequencies, totals, and percentages on each listed body part contacted for the nurse-midwife and the woman in active labor. Tables 31 through 34 indicate the nature of touch given to each body part of the parturient. Table 35 compares comforting touch given during contraction and at rest.

Nurse-midwives gave comforting touch 1.4 times per minute. Nurse-midwives cared for only 6 out of the 10 subjects and therefore were observed for only 360 minutes. The comforting touch by the nurse-midwife accounted for 29% of the total observed touches. Nurse-midwives touched every defined body part of the parturient, utilizing their own defined body parts with the exception of the head (Table 30).

Table 30. Frequencies, totals, and percentages of all comfort-touch types by certified nurse-midwife on each listed body part of the childbearing woman

Parturient Body Part	Nurse-midwife Body Part						Total	Percent- age
	Hand	Head	Lips	Trunk	Arm	Fin- gers		
Head	41	0	0	1	2	2	46	9.00
Face	26	0	3	1	0	5	35	7.00
Lips	0	0	3	0	0	4	7	1.00
Hand	53	0	0	0	0	0	53	11.00
Arm	57	0	0	0	0	12	69	14.00
Abdomen	82	0	0	0	0	46	128	26.00
Upper Back	2	0	0	0	0	0	2	0.05
Lower Back	67	0	0	0	2	0	69	14.00
Legs	20	0	0	3	16	0	39	8.00
Feet	20	0	0	7	20	0	47	9.50
Total	368	0	6	12	40	69	495	100.00
Percentage	74.0	0.0	1.0	3.0	8.0	14.0	100.0	

Table 31. Frequencies and totals of comfort-touch types by certified nurse-midwife's hand on each listed body part of the child-bearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact	
Head	4	0	0	0	32	4	0	1	41
Face	4	0	0	0	21	0	0	1	26
Lips	0	0	0	0	0	0	0	0	0
Hand	41	0	0	0	0	0	0	4	45
Arm	8	0	0	0	43	0	0	6	57
Abdomen	4	18	0	0	22	10	0	28	82
Upper Back	0	2	0	0	0	0	0	0	2
Lower Back	9	58	0	0	0	0	0	0	67
Legs	8	0	0	0	18	2	0	0	28
Feet	10	10	0	0	0	0	0	0	20
Total	88	88	0	0	138	16	0	40	368

Table 32. Frequencies and totals of comfort-touch types by certified nurse-midwife's fingers on each listed body part of the childbearing woman

Parturient Body Part	Type of Comfort Touch									Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact		
Body	0	0	0	0	2	0	0	0	2	
Face	0	5	0	0	0	0	0	0	5	
Lips	0	0	0	0	0	0	0	4	4	
Hand	0	0	0	0	0	0	0	0	0	
Arm	0	0	0	0	4	0	8	0	12	
Abdomen	0	38	0	0	0	0	8	0	46	
Upper Back	0	0	0	0	0	0	0	0	0	
Lower Back	0	0	0	0	0	0	0	0	0	
Legs	0	0	0	0	0	0	0	0	0	
Feet	0	0	0	0	0	0	0	0	0	
Total	0	43	0	0	6	0	16	4	69	

Table 33. Frequencies and totals of comfort-touch types by certified nurse-midwife's arm on each listed body part of the child-bearing woman

Parturient Body Part	Type of Comfort Touch								Total
	Hold/ Support	Massage	Kiss	Hug	Stroke	Pat	Tickle	Other Touch Contact	
Head	0	0	0	2	0	0	0	0	2
Face	0	0	0	0	0	0	0	0	0
Lips	0	0	0	0	0	0	0	0	0
Hand	0	0	0	0	0	0	0	0	0
Arm	0	0	0	0	0	0	0	0	0
Abdomen	0	0	0	0	0	0	0	0	0
Upper Back	0	0	0	0	0	0	0	0	0
Lower Back	2	0	0	0	0	0	0	0	2
Legs	16	0	0	0	0	0	0	0	16
Feet	20	0	0	0	0	0	0	0	20
Total	38	0	0	2	0	0	0	0	40



Table 35. Total touch frequencies and percentages by the certified nurse-midwife on the parturient during contractions and at rest

Physical State	Frequency	Percentage
Contraction	272	55
Rest	223	45

As previously mentioned, the hand was the most often used body part to impart comforting touch. The nurse-midwife's hand accounts for 74.1% of all touches. With her hand, in order of frequency, the nurse-midwife touched the parturient's abdomen, lower back, arm, hand, head, face, legs, and feet. In touching her client's abdomen, the nurse-midwife most often touched in a manner not defined in this study; she rested her hand on the abdomen. Then, in order of frequency, she stroked, massaged, patted, and held the parturient's abdomen. The nurse-midwife most often used her hands to massage the lower back of the woman in active labor. The arm of the parturient was most frequently stroked by the nurse-midwife, the hand most frequently held, the head and face most often stroked, the perineum massaged, the legs stroked, and lastly the feet were evenly massaged and held (Tables 30 and 32).

The fingers of the nurse-midwife were thereafter frequently used (15%) to give comforting touch. The nurse-midwife touched with her fingers, in order of frequency, the abdomen, arm, face, lips, and head.

She massaged the parturient's abdomen regularly with her fingers. The nurse-midwife used her fingers to stroke the client's arm. The face of the parturient also was massaged by the fingers. The nurse-midwife used her fingers to stroke the client's arm and to massage the perineum. The face of the parturient also was massaged by the fingers. The lips of the parturient were touched in a nondefined manner--by a soft touch. Lastly, the nurse-midwife used her fingers to stroke the head of the client (Tables 30 and 32).

The arm of the nurse-midwife accounted for 7.6% of the total comforting touch given. In order of frequency, she used her arms to touch the client's feet, legs, head, and lower back. She used her arms to support the feet and legs. She hugged her client's head twice and supported the lower back twice (Tables 30 and 33).

Two and two-tenths of the nurse-midwife's comforting touch came from the use of her trunk. In order of frequency, the trunk touched the laboring woman's feet, legs, head, and face. All touch either held or gave support (Table 34).

The nurse-midwife used her lips 1.1% of the time to render comforting touch. She kissed the lips and face of the client 3 times each (Table 30).

The nurse-midwife touched her client 45% of the time while she was at rest and 55% of the time while she was experiencing contractions (Table 35).

Comparison of Comforting-touch Behaviors  
of the Various Caregivers

This section focuses on the differences and commonalities of each category of caregiver. It includes frequencies of touch, body parts of the parturient contacted, types of touch used, and a comparison of touch given during a state of contraction and rest.

The foremost caregiver in ministering touch was the nurse-midwife. She touched her client 1.5 times per minute. This is 3 times that of the physician, who touched the patient 0.5 times per minute. Family members followed, touching the woman in childbirth 1.1 times per minute. The nurse entered between family members and physicians at .81 times per minute.

The percentage of each caregiver's body part used in imparting comforting touch is compared in Table 36. From this table it is seen that all caregivers predominately used hand contact in administering comforting touch. It is of interest to note that there is a decreasing progression in the use of hands in contributing comforting-touch. The physician used his hands 88%, the nurse 82%, the nurse-midwife 74%, and family members 65% of the time. The reciprocate of this progression is noted in finger-tip touch. This relationship between the caregiver category and percentage of body part used to give comforting touch gave rise to speculations which are examined in the next chapter.

Physicians appear to rely mainly on their hands, arms, and fingers to contribute comforting touch. Nurse-midwives and family members, however, utilized other body parts including head, lips, and trunk.

Table 36. Percentage comparison (rounded off) of body part used in giving comforting touch of each caregiver

Body Part	Caregiver			
	Family Member	Nurse	Nurse-midwife	Physician
Hand	65	82	74	88
Head	4	0	0	0
Lips	11	0	1	0
Trunk	2	1	2	0
Arm	7	6	8	6
Fingers	11	10	15	6

The nurse was in the middle of these two groups, using more body parts than the physician, but less than family members and nurse-midwives.

Table 37 compares the parturient's body part contacted in giving comforting touch by the various caregivers. Physicians touched mostly the hands and abdomen of the parturient. They also contacted less frequently the arm, perineum, and legs of the laboring woman. The laboring woman's head and back were rarely or never contacted. Family members touched nearly every body part of the laboring woman. The body part not touched was the perineum. Family members concentrated their touch on the head, arms, hand, and trunk of the parturient. Nurses, perhaps, were the most discriminating of the caregiver types. Nurses touched every body part except the client's lips. Nurses contacted the laboring

Table 37. Percentage comparison (rounded off) of the parturient's body part touched by caregiver

Body Part	Caregiver			
	Family Member	Nurse	Nurse-midwife	Physician
Head	15	13	9	2
Face	12	12	7	0
Lips	10	0	1	0
Hand	18	15	10	29
Arm	17	14	13	17
Abdomen	11	16	24	25
Upper Back	1	2	0	0
Lower Back	9	12	13	0
Legs	4	7	7	12
Feet	3	7	9	0

woman mostly above the waist, but 18% of the contact was below the laboring woman's waist. Finally, nurse-midwives focused much of their touch on the abdomen (24%), but also devoted much contact time to the client's head, extremities, back, and perineum, and closely followed the nurse in touching the laboring woman's body parts in a nondiscriminating manner.

For purposes of comparing types of comforting touch and because the majority of touch was made with the hands, touch types done by hands only were examined. A comparison is set forth in Table 38. Here it is seen that family members and nurses utilized much the same type of touch. The nurse-midwife utilized kinetic touch most often in stroking and massage. It is of interest to note that patting was avoided by both the nurse and the nurse-midwife.

Table 38. Frequency and comparison of the various types of comforting touch given by the various caregiver's hands

Type of Comfort Touch	Caregiver			
	Nurse-midwife	Physician	Family Member	Physician
Hold	88	44	186	176
Massage	111	9	79	75
Hug	0	0	0	0
Stroke	136	1	103	87
Pat	0	38	25	0

The last comparison of caregiver comforting touch was based on the physical state the parturient was experiencing (contraction or rest) (Table 39). The nurse-midwife stands out as the caregiver who offered comforting touch in the most nondiscriminating manner insofar as physical state. The nurse-midwife gave comforting touch almost equally during rest and contraction. The nurse and family members gave a majority of their comforting touch during contractions. The physician, unlike other caregivers, gave the greater part of comforting touch when his patient was at rest.

Table 39. Comparison of percentages (rounded off) of comforting touch done during rest and contraction

Caregiver	Contraction (%)	Rest (%)
Nurse-midwife	55	45
Physician	44	56
Family Member	61	30
Nurse	60	40

## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

This chapter contains a summary, conclusions, discussion and implications for nursing, and recommendations for further study.

#### Summary

This study originated from an interest in helping women to cope with the stresses of labor that may lead to crisis and its sequelae; it is the beginning of ongoing work in that direction. The purpose of this study was to:

1. Describe the types, location, and frequency of comforting touch given to women in active labor.
2. Describe the differences of various caregivers in giving comforting touch.

Ten subjects in active labor who met the established criteria were observed for 1 hour; data were recorded in keeping with the methodology. Analysis of data was done through frequencies, percentages, and frequency tables describing location and types of comforting touch.

A total of 1,701 touches was documented for 10 hours of data collection (1 hour per subject). Of the 10 subjects, 6 were delivered by nurse-midwives and 4 by physicians. The data have been presented collectively, individually, and comparatively for each type of caregiver.

The sample was a mix of women of varying ethnicity, parity, age, and marital status. Again, it is of importance to note in this summary that there is a basic difference in the way care is provided between the physician and the nurse-midwife, and that this difference is reflected in comforting touch given by these providers. The nurse-midwife has a previously established relationship with the parturient and labor sits, while the physician may or may not have the established relationship and does not labor sit.

Comforting touch as used to aid women in coping with the stresses of labor was the primary assumption. It has been documented that touch is a form of communication; it is one of the first methods of communication. The anticipated results demonstrate that caregivers use their hands most often to touch, progressing from fingers to arms to lips to trunk, and to the head; a progression from the most tactile-sensitive parts to the least. The most frequently touched body parts are the abdomen and lower back, areas where most discomfort is felt by the parturient during labor. Caregivers also gave comforting touch most often during a contraction (56%), as compared to a resting state (44%).

The most frequently used category of comforting touch given was hand and finger holding, followed by massage, stroking, tickling, and patting.

In contrast to other caregivers, the physicians relied mainly on their hands, arms, and fingers to impart comforting touch, while nurse-midwives, nurses, and family members utilized other body parts including

head, lips, and trunk. The physician also contacted the parturient more often at rest than during a contraction.

The nurse-midwife gave the most frequent comforting touch, followed in sequence by family members, nurses, and physicians.

The head of the caregiver was also used in an unexpected manner; e.g., as a vehicle of touch. This consisted of touch to the arm or head of the parturient.

### Conclusions

As a result of this study, the following conclusions were made:

1. Comforting touch is given most frequently by the hands of the caregivers.
2. Hands are used to impart comforting touch by holding or massage.
3. Body parts of the parturient most frequently contacted by the hands of the caregivers are hands, arms, abdomen, and lower back.
4. Nurse-midwives used comforting touch most frequently in their ministrations.
5. Physicians used comforting touch least frequently in their ministrations.
6. Nurse-midwives touched with more parts of their body than other caregivers.
7. Family members touched body parts mostly above the waist.
8. There is a progression of frequency of body parts used to give comforting touch from the hands, fingers, arms, lips, trunk to the head.

9. Nurses touched body parts most frequently in a nondiscriminating manner; i.e., nurses touched every body part except the lips.
10. Nurse-midwives touched with their hands most frequently to massage or stroke.
11. Physicians touched with their hands most frequently to hold or pet.
12. Family members touched with their hands most frequently to hold or stroke.
13. Nurses touched with their hands most frequently to hold or stroke.
14. Comforting touch was given most frequently during a contraction.
15. Physicians touched more frequently when the parturient was at rest.
16. Nurse-midwives gave comforting touch almost evenly regardless of rest or contraction.
17. Patting was avoided by nurses and nurse-midwives as a mode of giving comforting touch.
18. Comforting touch was given most when the parturient was experiencing a contraction (during painful stimulus).
19. Comforting touch was given to those body parts of the parturient, excluding arms and hands, where the parturient was experiencing discomfort.

### Discussion and Implications for Nursing

The comforting touch of the caregiver was described in this study. It was shown that a variety of similarities and differences exist among caregivers. In the midst of our technological society surrounded by gadgetry that all but bears the infant for the woman, it is still the personal interaction and relationship that carries considerable importance. It is still a social human, one with a complexity of thought and emotions, who bears the infant. It is all too easy to lose sight of this amidst the fascination that technological advances hold for mankind. It should be remembered that although machines can do many things, they cannot comfort a woman in labor and stimulate or encourage the use of that woman's resources to meet stresses that contribute to the crises in childbirth.

We have seen how environmental and psychological stresses predispose the parturient to crises and how those crises may lead to poor maternal/fetal results. Crises in labor may contribute to longer labors, higher C-section rates, higher forcep deliveries, and fetal distress due to acidosis. This acidosis evolves from the increase in catecholamine levels produced by the crises-provoking stresses that may come about during labor. Yet, what many care providers find most rewarding, viz., the intervention given to the woman in labor, demonstrates rapid results. Because a state of crisis is short, especially in labor where days are exchanged for hours, these interventions depend on communication--communication of trust, acceptance, and support.

and judicious use of touch, crises and their sequelae can often be assuaged.

Machines cannot promote and share in the satisfaction experienced when the obstacles are overcome. Support during labor is a personal interaction and communication between the woman and her caregiver --and the primordial mode of this communication is touch. By the use of comforting-touch communication and support may be facilitated and enhanced.

The expected outcome from this and future studies is to better understand how caregivers can meet the needs of laboring women, how to understand the timeliness and quality of interventions and facilitate coping.

The literature reviewed describes childbirth as a time of crisis wherein the woman turns inward and has great need for support. This was demonstrated by verbal and nonverbal behavior (Deutsch, 1945; Richardson, 1979). Touch has been shown to be the simple mode of communication; it is most effective in stress situations (Frank, 1957) and provides comfort and nurturing needs during stress periods (Hilliard, 1968).

Data results suggest that family members, who were not professionally taught or learned, generally seem to have intuitively appreciated comforting touch. Caregivers, with the exception of physicians, have been shown to give greater amounts of comforting touch during the discomfort of contractions and to touch those body parts of the parturient where pain is felt.

Nurses and nurse-midwives in this study demonstrated a high level of giving of comforting touch, with nurse-midwives touching more often and nurses touching more body parts of the laboring woman. This may be because both of these professionals see their responsibility in nurturing and giving comfort.

Family members touched as often as nurses, but their touch was limited to the upper body, mostly hand holding. This may reflect an uneasiness on their part to touch body parts of the parturient in the presence of others, or a giving up of this responsibility to the "professional."

The touch of the physician stands out from the other caregivers. The physician touched least. This touch was limited to a patting, hand holding, and ministrations to facilitate birth. Might this reflect the orientation of the physician to our technological age? Has the educational process of the physician refocused his behavior so that support of the patient is seen as a less important role? Has the patient become a case? Perhaps.

It is notable that family members touched the laboring woman with body parts other than the hand the greatest number of times. May this reflect a relationship of familiarity? If so, the nurse-midwife may consider herself/himself as closely identified with his/her client. Of significance in this consideration is that family members and the nurse-midwife were the only caregivers to kiss the parturient.

The sample size of 10 laboring women and their caregivers, although adequate for establishing a baseline, is a limiting factor in

generalizability of the data to the population at large. In future studies, larger numbers of subjects will be needed.

This study suggests a need for more understanding through research and formal teaching of how caregivers can better meet the supportive needs of the laboring woman. As nurses we must include and encourage family members in giving supportive touch. In our prepared childbirth education, the importance of touch must be included.

#### Recommendations for Further Study

This study was designed to detail the comforting-touch behaviors of caregivers to women in active labor and to assess differences that exist between the comforting-touch behaviors of various caregivers.

Recommendations for further study are:

1. Replication of the present study with a sample size lending itself to greater generalizability.
2. A descriptive study of behavioral elicitors of comforting touch by the laboring woman.
3. A descriptive correlation study of comforting touch to labor outcomes (e.g., Apgars, length of labor, satisfaction with labor experience).
4. A descriptive correlation study of specific types of comforting touch to labor outcomes.
5. Replication of the present study utilizing the video tape recorder with subsequent meticulous analysis of data recorded.
6. Replication of the present study correlating ethnicity of caregivers and parturients in analysis of comforting touch.

7. Replication of the present study correlating sex of the caregiver in analysis of comforting touch.

**APPENDIX A**

**PATIENT DISCLAIMER FOR STUDY  
(IN ENGLISH AND SPANISH)**

## PERMIT

I am seeking your voluntary participation in an investigational project titled, "Obtaining Information at the Time of Delivery." To deny participation will not cause loss of benefits. The object is: 1) to describe the frequency with which you were assisted during an hour of labor, 2) describe the feeling you had, and 3) describe what you felt at the time of delivery.

Your permission will allow your reactions, during labor and delivery, to be discussed. There is no risk to you. The information will be confidential. Your name will not appear in any of the data, only a number corresponding to your name. The Food and Drug Administration reserves the right to see the data.

James Pobrislo, R.N., B.S.N.

## PERMISO

Estoy súplicando su voluntaria participación en una investigación proyecto titulada, "Comformando Enternecer El Parto Del Nino." Negar de participar no va a causar perdida de beneficio. La intencion es: 1) describir la frecuencia consolando senoras embarazadas durante una hora dé parto, 2) para describir que modo de enternecer senoras sientén, y 3) para describir que sienten a la hora de parto.

Su permiso va a dejar la persona que clase de reacciones hay en el parto. No hay nada de riesgo para usted. La informacion va a estad secreta. Su nombre no va a estar en los datos nomas un numero que corresponda con su nomebre. La Administracion de Comeda y Drogas reserva el poder de ver los datos.

James Pobrislo, RN, BSN

APPENDIX B

DATA COLLECTION TOOL

Source: Anderson and Standley (1977)--Observational Tool.  
Heims (1974)--Recording Format and Coding Set-up.

Contraction	Breathing	Tension	Vocalization	Motivation	Position	Care-Giver	Parturient	Freq.	Momentum	Notes
Contraction	Regular	Relaxed	Lat.-Smile	Movement	Back	Hand=1	Head=1		1-5	
Rest	Deep	Tense	Cry	Stable	Side	Head=2	Face only=2			
Both	Shallow	V. Tense	Scream		Sit	Lips=3	Lips=3			
	Pant		Moan		Stand	Trunk=4	Hand=4			
	Puch		X			Arms=5	Arm=5			
	Irregular					Fingers=6	Abd=6			
						Other=7	Upper			
							Back=7			
							Lower			
							Back=8			
							Leg=9			
							Peri=10			
							Feet=11			
						In Room				
1						F				
						N				
						OB				
2						F				
						N				
						OB				
3						F				
						N				
						OB				
4						F				
						N				
						OB				
5						F				
						N				
						OB				
6						F				
						N				
						OB				
7						F				
						N				
						OB				
8						F				
						N				
						OB				
9						F				
						N				
						OB				
10						F				
						N				
						OB				

Organization of the Observational System

I. Physical State of the Laboring Woman

A. Contraction

1. Contraction
2. Resting
3. Both

B. Breathing

1. Regular
2. Irregular
3. Deep
4. Shallow
5. Pant
6. Push

C. Tension

1. Relaxed
2. Tense
3. Very Tense

D. Vocalization

1. Laugh or Smile
2. Cry
3. Scream
4. Moan
5. None

E. Body Movement

1. Movement
2. Stable

F. Body Position

1. Back
2. Side
3. Sit
4. Stand

## I. Physical State of the Laboring Woman

### Contraction

The presence and/or absence of a uterine contraction in the time-sampling interval is a basic component of the laboring woman's physical state. Evidence of a contraction may come from any source such as the fetal monitor, the woman's expressions of increased discomfort, and change in position and breathing. Ordinarily, when a woman is in active labor, there is clear evidence from several sources that she is experiencing a contraction. The categories in this column are mutually exclusive; one category is coded in each time-sampling interval.

1. Contraction: Evidence of uterine contraction.
2. Rest: Period between contractions.
3. Both: Both a contraction and rest period occur in any proportion in the time-sampling interval.

These physical states of the parturient will be coded with touch behavior borrowed from Heims' (1974) tactile contact recording format (1974). These behaviors are divided into four categories for recording: body part used to touch, body part touched, and frequency.

1. Frequency: Number of times tactile contact made by caregiver on parturient.
2. Body Part: An abbreviation system for body part used by caregiver.
3. Body Part: Body part of the woman in labor.

Touch type as listed in definitions of this study will be coded as:

- 1 -- holding
- 2 -- massage
- 3 -- kissing
- 4 -- hugging
- 5 -- stroking
- 6 -- patting
- 7 -- tickling

Coding

## Basic body parts of the caregiver:

Hands -- 1

Head -- 2

Lips -- 3

Trunk -- 4

Arms -- 5

Fingers -- 6

## Basic body parts of parturient:

Head -- 1

Face only -- 2

Lips -- 3

Hand -- 4

Arm -- 5

Abdomen -- 6

Upper Back -- 8

Lower Back -- 8

Perineum -- 9

Legs -- 10

Foot -- 11

APPENDIX C

COLLEGE OF NURSING ETHICAL REVIEW SUBCOMMITTEE  
OF THE RESEARCH COMMITTEE MEMORANDUM  
REGARDING APPROVAL OF THE  
HUMAN SUBJECTS COMMITTEE

THE UNIVERSITY OF ARIZONA COLLEGE OF NURSING  
MEMORANDUM

TO: James Pobrislo  
4141 E. 17th Street, Tucson, 85711

FROM: Ada Sue Hinshaw, R.N., Ph.D. - Jan R. Atwood, R.N., Ph.D.  
Director of Research ~~KT~~ Chairman, Research Committee

DATE: June 10, 1982

RE: Human Subjects Review: "Comforting - Touch Behaviors in  
Childbirth"

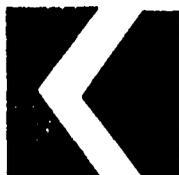
Your project has been reviewed and approved as exempt from University review by the College of Nursing Ethical Review Sub-committee of the Research Committee, and the Director of Research. A consent form with subject signature is not required for projects exempt from full University review. Please use only a disclaimer format for subjects to read before giving their oral consent to the research. The Human Subjects Project Approval Form is filed in the office of the Director of Research, if you need access to it.

We wish you a valuable and stimulating experience with your research.

ASH:ss  
1982

APPENDIX D

LETTER OF APPROVAL TO CONDUCT STUDY  
FROM PROTOCOL REVIEW COMMITTEE  
OF KINO COMMUNITY HOSPITAL



KINO  
COMMUNITY  
HOSPITAL

2800 E. AJO WAY/TUCSON, AZ 85713

PHONE 294 4471

May 27, 1982

James M. Pobrislo, R.N., B.S.N.  
Labor & Delivery  
Kino Community Hospital  
Tucson, Arizona

Dear Mr. Pobrislo:

We have reviewed your protocol "Comforting Touch Behavior in Childbirth," which was submitted to the Protocol Review Committee. Approval was granted with the consent form being revised and Spanish translation of informed consent. The following statements must be included in your revised informed consent:

A statement that participation is voluntary, that refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled, and that the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled.

A statement describing the extent, if any, to which confidentiality of records identifying the subject will be maintained and that notes the possibility that the Food and Drug Administration may inspect the records.

A description of any reasonable foreseeable risks or discomforts to the subject.

The committee also requested that you present the name and credentials of the other principle investigator involved. A quarterly report is to be submitted to the Protocol Review Committee by August 27, 1982.

Approval is granted with the understanding that no changes will be made in the procedures followed, without the knowledge and approval of the Protocol Review Committee. Any physical or psychological harm to any subject must also be reported to this committee.

Sincerely,

Jose Santiago, M.D., Chairman  
Protocol Review Committee



/dl

APPENDIX E

LETTER FROM DEPARTMENT OF HEALTH & HUMAN  
SERVICES TO USE OBSERVATIONAL TOOL

**DEPARTMENT OF  
HEALTH & HUMAN SERVICES**

Public Health Service  
National Institutes of Health  
Building 31 Room B2B15  
Bethesda, Maryland 20205

October 14, 1981

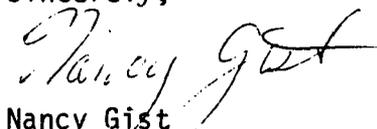
James Pobrislo  
4141 E. 17th Street  
Tucson, AZ 85711

Dear Jim:

Sorry about the confusion. All materials published through the Department of Health and Human Services is available for use by the public without prior permission.

For the purposes of your thesis, lets hope this letter will suffice.

Sincerely,



Nancy Gist  
Department of Health and  
Human Services  
Public Health Department  
Bethesda, Maryland

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