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One Measure of Success: A Study of the Lamaze Technique of Preparation for Childbirth

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ONE MEASURE OF SUCCESS:
A STUDY OF THE LAMAZE TECHNIQUE
OF PREPARATION FOR CHILDBIRTH

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With deepest appreciation to my husband and family without whose encouragement and assistance this project could not have been undertaken and completed. Special thanks also to my advisors whose guidance has been so excellent.

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INTRODUCTION

The process of the Psychoprophylactic Method of Childbirth, Lamaze Technique, has been receiving increasing emphasis during the past twenty years. Receiving its original trial and utilization in Russia in 1949, it was modified and introduced to Western society in 1951 by a French physician, Dr. Fernand Lamaze. [1] As a result, the method has also spread to the United States. One such organization which supports the Lamaze Method is the American Society for Psychoprophylaxis in Obstetrics, Incorporated. It was founded in 1960 by a group of physicians, physiotherapists, nurses and parents, all of whom maintain that childbirth is a natural, normal process. [2] Other notable organizations founded in recent years which support Lamaze and other methods are the International Childbirth Education Association, the Childbirth Without Pain Education Organization, and the Maternity Center Association.

Based on Pavlov's principles of conditioned response, the psychoprophylactic Method de-conditions women from childbirth fears and misconceptions, and then by conditioning,

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[1] "Psycho-prophylactic Method of Childbirth (Lamaze technique)" (New York: American Society for Psychoprophylaxis in Obstetrics, Inc.)

[2] Ibid.

trains her to consciously control her activity and participate in the birth of her child.[3] This method does not and is not expected to be a must for all women. Some women do not care to know what is happening during the birth process. For her, many methods of modern obstetric sedation, analgesia, and anesthesia are available and appropriate for individual situations. But for the woman who is eager to participate actively and fully and to know the true experience of childbirth, preparation for childbirth training is indispensible.[4]

> Psychoprophylaxis is verbal analgesia based on the pregnant woman. It is quite different from other methods of obstetric analgesia. It depends on words as therapeutic agents.... Its basis is the use of conditioned reflexes.... It attempts to equilibrate the brain (cortex) of the pregnant woman by creating during pregnancy, complex chains of conditioned reflexes which will be applied at the confinement. The pregnant woman learns to give birth as the child learns to read or swim. She completes this education, and so understands the simple mechanism of childbirth and can adapt herself when her confinement arrives. She gets rid of bad influences and memories she had previously accumulated which may inhibit her in the act of birth.[5]

The Lamaze Method mentally and physically re-conditions the patient to control her reception of pain.[6] The basis for this, as stated before, lies in the Pavlovian conditioned response theory. Briefly, the theory is as follows. One

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[3] Ibid.

[4] Priscilla Richardson Ulin, "The Exh Birth", American Journal of Nursing, Vol. LXIII, No. 6 (June 1963), p. 60.

[5] Dr. Pierre Vellay, Childbirth Without Pain (New York: E.P. Dutton and Co., Inc., 1960), p. 21.

[6] Ulin, "The Exhilirating Moment of Birth", p. 60.

perceives his environment through his sensory organs. As signals strike these organs, they transmit them to the cerebral cortex of the brain for interpretation. They can, however, also transmit signals originating internally. These are spoken of as "proprioceptive signals" indicating the body's position and "enteroceptive signals indicating functioning of various internal organs. As the cerebral cortex develops, it acquires the ability to form, group, transform, and extinct links between signals having actual value for the life of the organism, and corresponding activities of this organism. They are, however, only temporary links which last only as long as the signals are maintained. When the signals are terminated there remain traces of the links, so that the reflex could be brought back at some later time. Another system of signals is derived from speech. Words act upon nervous activity by links to established facts through a process we know as learning.[7]

This is the process that takes place when a woman comes to associate the words "pain" and "uterine contraction". She learns from others who have experienced pain associated with contractions of the uterus. She also learns that although highly uncomfortable, this pain is necessary to fully experience the joy of motherhood.

> A conditioned reflex can only be developed and maintained as long as it is not inhibited by other reflexes. The absence of conditioned associations through speech, capable of inhibiting reflex pain, is due to the woman's ignorance of the exact physiological process of childbirth for the association between pain and uterine contraction is practically

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[7]Isidore Bonstein, M.D., Psychoprophylactic Preparation for Painless Childbirth (London: Medical Books, Ltd., 1958), pp. 20-22.

> the only thing the woman learns about her confinement. This ignorance nourishes an entire series of emotional manifestations, going from apprehension to fear ... and upsets the quilibrium of the cerebral cortex. The onset of labor increases this exhaustion ... and weakens her yet more. The woman is incapable of re-establishing the tone of her cortical activity, because she can not act.[8]

Lamaze preparation attempts to reorganize the woman's cerebral activity. This is done by applying newly learned conditioned reflexes and thereby, inhibiting pain reflexes from uterine enteroceptions. These newly conditioned reflexes associate uterine contractions with actions on the woman's part which permit her active participation.[9]

Briefly, during the six weekly sessions of Lamaze training, the anatomy and physiology of pregnancy and childbirth, neuro-muscular relaxation exercises, efficient management of the body, and application of breathing techniques to be applied during childbirth, discussion of the role of modern obstetrical techniques, medication, and anesthesia, and the aims and goals of psychoprophylactic preparation are discussed and practiced.[10]

For a complete explanation of the Lamaze Method the reader is advised to see the following: Dr. Pierre Vellay, Childbirth Without Pain (New York: E.P. Dutton and Co., Inc., 1960); Fernand Lamaze, M.D., Painless Childbirth (London: Burke, 1958); Isidora Bonstein, M.D., Psychoprophylactic Preparation for Painless Childbirth (London; William Heinemann

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[8] Ibid., pp. 31-32.

[9] Ibid., p. 32.

[10] Psycho-prophylactic Method of Childbirth (Lamaze Technique).

Medical Book, Ltd., 1958); and Elizabeth D. Bing, Marjorie Karmel, and Alfred Tanz, M.D. A Practical Training Course for the Psychoprophylactic Method of Childbirth (New York ASPO, 1961).

UNPREPARED MOTHERS

WHEN LABOR STARTS

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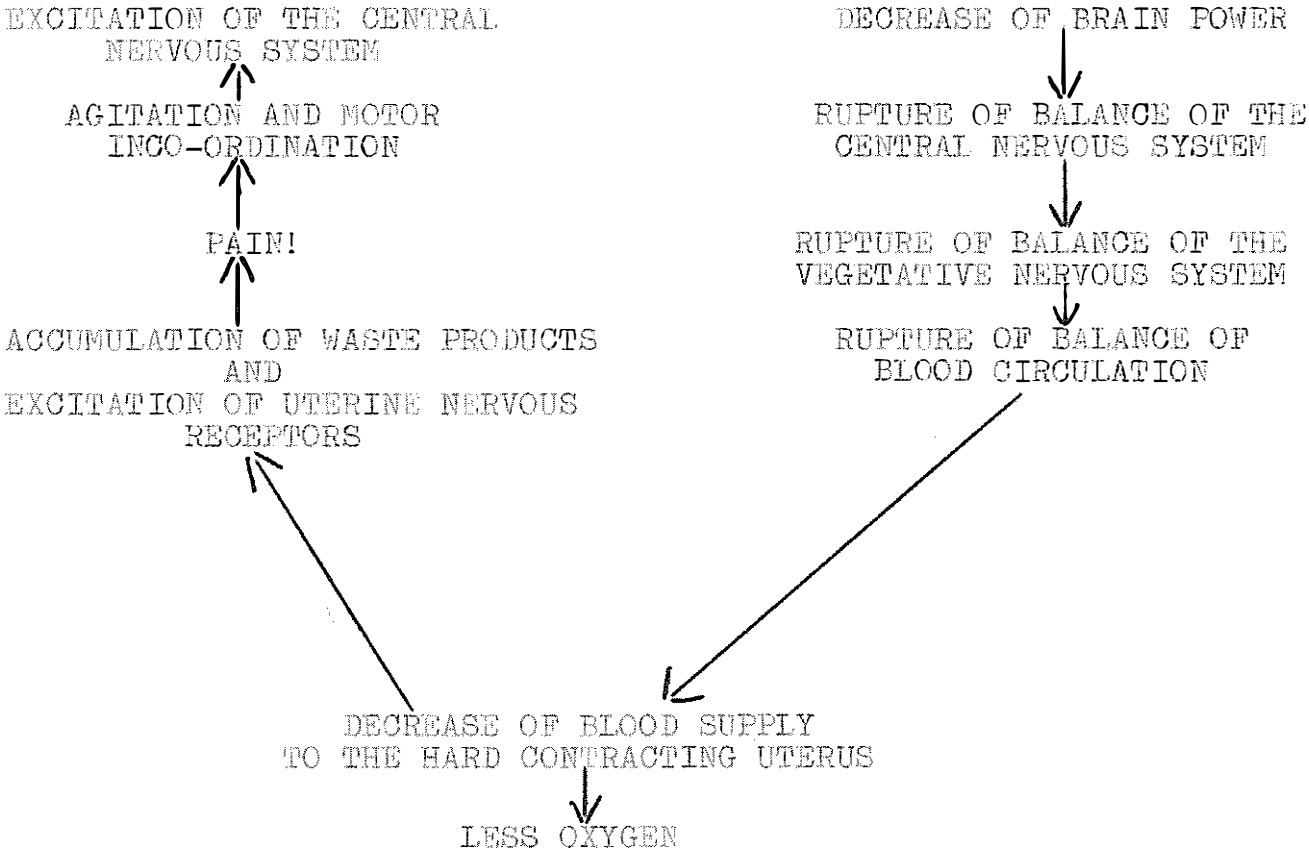
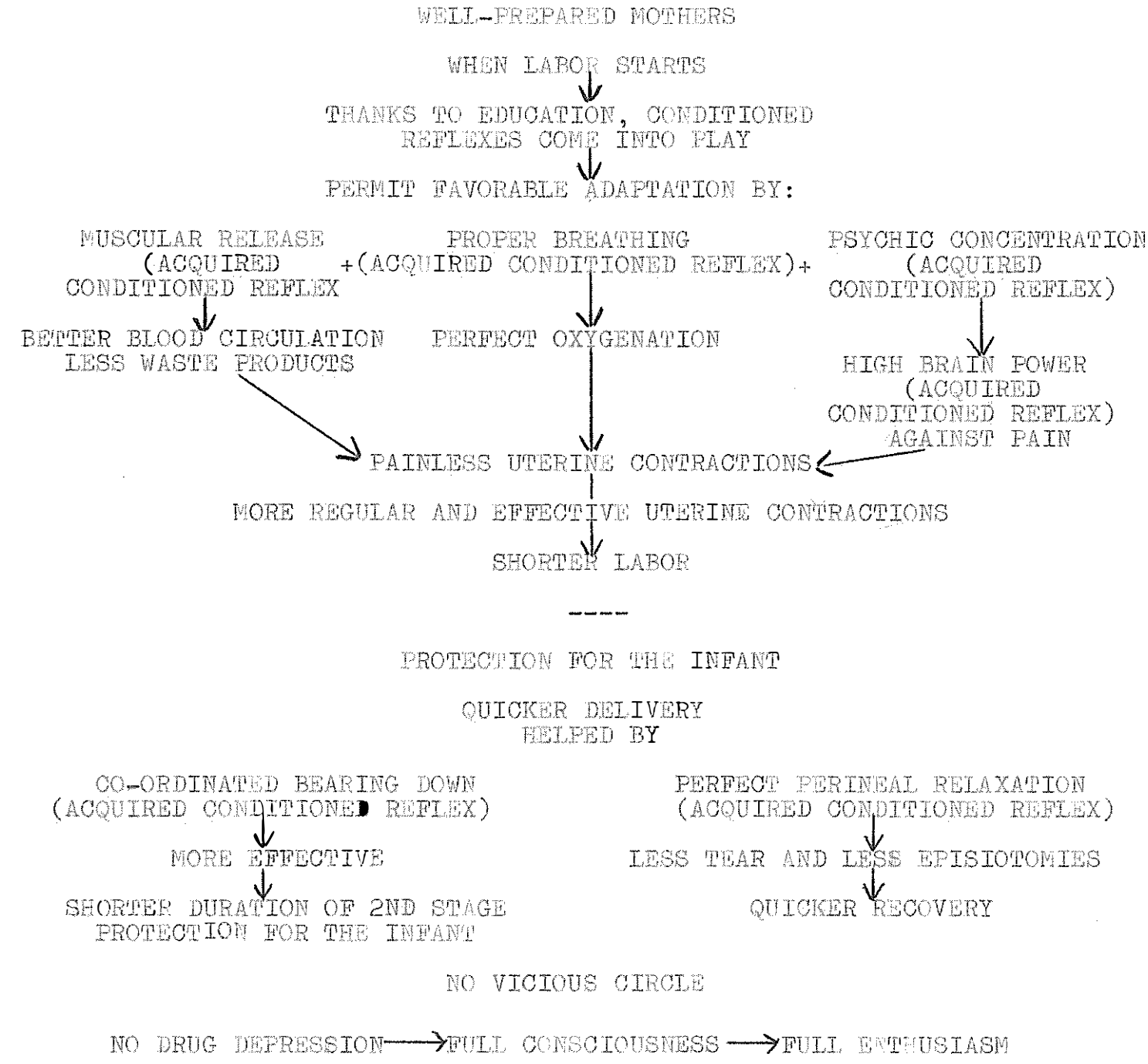
EMOTIONAL STATE



Isidore Bonstein, M.D., Psychoprophylactic Preparation for Painless Childbirth. (London: William Heinemann Medical Books Ltd., 1958), p. 82.



Isidore Bonstein, M.D., Psychoprophylactic Preparation for Painless Childbirth. (London: William Heinemann Medical Books Ltd., 1958), p. 83.

PART I

Chapter I: STATEMENT OF THE PROBLEM

Chapter II: REVIEW OF THE RELEVANT LITERATURE

CHAPTER I

STATEMENT OF THE PROBLEM

In selecting and analyzing a problem for study, it was decided that an exploration of the mother's participation in labor would be most significant and provide more insight into the effectiveness of the method. This problem was also selected because of a felt need of this author for more information among those in the medical profession concerning the objectives, goals, and practical application of the Lamaze Method of Childbirth.

Thus, the problem explored was: Does the woman who utilized the Lamaze Method of Childbirth conclude that it enabled her to more actively participate in the labor process?

CHAPTER II

REVIEW OF THE RELEVANT LITERATURE

Although many testimonials can be found praising the attributes of prepared childbirth, very little actual research has been done, especially in the specific area of the Lamaze Technique. The most pertinent of the available research derived from a review of the literature is reported here.

Lloyd H. Miller reports in the January 1961 issue of Obstetrics and Gynecology on a plan for childbirth education which he set up in his private practice. The program was begun on January 1, 1951; 4733 mothers who delivered 4788 babies participated in this program during the nine year period ending December 31, 1959. The instruction for the women included four, two hour classes conducted by trained nurses. The first three classes were attended during the second trimester and the last approximately six weeks before the estimated date of confinement. Areas covered were prenatal exercises and following a rather unstructured pattern, topics of interest. Miller's summary and conclusions are as follows:[11]

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[11] Lloyd H. Miller, "Education for Childbirth", Obstetrics and Gynecology, Vol XVII, No. 1 (January 1961), p. 123.

1. Education for childbirth has decreased the total number of hours in labor.
2. It has resulted in lower morbidity rate of mothers.
3. Babies are born alert and seldom need stimulation.
4. Deliveries are much less complicated.
5. The average blood loss is less.
6. All mothers were given the opportunity to watch their own deliveries and 75 per cent did so.
7. Support during labor by properly trained personnel was found to be essential.
8. The method appeared to help most patients.

Miller also concluded that it is becoming more and more important to have a patient satisfied mentally and emotionally with her medical care. Emotions play a great part, but also a great physical effort is required for delivery. Therefore if mothers are trained for physical effort, the emotional satisfaction will usually follow.

Carl Tupper studied over 1,200 women who utilized the natural childbirth method of Read (see Grantly Dick-Read, Childbirth Without Fear (New York: Harper and Brothers, 1959) from 1950-1954 inclusive.[12] He obtained the following results:

TABLE 1

PERFORMANCE FIGURES

PERFORMANCE	PRIMIPARAS	MULTIPARAS
Excellent	19.7 percent	46.5 percent
Very Good	22.6 "	10.7 "
Good	27.7 "	17.8 "
Helped	22.0 "	17.8 "
Failures	8.0 "	7.2 "

Carl Tupper, "Condition for Childbirth" American Journal of Obstetrics and Gynecology, Vol. LXXI, No. 4 (April 1956), p. 736.

Tupper believes that natural childbirth conditioning for

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[12] Carl Tupper, "Condition for Childbirth", American Journal of Obstetrics and Gynecology, Vol. LXXI, No. 4 (April 1956) pp 736-740.

labor is used not so much for its relief from pain as for its psychological effect on the woman, permitting her to derive greater satisfaction from having a baby, and this is a most valuable addition.

This next study is based upon attitudes, feelings, and reactions of doctors and nurses and people in many departments who have worked with parents and helped to develop the preparation for childbirth program. The philosophy of natural childbirth was explained and discussed. It was made clear to every patient that there was no such thing as success or failure. Each person was treated as an individual with certain basic emotional characteristics. The function of this natural childbirth program which took place at the Sloane Hospital for Women, was to help each woman develop her strengths to the fullest and the only evaluation of success was whether or not the mother was satisfied with her experience. The study compared almost 300 women who attneded a series of classes with 300 who had not. No differences were found in blood loss or length of labor, but those with preparation needed less medication and anesthesia and had more spontaneous deliveries. The greatest differences were shown among those who had originally requested the classes and attended them. [13]

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[13] Marion D. Laird and Margaret Hogan, "An Elective Program of Preparation for Childbirth at the Sloane Hospital for Women, May 1951 to June 1953", American Journal of Obstetrics and Gynecology, Vol LXXII, No. 3 (September 1956), p. 643.

Obstetricians answered the following questions:

1. Was the mother controlled throughout her labor?
2. Was she completely cooperative throughout?
3. Was she pleased with her delivery?
4. Was she happy with her baby?

Mothers were asked:

1. Are you satisfied with your experience?
2. Would you elect natural childbirth next time?
3. When did you experience the greatest degree of pain or discomfort?
4. Are you happy with your baby?

The physicians listened to personal accounts from each mother and evaluated them on three points: physical, psychological, and social.

TABLE 2

EVALUATION OF 230 RECORDS RECEIVED

	MOTHERS	OBSTETRICIANS
Successful	142	150
Reasonably Successful	46	24
Fairly Successful	32	24
Unsuccessful	10	27
Not evaluated	--	5

Marion Laird, and Margaret Hogan, "An Elective Program on Preparation for Childbirth at the Sloane Hospital for Women, May 1951 to June 1953," American Journal of Obstetrics and Gynecology, Vol. LXXII, No. 3 (September 1956), p. 643.

The obstetricians scored higher than the mothers in thirty-five records and lower in 30 records.[14]

The following set of figure and tables are results of psychoprophylactic preparation in 707 confinements at the Maternity Hospital at Geneva. In that study, 25.5 percent

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[14] Ibid.

rated excellent, 48.5 percent good, 11.8 percent fair, and 14.2 percent failure.[15]

Using somewhat the same criteria, Dr. Lamaze obtained the following results in Paris until October 31, 1955.

TABLE 3
RESULTS OBTAINED BY DR. LAMAZE

DEGREE	NO. OF PATIENTS	PER CENT	TOTAL PER CENT
Excellent	893	18.43	
Very Good	1,097	22.63	
Good	1,172	24.17	
Fair	859	17.73	82.96
Tolerable	595	12.28	
Failure	231	4.76	17.04
	4,847	100.00	100.00

P. Hubert De Watteville, "The Use of Obstetrical Analgesia at the Maternity Hospital at Geneva," American Journal of Obstetrics and Gynecology, Vol. LXXIII, No. 3 (March 1957), p. 483.

The criteria for the classification of the results in these studies is as follows:

TABLE 4

CRITERIA FOR CLASSIFICATION OF RESULTS

CLASS	APPRAISAL BY PARTURIENT	APPRAISAL BY PHYSICIAN OR MIDWIFE
Excellent	No feeling of pain.	Patient relaxed, calm with perfect self-control, no complaints, smiles.
Good	Occasional slight pain, perfectly tolerable, no need for analgesia.	No complaints, but some temporary tension alleviated by massaging.
Fair	Perception of disturbing pain, desire for some analgesia	Complains, some restlessness, occasional moaning, but responds to orders and encouragements.
Failure	Intolerable pain	Screaming, restlessness, psychomotor excitation, no response to orders and encouragement.

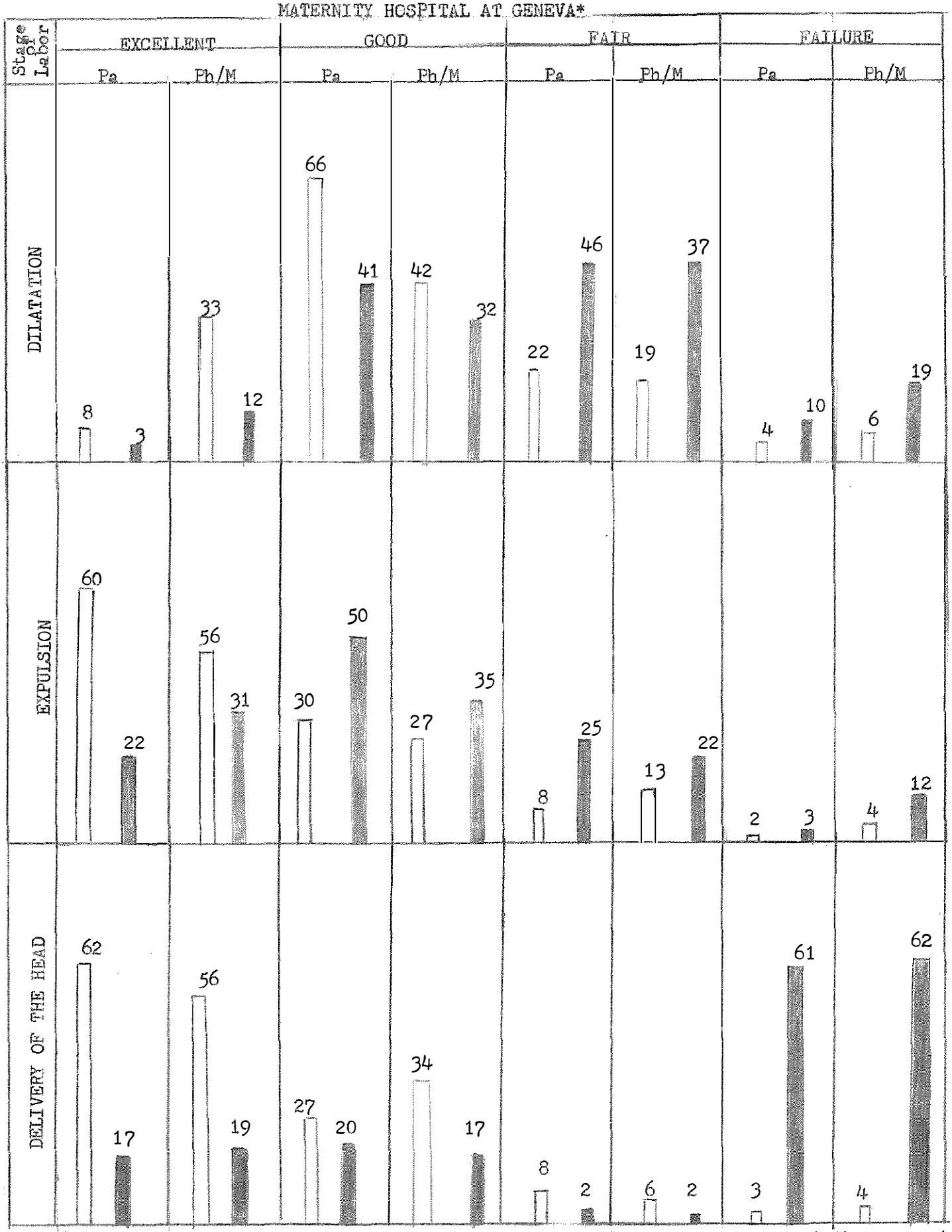
Reference: Same as for Table 3

[15] P. Hubert De Watteville, "The Use of Obstetrical Analgesi at the Maternity Hospital at Geneva", American Journal of Obstetrics and Gynecology, Vol LXXIII, No. 3 (March 1957), p. 482.

Using the above criteria, the results in the following table show the appraisal of the course of delivery in women (primiparas and multiparas) with and without psychoprophylactic preparation, at the Maternity Hospital at Geneva. Ninety-two cases used psychoprophylactic preparation and fifty-nine did not.

TABLE 5

APPRAISAL OF THE COURSE OF DELIVERY
MATERNITY HOSPITAL AT GENEVA*



*For each stage of labor, the heights of the columns and the figures represent the percentage of cases with psychoprophylactic preparation (white columns) or without (black columns) falling within the respective class of appraisal when the latter had been done either by the paturients themselves (columns headed Pa) or by the physician and/or midwife (column headed Ph/M).

Source: Same as for Table 4, p.484

Table 6 shows how psychoprophylactic preparation had increased in use and popularity at the Maternity Hospital at Geneva and compares it to other types of analgesia used at the same institution during the times period from 1950 to June 30, 1956.

TABLE 6

METHODS OF OBSTETRICAL ANALGESIA USE IN THE MATERNITY HOSPITAL AT GENEVA

Year	1950	1951	1952	1953	1954	1955	June 30 1956
Total Number of Deliveries	1,410	1,406	1,380	1,497	1,534	1,702	922
Delivery Under Trilene and Nitrous Oxide	326 32%	591 42%	726 52%	840 56%	608 39%	170 10%	59 6.4%
Delivery Under Pudendal Block	63 4.4%	48 3.4%	40 2.9%	39 2.5%	52 3.4%	49 2.9%	29 3.1%
Delivery Under Saddle Block	81 5.7%	72 5.1%	35 2.5%	2 0.1%	----	----	----
Delivery Under Continuous Lumbar Peridural Analgesia	17 1.2%	16 1.1%	88 6.4%	152 10%	106 6.9%	108 6.3%	48 5.2%
Delivery By Psychoprophylactic Preparation	----	----	----	----	3	454	250
							26.5% of all deliveries

P. Hubert De Watteville, "The Use of Obstetrical Analgesia at the Maternity Hospital of Geneva", American Journal of Obstetrics and Gynecology, Vol. LXXIII, No. 3 (March 1957), p. 474.

A.A. Earn reports on a study conducted over an eighteen month period on 190 patients from an antenatal clinic in Leicester General Hospital, Leicester, England. He concluded that two improvements were possible in improving psychological care during pregnancy. First is the abolition of loneliness and anxiety which can result in modern hospitalization. Second, a new and practical tool is needed to eliminate suffering

in childbirth. These improvements were then accomplished by a system based on three fundamentals:

1. The patient was educated in the elementary anatomy of childbirth.
2. The pain threshold was raised by mental concentration.
3. The patient was made aware of analgesic agents and assured that they would be employed if necessary.

Forty patients, all of whom had anxiety about childbirth, underwent the training, and were compared with 100 who had not and fifty who used Reads method; no differences were found in length of labor or complications, but less analgesia was necessary with Barn's group. In brief, the training consisted of teaching the patients to achieve a state of extreme relaxation by strained ocular fatigue and suggestion.[16]

An evaluation of a prepared childbirth program was undertaken by the Department of Obstetrics and Gynecology at Yale. All sixty-two women in the study were primiparas who were first seen by their obstetricians prior to the twentieth week of pregnancy. Prenatal classes were held for these women with the content being mutual topics of discussion, exercises, and relaxation techniques. This study concluded that the type of person who utilizes a prepared childbirth program is more important in determining its effect that the preparation itself. The data from this study did not support previous reports concerning effects of preparation and

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[16] A.A. Barn, "Mental Concentration--A New and Effective Psychological Tool for the Abolition of Suffering in Childbirth", American Journal of Obstetrics and Gynecology, Vol, LXXXIII, No. 1 (January 1962), pp 29-35.

support on the length of labor, reduction of sedation, etc. It was then concluded that the ultimate contribution of prepared childbirth programs in this country will be to help in reversing the trend toward "heavy sedation" and the use of amnesia producing drugs. The did find, however, differences between those who were interested in and attended classes and those who did not in that those who attended were older, better educated, from a higher occupational group and had fewer fears about childbirth.[17]

Chertok has compared the three most widely used methods of prepared childbirth, namely the Read method, hypnosis, and psychoprophylaxis. He found that relaxation was utilized in varying ways in all methods. For some relaxation is passive; others require a more active approach. Nonetheless, it may be thought of as having effects at three levels: muscular, central and psychotherapeutic. There seemed to be no accurate and practical instruments for measuring the degree of muscular relaxation achieved, but central relaxation was brought about by the mechanism of attention, or in Pavlovian terms, by focusing upon a center of cortical activity. Psychotherapeutic relaxation is accomplished through suggestion. The Russian school expresses this in physiological terms (hypnoidal state with heightened suggestibility); the Americans in psychological terms (interpersonal aspects

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[17] Clarence Davis and Frank Marrone, "An Objective Evaluation of a Prepared Childbirth Program", American Journal of Obstetrics and Gynecology, Vol, LXXXIV, No. 9 (November 1962), pp 1196-1206.

of suggestion). Relaxation is practiced during preparation and during labor. During labor, according to the Russian theory, the analgesic effect occurs as a result of posthypnotic suggestion. The Americans maintain the effect results by intrahypnotic effects.[18]

On a theoretical basis, French proponents of psychoprophylaxis maintain that relaxation does not work the same way as in Read or hypnosis. These methods lead to passivity, inhibitory states, and a lowering of the level of consciousness. Psychoprophylaxis advocates activity that raises and maintains the threshold of cerebral sensitivity. However, some express the view that a state of muscular relaxation corresponds neurologically to an inhibitory state.[19]

Fizalkowski has levied several strong criticisms against methods of psychophysical preparation and other methods for the conduct of labor. He states:

> The exclusive concern with the combat of labor became the weak point in psychoprophylaxis as well as in other psychophysical methods. As a result, a hostile attitude toward the methods of pharmacologic anesthesia followed. In practice, furthermore, it is difficult to dispense with the conviction of the necessity of pain, especially when even its denial is continually being spoken of, for the attention of the pregnant woman is thus concentrated upon it.[20]

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[18] L. Chertok, "Relaxation and Psychosomatic Method of Preparation for Childbirth", American Journal of Obstetrics and Gynecology, Vol. LXXXII, No. 2 (August 1961) pp 264-265.

[19] Ibid., p. 264.

[20] Wtodmimiery Fizalkowski, "New Ways of Psychophysical Preparation for Childbirth", American Journal of Obstetrics and Gynecology, Vol. XCII, No. 7 (August 1965), p. 1018.

He also advances the opinion that psychoprophylaxis has made only partial use of the principle that labor is the result of inactivity and lack of participation by the patient. His contention lies in the belief that the suffering of the labor patient has been dealt with, but the complete re-education which should include both the psyche of the woman and the medical approach of the obstetrician.[21]

He continues by pointing out that medicine itself has contributed to the exaggeration of the suffering associated with labor by excluding from the patient's consciousness that important role she can play in protecting her baby during the birth process. This role among the other important topics of prenatal instruction can best be presented in a group situation.

> Pregnant women feel better in a group. They form associations with each other and compete in the correctness of the performance of exercises....[22] The mother who is well prepared plays a superior role in the process of childbirth.[23]

Carl Fromhagen, however, expresses the opinion that few women can be prepared for childbirth solely through indoctrination. He contends that a dependable tranquilizer might produce similar results in allaying fear and anxiety in pregnant women who are psychologically unprepared for natural childbirth.[24]

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[21] Ibid.

[22] Ibid. p. 1020.

[23] Ibid., p. 1021

[24] Carl Fromhagen, "Management of Emotional Disturbances in Obstetrics and Gynecology Patients", American Journal of Obstetrics and Gynecology, Vol LXXXVII, No. 2 (September 1963) p. 184

The mental-hygiene approach has fastened a variety of programs to relieve anxiety and tension in childbirth. However, no published results have demonstrated any significant differences in criteria between women who have had special emotional care and those who had not. These studies were the following: Henry, 1937[25], Fries, 1941,[26] Fries, 1944[27] Zimmerman, 1947,[28] Clay, 1948,[29] Boweby, 1951,[30] Caplan, 1951,[31] Caplan, 1954[32] Caplan, 1957[33].

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[25]G.W. Henry, "Mental Hygiene During Pregnancy", Preventative Medicine, Vol 1:209 (1937) As quoted by Richardson and Guttmacher, p. 26.

[26]M. Fries, "Mental Hygiene in Pregnancy, Delivery, and the Puerperium", Mental Hygiene, Vol XX, (April 1941) pp 221-36.

[27]M. Fries, "Psychosomatic Relationship Between Mother and Infant", Psychosomatic Medicine, Vol. VI, (1944), p. 159, As quoted by Richardson and Guttmacher, p. 26.

[28]K.A. Zimmerman, "Public Health Nurse and the Emotions of Pregnancy", Public Health Nurse, Vol. 39 (1947) p. 63. As quoted by Richardson and Guttmacher, p. 26.

[29]A.S. Clay, "Guidance in Maternal and Infant Care Two Months Before and After Birth of the First-Born", Pediatrics, Vol. II (1948) p. 200. As quoted by Richardson and Guttmacher, p. 26.

[30]B. Boweby, "Maternal Care and Mental Health", World Health Organization Monograph Series, No. 2, (1951), p. 26. As quoted by Richardson and Guttmacher, p. 26.

[31]G. Caplan, "Mental Hygiene Work With Expectant Mothers--a Group Psychotherapeutic Approach", Mental Hygiene, Vol. XXXV (1951), p. 41. As quoted by Richardson and Guttmacher, p. 26.

[32]G. Caplan, "The Mental Hygiene Role of the Nurse in Maternal and Child Care", Nursing Outlook, Vol II, No. 1 (January 1954), pp. 14-19.

[33]G. Caplan, "Psychological Aspects of Maternity Care", American Journal of Public Health, Vol. XLVII, No. 1 (January, 1957) pp. 25-31.

The use of hypnosis was studied by Abramson and Heron. The results reported in The American Journal of Obstetrics and Gynecology, Vol 59, 1950, showed that the use of hypnosis resulted in an average reduction of time of the first stage of labor by two hours and the difference was even more in primiparae. The study used 100 experimental subjects and 88 controls.[34]

Special programs promoting "natural childbirth", educated childbirth, mental concentration, Pavlovian conditioning, et cetera, have yielded a great deal of information. Relaxation is strived for and is accomplished through instruction, exercise, breathing and support by those attending the mother.

The preparation of Dick-Read emphasizes eliminating fear which produces muscular tension and ultimately pain. Thus, alleviating fear would produce a smoother childbirth both physically and psychologically.[35]

Mandy, et al, conducted studies based on Reads method in an attempt to assess the value of the preparation. By comparing almost 400 patients who participated with 400 controls who had not, they found no difference in the length of labor or occurence of complications. [36]

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[34] J.H. Abramson and J.A. Heron, "An Objective Evaluation of Hypnosis in Obstetrics", American Journal of Obstetrics and Gynecology, Vol. LIX (1950) p. 1069. As quoted by Richardson and Guttmacher, p. 27.

[35] G. Dick-Read, Childbirth Without Fear, (New York: Harper, 1953).

[36] A.J. Mandy, et al, "Is Natural Childbirth Natural?", Psychosomatic Medicine, Vol. XIV (1952), p. 431. As quoted by Richardson and Guttmacher, p. 27.

Roberts, et al, conducted classes and compared 1000 women who participated in classes and 3000 who did not. They also concluded that no significant differences were shown in length of labor, maintenance of control by the mother or occurence of complications but that there were differences in the degree of relaxation and amount of analgesia needed during labor.[37]

Van Auken and Tomlinson also compared two groups of women, 200 in each group; one group participated in a preparation for labor program and the other did not. They found that the prepared patients needed less analgesia and anesthesia, had two hours shorter labor, required 17 percent less delivery by artificial means, and 5 percent less perineal trauma.[38]

The Yale Training for Childbirth Program reported by Thoms and Karlovsky, concluded that after studying 2000 deliveries their regime greatly decreased the number of depressed infants at birth, resulted in shorter labors, fewer operative deliveries, less blood loss, quicker recovery, and more satisfied, happier mothers.[39]

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[37] H. Roberts, et al, "The Value of Antenatal Preparation", Journal of Obstetrics and Gynecology of the British Empire Vol. LX (1953) p. 404. As quoted by Richardson and Guttmacher, p. 27.

[38] W.B.D. VanAuken and D,R. Tomlinson, "An Appraisal of Patient Training for Childbirth", American Journal of Obstetrics and Gynecology, Vol. LXVI (1953) p. 100. As quoted by Richardson and Guttmacher, p. 27.

[39] H. Thoms and E.P. Kavlovsky, "Two Thousand Deliveries Under a Training for Childbirth Program; a Statistical Survey and Commentary", American Journal of Obstetrics and Gynecology, Vol. 68 (July 1954), pp. 279-84.

The accumulated evidence from the preceding investigations suggests in general that these programs result in a decreased administration of medication with more spontaneous deliveries, not a drastic reduction in length of labor or complications. Except for the study done at Yale by Davis and Morrone, none investigated the motivation and psychological factors which prompted the women to attend classes, and the possibility that their labors might have been better with or without preparation. Differences were found, but none were of major importance.[40]

> "Much more intensive study of the psychological and social characteristics of participants and non-participants is indicated. Until a control is used which consists of women who would have wished for but have been denied the opportunity of attending classes, the effects of expectant-parent education cannot be conclusively established.[41]

An article by Lee Buxton seems to summarize the preceding material. He states that modern prenatal care up to recent time has neglected a very influential facet in maternal welfare and labor and delivery; the mental and emotional attitude of the pregnant woman. However, progress in anything must come in stages. With the refinements of adequte physical care well established, psychological care can come into

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[40] Stephen A. Richardson and Alan F. Guttmacher, Childbearing -- Its Social and Psychological Aspects. (The Williams and Wilkins Company, 1967), p. 29.

[41] Ibid.

light. This need is rapidly being realized by the increasing numbers of childbirth preparation clinics in this country. Women are becoming better informed and are demanding the preparation hoping to be able to approach the labor and delivery with anticipation, eagerness, and excitement, instead of fear and dread. Certainly every technique reports a truly impressive number of successful cases. Three-fourths or more of the participants of any kind of childbirth preparation have had a successful delivery. It seems that childbirth preparation of any kind is of great psychological value. However, he states two possible objections to prepared childbirth: 1. Time, expense and number of personnel needed. 2. Harm of preparation techniques for emotionally unstable individuals. Both points bring to focus the need for careful assessment of the facilities desiring to carry on the program, and also a sensible evaluation of every patient desiring preparation training.[42]

> Natural childbirth is said to "work." Many claims have been made: anxiety during pregnancy and pain during labor and delivery are reduced; a woman's feelings about herself are improved, as are both her feelings toward and actual reactions with her husband and her baby; the act of childbirth itself is much more positive...[43]

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[42] C. Lee Buxton, "Psychophysical Training in Preparation for Childbirth", as appears in Maternal Health Nursing by Wedell I. Smith and J. William Morre, (Princeton, New Jersey: D. Van Norstrand C., Inc., 1962), p. 18.

[43] Deborah Tanzer, "Natural Childbirth: Pain or Peak Experience?" Psychology Today, reprint, October 1968, p.2.

Why does natural childbirth enable women to effectively control their own labors: What psychological forces are inherent in the preparation? Some promising advances have been made in the field of teaching and learning which can explain these questions. Special techniques have been designed to arrange what are called "contingencies of reinforcement" which are the relations which prevail between behavior on one hand and the consequences of that behavior on the other, with the result that a much more effective control of behavior has been achieved.[44] An organism learns by making changes in his environment. Two recent principles identifying this have been proposed. One is the Law of Effect. This insures that effects do occur and that they occur under conditions which are optimal for producing the changes called learning. Once the reinforcement has been established, the behavior of the organism can be shaped at will.[45]

A second technique permits the maintenance of behavior in given states of strength for long periods of time. Reinforcements continue to be important long after an organism learns to do something, that is long after it has acquired the behavior. Reinforcement is necessary to maintain the behavior in strength.[46]

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[44] B.F. Skinner, "The Science of Learning and the Art of Teaching", as appears in Programmed Learning: Theory and Practice by Wendell I. Smith and J. William Moore, (Princeton, New Jersey: D. Van Norstrand C., Inc., 1962), p. 18.

[45] Ibid., p. 19.

[46] Ibid.

Virginia Sendus states that the behavior and attitude of the prepared patient in the labor and delivery room can be accounted for by basic psychological principles.[47] To do this one needs to identify the primary reinforcement, the responses that are made, and the stimuli that are to function as secondary reinforcers plus the contingencies present.[48]

One basic assumption is needed, that the production of a child and the process of birth, with its associated sights and sounds, act as primary reinforcement for the normal woman. It is a rewarding goal. Thus, previously neutral stimuli will become reinforcing when repeatedly paired with it.[49]

For the prepared childbirth patient, there are repeated pairing of a neutral and reinforcing stimuli as she listens to and reads about childbirth. She learns the sequence of events leading to the goal and the specific responses expected of her. Each response will in its turn produce certain recognizable consequences. Each physiologic change and the feedback from each of her learned responses will become a discriminative stimulus, telling her what to do next and as a secondary reinforcement, rewarding in its own right. The closer each comes to the goal, the more rewarding.[50]

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[47] Virginia Sendus, "An Academic Psychologist Looks at Natural Childbirth", Obstetrics and Gynecology, Vol. XIV, No. 6 (December 1959), p. 820.

[48] Ibid.

[49] Ibid.

[50] Ibid., pp 820-821.

The entire process from the onset of labor to the moment of actual delivery has been a secession of well-prepared responses and anticipated rewards.[51] The author has therefore stated specific implications for training programs for prepared childbirth:

> 1. Each detail of the route to the goal must be foreseen, anticipated, and understood by the patient before it can serve as a secondary reinforcement.
> 2. The patient must be made aware that there are almost as many variations among normal labors as there are normal labors. Therefore, reports of many normal labors shoudl be reported.
> 3. Pain should not be denied. These sensations can function as rewards only if they are foreseen.
> 4. Movies should be used for teaching aids. Multiparas in the class should discuss their experiences.
> 5. Medical personnel must be in attendance to explain deviation as they occur, so the patient can adjust her expectations accordingly. Also, they should keep her informed of her progress.[52]

Various studies have been undertaken to determine mothers' reactions to childbirth classes. A study of 283 primiparas in a metropolitan suburban community was done when their babies were two to three months old. About one half had attended classes, some with their husbands. The classes consisted of six to eight weekly sessions, some with exercises. The interviews to evaluate the classes were structured, and lasted about forty-five minutes. They were administered by carefully but non-medically trained lay persons.[53]

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[51] Ibid., p. 822.

[52] Ibid., pp. 822-823.

[53] Alfred Yankauer, Walter E. Bock, Emma L. Shaffer, and Dorothy E. Clark, "What Mothers Say About Childbearing and Parents Classes", Nursing Outlook, Vol VIII, No. 10 (October 1960), p. 563.

The reactions to the classes are as follows. Forty percent of the mothers who did not attend did not know that there were classes. Another onethird said employment, and transportation prevented them from coming. Only one out of four said they were "too busy" or "did not need the classes". Two thirds thought it would have been an advantage to attend. In general, the mothers valued the class experience. Three fourths of the mothers who attended classes mentioned the class as a good source of information about childbirth, baby care, and pregnancy. One half of these rated it as the single and most important source. More than one fourth thought all parts were valuable. Sixty five percent were unable to name any subjects not covered in class which might have been helpful to them. One half of the mothers at the time of this interview had already recommended the class to other expectant mothers and all but two of the remainder said that they would attend again if given the chance. Mothers valued most the classes which had contributed to the general understanding of what pregnancy, labor, delivery, and baby care would mean to them. They least valued the subject matter of the planned curriculum. They valued most the opportunity to gain a better understanding of themselves and some foreknowledge of what is otherwise a strange experience. They felt that to profit most, they needed to be free to choose their own curriculum and topics for discussion. There is no indication from these data that attendance at parents classes was related to the mother's reaction to their child-

bearing experiences. On the other hand, the classes might possibly have provided those mothers who attended with the extra support not required by those who did not attend.[54]

Implications from this study are:

> 1. Much more needs to be done to relieve women of concerns and anxierties in pregnancy. This should not be done by lectures and advice, but by group discussion and expressing and sharing concerns.
> 2. Mothers should not be left alone while in labor. Professional personnel shouldbe assigned to them and a simple change in visiting rules should bemade.
> 3. Suggestions for classes: adequte publicity as to where classes are to be held, etc.; leaders should be trained in the use of group processes; mothers should choose their own topics and explore them to the extent needed by them; they should have a chance to visit the hospital.[55]

The purpose of a study reported by Koldjeski, was to present an analysis and description of content obtained in unstructured group teaching experiences with antepartal patients. The use of unstructured groups was one approach employed to integrate and apply select mental health concepts in the ongoing public health program.[56]

The concepts of anxiety and frustration were identified as being relevant in working with mothers in the antepartal period. Nursing approaches were based on the reduction and use of anxiety to promote new learning. The unstructured group experience was selected as one approach in which the mother could express feelings in a non-judgmental setting and through talking out suggestions and reassurance, would become better able to handle the stresses encountered in

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[54] Ibid., p. 564.

[55] Ibid., p. 565.

[56] Helen Dixie Koldjeski, "Concerns of Antepartal Mothers Expressed in Group Teaching Experiences and Implications for Nursing Practice", ANA Clinical Sessions, 1966, (New York: Appleton Century-Crofts, 1967), p. 117.

everyday family living. The participants were Negro mothers from the lower socioeconomic class. The four major categories of expressed concern were: 1. Information concerning antepartal problems, labor and delivery. 2. Information about anatomy and physiology. 3. Fears and anxiety related to labor and delivery. 4. Information relating to baby care and family management.[57]

Fears of labor and delivery was the most frequently introduced topic by the mothers. Seventy eight percent of the fifty four topic introductions on this subject were initiated by the mothers, while twenty nine percent were by the nurse. Information relating to baby care and family management was introduced in a frequency of seventy one percent of forty one topic introductions by the nurse and twenty nine percent by the mothers. Of the forty four topic introductions about antepartal problems, labor and delivery, fifty four percent were by the mothers and forty six percent by the nurse. Information about anatomy and physiology was introduced sixty three times, forty six percent by the mothers and fifty four percent by the nurse. These data indicate that mothers in group teaching experiences tend to select topics that are self-oriented. Both categories, "fear and anxiety about labor and delivery" and "information on antepartal problems, labor and delivery" included topics related directly to experiences and situations in which mothers would participate

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[57] Ibid.

in a personal and deeply involved manner.[58]

Implications for health teaching with antepartal mothers are that the purposes need to be evaluated in terms of the patient's fears and anxieties, and that she is more concerned about talking about herself than she is about learning the techniques of being a parent. This means that those who teach the classes need the knowledge and ability to use interpersonal relationships in order to counsel these mothers.[59]

Nurses very often are the ones who teach the antepartal instruction, whether it be Lamaze, prenatal classes, parent's classes, etc., and it is a nurse who has most intimate contact with the patient during her labor, delivery, and hospital stay. Since this paper is oriented toward nursing, a discussion of the nurse's role with the laboring patient who has had childbirth preparation is essential.

Nursing has an integral role to play in aiding the lavoring patient who utilizes the Lamaze method. The patient in labor is in a stressful situation. "Any agent that demands an increased vital activity automatically elicits a nonspecific defense mechanism which raises resistance to stressful agents."[60] In this case, pain and associated tension and fear is the stressful agent. However, Lamaze provides a specific activity designed to deal with it. But support from all those who come in contact with her is essential.

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[58] Ibid., p. 121.

[59] Ibid., pp. 122-123.

[60] Hans Selye, "The Stress Syndrome", American Journal of Nursing, Vol. LXV, No. 3 (March 1965), p. 98.

A great deal of literature exists on pain and many concepts have been formed which lead to reasons for individualizing nursing care.[61]

Four primary concepts of pain are:

1. A feeling state which is opposite of pleasure.
2. The result of strong stimulation of any sensory mechanism.
3. A sensation having its own specialized neural mechanisms.
4. A complex phenomenon involving both a feeling state and a sensation with its own properties.[62]

The last mentioned, more complex view of pain exists primarily today due to the influence of other disciplines such as sociology, psychology, anthropology, and psychiatry. All are known to have direct influence on one's perception and response to pain.

Bender reports on two consecutive and related studies undertaken to test the relationship between supportive nursing care during labor and the incidence of intrapartal vomiting.[63] One of her conclusions was that the nurse provides "guide wires" for the patient, giving of both her physical and emotional strength.[64]

It has been said that natural childbirth mothers need no help in labor, and that the nurse may in fact be intruding. This only leads to fear among patients and resentment among the nurse. [65] The intent of supportive nursing care

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[61] Mary Angela B. McBride, "'Pain' and Effective Nursing Practice", ANA Clinical Sessions, 1966 (New York: Appleton Century-Crofts, 1967), p. 76.

[62] Ibid.

[63] Ibid.

[64] Barbara Bender, "A Test of the Effect of Nursing Support on Mothers in Labor", ANA Regional Clinical Conference, 1967, (New York: Appleton Century-Crofts, 1968), p. 171.

[65] Ibid., p. 172.

should be to provide an environment wherein the patient can express her feelings freely and the nurse can discover the meaning of the patient's behavior. Only then can she help the patient modify her behavior in relation to the labor process.[66] In natural childbirth, the nurse becomes a "link to the outside world" for the patient and her husband. This family becomes consumed with the task of giving birth, thus tending to withdraw. However, after the experience, they are very very expressive, sometimes to the point of being overwhelming.[67] These parents who have educated themselves in the childbirth process are idealistic.[68] They have learned how one's body can be controlled so that childbirth need not be the painful experience of others. Also, since the advantages of natural childbirth are spread a great deal by "word-of-mouth", the experiences of future parents will be affected by those in the present. Therefore, nursing can help in a variety of ways:

> 1. The attending nurse can familiarize herself with the various methods of prepared childbirth. She should find out what method the parents have chosen and what their expectations are.[69]

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[66] Florence Hoff, "Natural Childbirth, How Any Nurse Can Help", American Journal of Nursing, Vol. LXIX, No. 7 (July 1969), p. 1451.

[67] Bender, "Nursing Support", p. 173.

[68] Hoff, "Natural Childbirth", p. 1451.

[69] Ibid.

2. Friendly acceptance of the patient, her husband, and their method are of great importance. She hopes to be deeply involved and participating in the birth of her child, and needs support to accomplish her goals.[70]

3. Information as to the patient's progress should be freely given since it is the patient's guide to her activity and breathing patterns.[71]

4. "Emotional support is the central core of the nurse's role in natural childbirth."[72] She can do this either by supporting the husband, thus indirectly supproting the mother; or she can do it directly through backrubbing, coaching her on breathing assurance, etc.

If the nurse has established good rapport with the patient during admission and early labor, she can provide emotional support even at interrupted intervals, if necessary, because she is a person in whom the patient feels confidence and in whom she can trust.[73]

Flora Hommel reports on nurses in private practice as montrices, a professional who is trained to give support in the Lamaze method.[74] She has trained about thirty five nurses in the Detroit area in the Lamaze Method. After training them, they are then assigned to hospitals to assist patients in labor.

The training program required for those wishing to teach Lamaze and attend patients in labor is:

1. Attendance at an entire series of six classes given to expectant parents.

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[70] Ibid., pp. 1451-1452.

[71] Ibid., p. 1452.

[72] Ibid.

[73] Ibid.

[74] Flora Hommel, "Natural Childbirth--Nurses in Private Practices as Montrices", American Journal of Nursing, Vol. LXIX, No. 7(July 1969), p. 1447.

2. Attending a series of six sessions, two to three hours each, scheduled over three days. These sessions include:

a. A lecture by the obstetrician on the complications of labor.

b. Principles and techniques of psychoprophylactic method as applied to normal labor.

c. Discussion of problem labors with consideration of physical and psychological aspects and techniques of coaching.

d. History of the method, the program, and its development.

e. Discussion of statistics and their collection with analysis of the form the monitrice is to fill out and discussion of the public relations role of the monitrice.

f. Practice sessions, testing the monitrice on her performance in subsequent labors and deliveries.[75]

These monitrices have been found to have gained excellent rapport with the patients, husbands, and staff. The staff especially knows that her presence assures care for one woman, should they become too busy to give the attention they would like to.[76]

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[75] Ibid., pp. 1448-1449.

[76] Ibid.

PART II

Chapter 3: HYPOTHESES

Chapter 4: METHOD

Chapter 5: RESULTS

Chapter 6: ANALYSIS OF DATA

CHAPTER 3

HYPOTHESES

1. The Lamaze method provides effective preparation for labor in those women who choose to utilize it.

2. Each self-determined action by the mother is positively reinforcing.

3. "Success" is not dependent upon absense of pain, but on the feeling of satisfaction gained.

CHAPTER 4

METHOD

It was concluded by this author that in order to obtain significant research data, independent findings should be sought. Three Lamaze teachers were contacted, two in the Bloomington-Normal areas, and one in Peoria. A list of eighty six names and addresses was compiled. These names were of women who had participated in the Lamaze preparation and had delivered. The list of those in the Bloomington-Normal area was complete; however, the list from Peoria was not. This was due to the fact that some of the women had since moved and left no forwarding address. All the Lamaze classes consisted of a six week training session following the format mentioned earlier.

A questionnaire was then written which asked twenty six questions. It was structured so as to obtain sufficient background data, yes and no answers to specific questions, and also subjective responses. These questionnaires were intended to remain anonymous; however, many respondents did sign their names.

A total of eight questionnaires were sent out in late November, 1969, to be returned by December 15, 1969. Of these eighty, three were returned due to a change of address with

no forwarding address available. Therefore, seventy seven questionnaires were actually received by the women, and of this sample, sixty nine were returned. A second set of six questionnaires were sent out in early January 1970 to be returned by January 16, 1970. This second mailing was necessary to accomodate those who were due to deliver, but had not as of the time of the initial mailing. Of these six, three were returned. This gave a total of eighty three questionnaires sent out, and a return of seventy two, a percentage of 86.75 percent.

CHAPTER 5

RESULTS

The results are as follows:

1. All respondents answered the first question asking age. The range was from 21 to 45 years with 25.85 being the mean.

2. All 72 respondents answered question 2, Date of delivery. The dates of delivery ranged from March 16, 1968 to December 22, 1969. It was felt that recent experience with the method would yield the clearest and most accurate responses.

3. There were 71 responses, 98.61 percent of the total, to question 3, asking number of previous pregnancies. 39 (54.93 percent) were primiparas; 32 (45.07 percent) were multiparas.

4. There were 71 responses (98.61 percent of the total) to question 4 concerning number of living children. The mothers had an average of 1.49 living children.

5. There was 100 percent response to the question, "Have you had any previous children useing the Lamaze method?" 71 (98.61 percent) never used Lamaze before, and 1 (01.39 percent) had used the method.

6. Question 6, "Have you used any method other than Lamaze?", was answered by 100 percent of the women, with 70 (97.22 percent) having never used a method other than Lamaze previously, and 2 (2.78 percent) having used other methods.

7. a. There was 100 percent response. 51 (70.83 percent) said they attended all sessions of the Lamaze classes. 21 (29.17 percent) did not.

b. Of the 21 who did not attend, 19 (86.36 percent) responded to part b, "If not all, which ones did you attend?" 10 (52.63 percent) attended sessions 1 through 5. 2 (10.53 percent) attended 1 through 4. 2 (10.53 percent) attended 1 through 3. 2 (10.53 percent) missed 2 sessions, 1 and 6. 1 (5.26 percent) missed session 2. 1 (5.26 percent) missed session 1. 1 (5.26 percent) missed session 3.

The sessions were as follows:

Session 1: Introduction, objectives, theory, and goals of Lamaze, theory of conditioning, anatomy and physiology of pregnancy, labor, and delivery, explanation of the stages of labor, and the husband's role.

Sessions 2, 3, and 4: Neuromuscular exercises, relaxation and breathing techniques.

Session 5: Tour of the obstetrical unit , talk by couples who had used the method.

Session 6: Review, practicing of all exercises, breathing, etc.

c. 67 (93.06 percent) responded to, "When did you attend the sessions?" The sessions were attended from April 1968 to November 1969.

d. 70 (97.22 percent) responded to the question, "Did you attend any additional sessions?" 42 (60 percent) attended additional session; 28 (40 percent) did not.

8. 72 (100 percent) responded to question 8, with 66 (91.66 percent) saying that had practiced the exercises as recommended, and 6 (8.34 percent) saying they did not.

9. a. 72 (100 percent) responded to the question, "Did you use slow chest breathing in the beginning of your labor?" 59 (81.94 percent) responded to theaffirmative. 13 (18.06 percent) said they did not.

b. Of the 59 who did use slow chest breathing, 40 (67.80 percent) combined it with effleurage, and 19 (32.20 percent) did not.

10. 71 (98.61 percent) responded to question 10. 66 (92.92 percent) said they did use panting breathing, and 5 (7.05 percent) did not.

11. a. 72 (100 percent) responded to the question, "Did you use accelerated and decelerated breathing?" 55 (76.39 percent) did and 17 (23.61 percent) did not.

b. Of the 55 who did use accelerated and decelerated breathing, 38 (69.09 percent) combined it with effleurage and 17 (30.91 percent) did not.

12. 71 (98.61 percent) responded to "Did you use transitional breathing?" 61 (85.92 percent) did and 10 (14.18 percent) did not use transitional breathing.

13. a. 72 (100 percent) responded to "Was it necessary for you to act against the pushing reflex until you were instructed to push?" 37 (51.39 percent) found it necessary, and 35 (48.61 percent) did not.

b. Of the 37 who found it necessary to act against the pushing reflex, 34 (91.89 percent) were able to do it, and 3 (8.11 percent) were not.

c. 61 (84.72 percent) answered, and 57 (93.44 percent) said pushing brought relief and 4 (6.56 percent) said it did not.

14. 60 (83.33 percent) responded to, "Could you relax the pelvic floor to aid the delivery?" 50 (83.33 percent) could and 10 (16.67 percent) could not.

15. a. 69 (95.83 percent) responded to, "Did you at any time during you labor experience pain?" 63 (91.30 percent) experienced pain, and 6 (8.70 percent) did not.

b. Of the 63 who did experience pain, it was dur- the following times:

During transition	29	46.03	percent
With all contractions	10	15.87	"
Early labor before transition	6	9.52	"
Pushing and delivery	5	7.94	"
When distracted (preping, checking dilatation)	4	6.35	"
When lost control	3	4.76	"
When did not breathe with contraction	3	4.76	"
When could not relax	2	3.18	"
Before husband's support	1	1.59	"

c. Of the 63 who did experience pain, 61 (96.83 percent) responded with the following methods to counteract pain:

Breathing patterns	33	54.10	percent
Relaxation	25	40.98	"
Husband's support	15	24.59	"
Concentration	7	11.48	"
Medication	4	6.56	"
Change of position	4	6.56	"
Effleurage	2	3.28	"
Anesthesia (complications)	1	1.64	"

The above results were mentioned singly and in combination.

d. 60 (93.65 percent) responded to, "Did these actions bring relief?" 54 (90.00 percent) said yes; 6 (10.00 percent) said no.

16. 71 (99.61 percent) responded to, "Were you able to determine the progress of your labor and initiate the proper activity?" 57 (80.28 percent) were able to, and 14 (19.72 percent) were not able to.

17. a. 68 (94.44 percent) responded to, "Were you able to follow the directions of your husband?" 65 (95.59 percent) could and 3(4.41 percent) could not.

b. 71 (99.61 percent) responded to, "Were you able to follow the directions of the nurses?" 61 (85.92 percent) could follow the directions, and 4 (5.63 percent) could not. In combination with this answer, 6 (8.45 percent) added comments such as "Nurses gave no help", "No directions", "Wrong directions", "Acted as if they resented Lamaze".

c. 69 (95.83 percent) responded to, "Were you able to follow the directions of your doctor?" 67 (97.10 percent) could follow the doctor's directions; 2 (2.90 percent) had no doctor present for the birth, or he offered no help.

18. 70 (97.22 percent) responded to, "Could you maintain control of your activity?" 62 (88.57 percent) could and 8 (11.43 percent) could not.

19. 71 (98.61 percent) responded to, "Could you maintain control of your breathing patterns?" 63 (88.73 percent) said they could, and 8 (11.27 percent) said they could not.

20. 70 (97.22 percent) responded to, "Were you able to rest between contractions?" 64 (91.42 percent) could rest;

6 (8.58 percent) could not.

21. 71 (98.61 percent) responded to, "Were you able to breathe normally between contractions?" 70 (98.59 percent) said they could; 1 (1.41 percent) could not.

22. 69 (95.83 percent) responded to, "Were you able to consciously relax?" 63 (91.30 percent) could; 6 (8.70 percent) could not.

23. 71 (98.61 percent) responded to, "Through yours experience with the Lamaze method, do you conclude that you were able to actively participate in the labor process?" 100 percent concluded that they were able to actively participate.

24. 72 (100 percent) responded to, "Are you satisfied with your experience?" 66 (91.67 percent) were satisfied; 6 (8.33 percent) were not.

25. 72 (100 percent) responded to, "Would you recommend the Lamaze method to a friend?" 72 (100 percent) answered to the affirmative.

26. Question 26 provided the respondent with an opportunity to express any additional comments about her experience. Some very prominent trends became evident from these comments.

Praise for the method was foremost in these responses. One woman commented that Lamaze was "the only way to go". Another stated she "could stand ten more labors, but no more children!" The reasons for this praise were mainly from the fact that the mother felt she was awake and aware and fully participating.

One respondent claimed the "success factor" in her labor was the participating role of her husband. The importance of husband coaching and involvement was stressed consistently by the respondents.

The majority of the comments also contained detailed accounts of the course of labor and what techniques the woman used and why. They also mentioned how they could have performed better in labor. Others stated they should have practiced more.

Many stressed the wonderful feeling of closeness and fulfillment they felt when the labor process was shared by the husband and wife. They regreted that the husbands were not always able to be allowed in the delivery room, and expressed the hope that soon this would be changed. Some also felt it was very important for more doctors and nurses to become familiar with the method. They hoped that the method would spread and one felt that it should be required for all expectant parents.

In terms of pain relief, they stated that they experienced pain, but Lamaze enabled them to cope with their pain and turn it into useful activity.

The mothers felt they were well prepared by the classes; they knew what to expect, and how to handle it. They also felt the method was more beneficial to the baby and expressed delight at the healthy cries and pink skins they observed at birth.

CHAPTER 6

ANALYSIS OF DATA

This author concludes that the Lamaze method is gaining acceptance rapidly and will continue to do so in this area. The respondents are very enthusiastic about the method as evidenced by the large percentage of questionnaires and by their 100 percent "recommendation to a friend".

Age appears to have an important relationship to interest in Lamaze with younger women comprising the classes. But primiparas only outnumbered the multiparas by five. The family size appeared to be small, possibly indicating more time for the mother to attend classes.

Interest appeared to be maintained throughout the sessions with the majority of women attending all the sessions. Of those who missed the sessions, the classes they missed were not detrimental to their functioning in labor. It was interesting to note that so many practiced as recommended and practice was mentioned as a very important factor in influencing ones outcome with the method.

The results also indicate individual differences and preferences of patients and shows the diversity of the method. A certain technique need not be used for a particular phase of labor, but can be interchanged or omitted if desired.

In general, the results show that Lamaze preparation was beneficial for those who utilized it. The majority of the results were heavily weighted to one side or the other which showed the influence of the class preparation. The results reflected the class content and the women seemed to perform in labor in accordance with the class material.

It is also notable that relief was obtained by such a large majority. It was interesting that such actions by the personnel as preping, checking dilitation, etc., distracted the women and interrupted their concentration. This shows the important role of mental concentration. To allay their pain, they employed a variety of methods with breathing patterns, relaxation and husband's support heading the list. A very promising result from this study is the large proportion who obtained relief from pain and who felt a large measure of satisfaction with their efforts.

Determining the progress of their labors which is integral in childbirth preparation and so important to the mother's ability to initiate activity was achieved by the majority. They could follow instructions of those around them. However, the response of some to the nursing personnel was somewhat surprising. The figures also show control was maintained both of activity, breathing, and relaxation. Very notable are the answers to the last four questions, showing the success of the mothers.

PART III

Chapter 7: SUMMARY AND CONCLUSIONS

CHAPTER 7

SUMMARY AND CONCLUSIONS

The results show that the respondents have utilized the method and techniques as taught in the six week course, and they have made adaptations to fit their own particular needs and labors. They considered their experience to be one of active participation and one with which they can truly be satisfied.

This sample showed that Lamaze does offer significant preparation for those willing to utilize it. Labor contractions were interpreted accurately and as signals to begin a specific breathing pattern which brought a variety of results. These actions were reinforcing to the mother. This study also clearly shows that feelings of success were measured in terms other than relief of pain, such as husband and wife team work, being awake and fully participating, and being able to remain in control.

Although this sample was small, it did show that the Lamaze technique did provide preparation, the majority being effective for this group of women. Each technique was explored as to the woman's use of it and response to its effectiveness. The preparation for this group did provide

for active participation on the part of the laboring patient.

The results show that the techniques employed brought the desired results in a majority of these patients.

Further areas which could be explored in the field of Lamaze are the husband-wife relationship in labor, staff reactions to Lamaze patients, and how they perceive their role with them, and class content and teaching methods.

Other areas for research:

Biochemical and physiological aspects and or alterations in the mother during resulting labor from childbirth preparation.

Motivation of mothers who take classes.

Socio-economic and cultural characteristics of those who utilize prepared childbirth as compared to those who do not. Is there any significance in the performance in labor?

Specific recommendations which can be made are: Class content should be maintained at a high quality with use of visual aids, class discussion of mutual interest topics, practice sessions, etc. Lamaze should be included more extensively in nursing curriculums and a thorough knowledge of the goal and objectives of childbirth preparation should be taught to insure the needed support to patients in labor.

APPENDIX

The following brief explanations define the terms used in the questionnaire.

The exercises are of two types:

1. Limbering: which improve the mother's physical well being and are not strenuous.

2. Muscle control and relaxation: The mother is taught that relaxation in labor is an active process. They are trained to release totally those muscles that do not take part in the progress of labor. Concentrating intensely on relaxing not only helps a mother maintain her self control, but contributes to the inhibition of pain reception.

The purpose of the exercises is to condition the patient to react instantly to the command "Relax!" by isolating given muscle groups and forcing them to respond.

Breathing techniques are slow chest breathing, accelerated-decelerated, transitional andpanting.

Slow chest is a deep respiration which uses primarily the intercostal muscles. There is lateral expansion of the ribs and a rise and fall of the ternum while the abdominal muscles remain at rest. This breathing is used as soon as the patient feels the need for control.

Accelerated-decelerated actively follows the character of the contraction. It is shallow but increases in rate as the strength of the contraction increases and slows as the intensity decreases.

Rapid superficial breathing or ponting is intercostal, rapid and shallow requiring intense concentrated activity. The whole body including the abdomen is relaxed. Panting is used when the mother is not to push since she can not pant and push at the same time.

Transitional breathing is used at the time when the contractions are most severe. The breathing is faster, slightly deeper and has a more emphatic rhythm. It requires four, six, or eight fast panting breaths followed by a forcible exhalation. This is continued until the end of the contraction.

Effleurage is a massaging technique used to relax tense abdominal muscles during a contraction. [77]

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[77] Ulin, "The Exhilirating Moment of Birth", pp. 65-66.

I am a senior nursing major at Illinois Wesleyan University and am writing a departmental honors paper on the Lamaze method of childbirth. In order to study the method and evaluate its effectiveness, I need responses from women like yourself who have used the method. So would you be so kind as to answer the following questions and return the questionnaire as soon as possible? A self-addressed stamped envelope is enclosed for your convenience. Please return the questionnaire by _____. Thank you very much.

Mrs. Cindy Ketchum

1. Age: _____

2. Date of delivery: _____

3. Number of previous pregnancies: _____

4. Number of living children: _____

5. Have you had any previous children using the Lamaze method? Yes No (Circle the appropriate answer)

6. Have you used any method other than Lamaze? Yes No

7. a. Did you attend all sessions of the Lamaze classes? Yes No

   b. If not all, which ones did you attend?

   c. When did you attend the sessions?

   d. Did you attend any additional sessions? Yes No

8. Did you practice the exercises as recommended? Yes No

9. a. Did you use slow chest breathing in the beginning of your labor? Yes No

   b. Did you combine it with effleurage? Yes No

10. Did you use panting breathing? Yes No

11. a. Did you use accelerated and decelerated breathing? Yes No

   b. Did you combine it with effleurage? Yes No

12. Did you use transitional breathing? Yes No

13. a. Was it necessary for you to act against the pushing reflex until you were instructed to push? Yes No

   b. Were you able to do this? Yes No

   c. Did pushing bring relief? Yes No

14. Could you relax the pelvic floor to aid the delivery? Yes No

15. a. Did you at any time during your labor experience pain? Yes No

   b. If so, when?

   c. What did you do then?

   d. Did these actions bring relief? Yes No

16. Were you able to determine the progress of your labor and initiate the proper activity? Yes No

17. a. Were you able to follow the directions of your husband? Yes No

b. Were you able to follow the directions of the nurses? Yes No

c. Were you able to follow the directions of your doctor? Yes No

18. Could you maintain control of your activity? Yes No

19. Could you maintain control of your breathing patterns? Yes No

20. Were you able to rest between contractions? Yes No

21. Were you able to breathe normally between contractions? Yes No

22. Were you able to consciously relax? Yes No

23. Through your experience with the Lamaze method, do you conclude that you were able to actively participate in the labor process? Yes No

24. Are you satisfied with your experience? Yes No

25. Would you recommend the Lamaze method to a friend? Yes No

26. Any additional comments that you may have:

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