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It was the purpose of this study to design and begin the initial phase of the psychological-sociological segment of the Pregnancy Helping System (PHS) as elaborated by the Pregnancy Helping System staff of the Department of Child Development and Family Relations of the School of Home Economics of the University of North Carolina at Greensboro. There were two projected outcomes of this pilot study: a) an evaluation of the research tool designed for use in the PHS, the Parental Decision-Making Questionnaire (PDMQ); and b) a description of the potential for further elaboration and functioning of the PHS. A description of the logistics and utilization of, reaction to, and evaluation of childbirth education services extant in Greensboro, North Carolina, as of June, 1973, were seen as forming the basis of the study.

Subjects came from three local obstetrical firms and were chosen on the basis of two critieria: a) they needed to be in their eighth or ninth month of pregnancy; and b) they needed to have completed their childbirth education course if they were enrolled in one. Research forms were distributed in the physicians' offices by their receptionists and were either completed there or completed at home and mailed to the researcher in a stamped, self-addressed envelope provided by a co-researcher. There were 13 subjects in the study group.

Outcomes of the study were as follows: a) a general system involving cooperative efforts of research, educative and medical teams in the area of childbirth education need speak to the welfare and immediate benefit of all concerned, and, most importantly, speak to the welfare of the research subject (medical patient); b) the relative awareness of childbirth educative services and materials available in Greensboro seems to have reached a large portion of the obstetrical population, it now being a question of <u>what</u> <u>type</u> of education would best meet their needs; and c) the PDMQ, with noted corrections, has proven to be a valuable instrument in the needs-assessment segment of the sociological-psychological portion of the PHS, especially when used in conjunction with the Physicians' Monthly Summary Report (PMSR).

CHILDBIRTH EDUCATION: A DESCRIPTIVE INVESTIGATION

by

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Approved by

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APPROVAL PAGE

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CHAPTER I

INTRODUCTION

To date, there are three individual psychoprophylactic childbirth training groups extant in the Greensboro, North Carolina, area meeting the educational needs of the community in a rudimentary fashion. Most of these classes are conducted on a monthly basis for those who can afford them, those who are ready to begin training at the time the classes begin, and for those who meet various social requirements. The positive physiological, psychological, and sociological benefits of childbirth training having been established (Bean,1972; Colman and Colman,1971; Hungerford,1972; Tanzer,1967; Grim,1967; Stolz, 1967) it would seem that something more than a haphazard approach is indicated in establishing a comprehensive training program for the Greensboro area.

To bridge the gap between the childbirth education needs of the community, and the programs geared to meet those needs, both in the present and in the future, the Pregnancy Helping System (PHS) for Greensboro was designed and the initial research phases implemented. The basic delivery model was patterned after that suggested by Henderson and Henderson (1972; see Appendix A) with situation-specific adjustments, deletions, additions, and personnel having been added to that paradigm. It was hoped that through a constant flow of systems evaluation

and community needs assessment fed back into the planning and design process for the educational program, a system would be implemented which would coincide closely with the needs of the general obstetrical population in the area.

Purpose

This study was designed to provide the following: a) a description of childbirth education services extant in Greensboro; b) a pilot study of the basic research instrument, the Parental Decision-Making Questionnaire (PDMQ), designed for use in the larger projected research-services system, the PHS; and c) the initial stage of the PHS, that is, to function as the preliminary step of the PHS and as the first evaluative feedback from the sociological-psychological assessment segment of the PHS (see Appendix B). With respect to the PHS, the study indicated both the general nature of the population studied and the potential for the future of the system. Specifically, since the PHS was elaborated without actual functionaries playing an active role in the design of the system, specific systems design, and research instrumentation were untested and, thus, only theoretical. It was the purpose of tnis study to try the PDMQ and the PHS design within the environment for which they were formulated, the subsequent results serving as indicators for the future of both, and delimiting more specifically the boundaries of the general obstetrical educational system.

Justification for the Study

The PHS was designed with one major concern in mind: optimization and individualization of childbirth educative programs in Greensboro. The systems approach was chosen for solving the problem because of the spatio-temporal specific emphasis of its design. Needs assessment and program evaluation formed the foundation for a personalized service system and the constant flow of feedback necessary to insure a changing system to meet changing community needs. Individualization of childbirth education, both on a community level and personal level, requires the cooperation and collaboration of research evaluation teams, education teams, and medical teams, and it was for this reason that a systems approach could be seen as indicated and most likely to produce positive results. More specifically, personalization of service need be optimized, as indicated by Lane and Williams (1966): "The best care will be effective to the extent it has meaning, significance and purpose to the people most intimately involved, the patient and his family." It was believed that the descriptive study at hand would provide the preliminary foundation on which to build an individualized service delivery system.

Questions

The initial study of the PHS, and one which utilized the PDMQ exclusively in its design, was concerned with the following questions: a) to what extent was the obstetrical population in Greensboro prepared educationally for the birth of their

child(ren); b) how did each prospective parent evaluate her particular form of preparation for childbirth; and c) how did each prospective parent feel about being formally prepared for childbirth. Additionally, aside from the preliminary data feedback, the congruency of PDMQ items with information desired, and the functioning nature and potential for the PHS were seen as major functions of the study.

Subjects

The group investigated in the initial study came from the general obstetrical patient population of three local obstetrical firms. The PDMQ was administered to all those pregnant women in their eighth or ninth month of pregnancy. The reason for the selection of such a population was threefold: a) the design of the study indicated the need for as large a number as possible within a given temporal space of six weeks; b) LeMasters (1957) stressed the importance of a prospective study in this area, as did Colman and Colman (1971) who also indicated that the interests of the prospective mother shifted to labor and delivery and the health of the child during the latter part of the last trimester, thus making her most receptive to such an investigation.

Utilization of Data

In answering the first question--to what extent was the obstetrical population of Greensboro prepared educationally for the birth of their child(ren)--three items from the PDMQ

were planned. First, there was a generalized question which was designed to investigate the general social communication milieu of the individual prospective parent (item 8 on the PDMQ). It was designed to elicit, in a simple, straightforward manner, the generalized process of readiness of each subject, including social interaction, educative reading, medical care, and formal classroom training, all of which have a significant impact on consequent individual parental behavior (Stolz,1967). In addition, mass-media influenced preparation was to be assessed in item 15. Finally, the actual form of preparation, whether formal or informal, utilized by each of the subjects was to be elicited in item 11. This item served as both a cross-check of information obtained in items 7 and 8, and as simple baseline data for persons who were formally trained or not.

The second question, a self-evaluation of the individual preparatory process by the subjects, was handled on two levels. First, the effectiveness of the social milieu vis a vis aid in childbirth preparation was to be assessed on two consecutive items. The first question asked whose recommendations were most helpful before and during pregnancy in preparing for childbirth. The second item asked the subjects to rate the effectiveness of the same grouping of persons used in the preceding item with respect to childbirth preparation before and during pregnancy, on a four-point scale. Second, the general

desirability of the individual subject's preparation for other prospective mothers was the target of a later item (item 12). This four-item, forced-choice rating was to be used to assess the general desirability of the various preparation processes by the persons involved, individual-personal needs and general-societal needs not necessarily being congruent. A desirability assessment was provided for each of the preparation processes which, coupled with a spouse cross-expectation item (14, numerically), formed the heart of the community program evaluation segment of the general service delivery system.

Finally, the subjects' evaluation of formal childbirth education as a singular process was to be assessed on a number of levels. First, familiarity with the one formal natural childbirth, maternity-centered education program extant in Greensboro, i.e., psychoprophylactic training, was to be tabulated on a four-item, forced-choice rating scale, the scale providing both dissemination of information feedback, and a third baseline count of psychoprophylactic-trained individuals. Second, again on a four-item, forced-choice question, subjects were to be asked to assess the relative merits of being formally trained by a birth educator. Finally, two items were designed to elicit information as to whether the subjects would take part in a formal training program if it were available (yes or no) and what type of program they would like to see implemented city-wide. From the latter two

components would come the impetus for implementation of a given preparation program, or programs, and the descriptive data for the community needs assessment segment of the delivery system.

CHAPTER II

REVIEW OF THE LITERATURE

In describing the phenomenon of preparation for childbirth one overriding consideration need be kept in mind; pregnancy seems to present a normative crisis situation to the prospective parent, for which preparation procedures of any and all varieties function as coping mechanisms (LeMasters,1957; Caplan, 1957; Bibring, 1959). In this light it was seen that delimiting a descriptive study of childbirth preparation techniques to a breakdown between the various "Natural Childbirth" training programs would in itself present a false dichotomy. That is, preparation may take any form the individual so chooses including, of course, the various forms of "Natural Childbirth" preparation and Red Cross preparation, both being available within the health services framework of Greensboro, North Carolina, as well as any and all types of social-interaction, and self-prepared methods. Rather than duplicate previous research efforts aimed at describing and delimiting the various forms of "Natural Childbirth" (see Tanzer, 1967; Fielding and Benjamin, 1962; Bean, 1972), of "Prepared Childbirth" programs (see Thoms, 1950; Thoms, 1962), of a model Red Cross program (see Nicely et al., 1942), and of emotional support programs in general (see Grim, 1967), it seemed more profitable to limit the review of literature to

the following topics: a) the significance of preparation for parturition, with an emphasis on the importance of prenatal development, and potential for, and significance of, educative incursion of material into the value system of the prospective mother; b) the role of research in delimiting the guidelines of obstetrical social responsibility, and the functional aspects of an optimal community maternal health care delivery system; and c) a cursory description of educative materials and programs available and extant in Greensboro, North Carolina. It need be noted that this research was not geared toward an advocacy of any one faction in the delivery of maternal health care services, but was aimed, rather, at describing certain trends in obstetrics, both country- and world-wide, and in the specific target area of Greensboro.

The Significance of Preparation for Parturition

Preparation for parturition, for clarification purposes, was defined as follows: any and all efforts made by the expectant mother, whether made passively or actively, to help her clarify and cope with her state of pregnancy and its consequent outcomes, labor and delivery, and parenthood, (extreme psychiatric exceptions, as well as extreme physiological dysfunction, notwithstanding). The target of preparation, in any of its forms, seemed to be the alleviation of crisis symptoms, pregnancy being viewed as the crisis provocator. An elaboration of this point, as reviewed in the literature, bespeaks the verity of this contention.

LeMasters (1957) reported on research conducted by him and a group of colleagues which was aimed at describing parental adjustment to the birth of the first child. His working hypothesis that the addition of the first child presented a crisis situation to the social system of the family was born out convincingly in the results of the study conducted among 46 middle-class, unbroken families located in urban and suburban areas, with the father a college graduate and both parents ranging in age from 25 to 35 years, (race and religion were not controlled). The definition of crisis used by LeMasters was adopted from Hill (1950) as "any sharp or decisive change for which old patterns are inadequate", and was broken down on a five-point scale: 1) no crisis; 2) slight crisis; 3) moderate crisis; 4) extensive crisis; 5) severe crisis. The study results were as follows: 1) 38 of the 46 (83%) couples reported "extensive" or "severe" crisis, (in the case of a tie between two opinions, maternal and paternal, the mother's opinion won out); 2) crisis could not be seen as a product of unwanted pregnancies as 35 of the 38 crisis pregnancies were "desired" or "planned"; 3) the quality of the marriage also was not a significant factor as 34 of the 38 were rated by the spouses, and cross-checked with friends as being "good" or better; 4) psychiatric disabilities were similarly ruled out as all couples exhibited adequate personality adjustment; 5) there was little or no preparation for parental roles, each couple maintaining a romanticized perception of parenthood; and 6) women with pro-

fessional training and work experience, 8 of the 38 crisis subjects, registered "severe crisis" each time, a result of two adjustments: 1) they were giving up an occupation which had significance for them; and 2) they were mothers for the first time. The conclusions of the study were as follows: a) prepared parents experienced seemingly less of a crisis situation; and b) educative programs seemed to be indicated which provide adjustmental help as a family makes the transition from marraige to the addition of a child.

Similarly, Caplan (1957) outlined certain critical variables and periods which served as disequilibrating factors with respect to maternal adjustment to pregnancy. That is, psychological upset extant in the first trimester in most instances, usually a function of ambivalence with respect to the pregnancy, was seen as coinciding with consequent physiological upset of the period. In addition, tne usual swings in mood experien ced in later stages of pregnancy which have a basic physiological etiology, could either be coped with when their physiological basis was known, or could function as disintegrative forces if not understood and seen in proper perspective. Increased demands were made on family ties as the woman usually exhibited increased introversion, passivity, and dependency--yet another potential crisis area. Previously unresolved psychological conflicts might also surface in the last two trimesters, adding yet more complications. For a potential resolution, Kaplan asserted:

> "...(Maternity work) is an area where we badly need more research not only to elucidate the dynamics of these important and puzzling changes, but also in order to develop techniques of specific preventive intervention, to explore what types of new specialist service to provide in prenatal clinics, and to determine the most effective pattern of collaboration between psychiatric and nonpsychiatric personnel (1957,p. 31)."

Speaking in more general terms, Bibring (1959) added yet another dimension to the concept of pregnancy as a normative crisis. Specifically, she maintained:

> "Pregnancy, like puberty or menopause, is a period of crisis involving profound psychological as well as somatic changes. In pregnancy,..., new and increased libidinal and adjustive tasks confront the individual, leading to a revival and simultaneous emergence of unsettled conflicts from earlier developmental phases and to the loosening of partial or inadequate solutions of the past. This disturbance in the equilibrium of the personality is responsible for creating temporarily the picture of a more severe disintegration. The outcome of this crisis is of the greatest significance for the mastery of the thus initiated phase... . However, it is well known that these crises are equally the testing ground of psychological health, and we find that under unfavorable conditions they tend toward more or less severe neurotic solutions (Bibring,1959, p. 116)."

Educative programs, she stated further, were a means "of bringing the psychological support in line with the achievements of today's obstetrics (p. 119)."

In conclusion, it could be stated that crisis attending pregnancy was closer to fact than theory, there being seemingly universal support for the contention from all perspectives. Erikson (1953) in discussing general human development wrote:

> "Because of a radical change in perspective, (the author's emphasis), each successive (developmental) step is also a potential crisis (Erikson,1953, p.189)."

Colman and Colman (1971) attested further: "...There is a certain quality of inner experience which seems to be distinctive of the pregnant state and which sets it slightly apart from life at any other time. It seems true that women experience pregnancy as a psychological crisis (p. 6)." Finally, Grim (1967), in a review of literature to 1967, concluded that all obstetrical research indicated two universals of pregnancy: all women had both potitive and negative attitudes toward pregnancy, and all women experienced an increase in anxiety or tension during this time.

Areas of Educative Incursion

What aspects of maternal prenatal adjustment seemed to be most conducive to educative efforts aimed at relieving the crisis of pregnancy? Literature in the area tended to indicate three basic target areas: a) prenatal nutrition; b) emotional adjustment for the mother as she prepares for the coming of the child; and c) preparation for the process of labor and delivery (Bean,1972; Page, Villee, and Villee,1972; Colman and Colman, 1971; Peckham,1969; Grim,1967; Mead and Newton,1967; Goodrich, 1966; Mount Sinai Hospital,1965; Mead,1964; Montagu,1962; Thoms, 1952). Of the three components, only the latter two areas of educative preparation are available in Greensboro and, thus, are dealt with in the review. However, the significance of prenatal nutrition as a potential educative component should not

be overlooked.

Emotional Adjustment for the Mother

In consideration of fetal development as related to the maternal emotional state, Montagu (1962) provided the most concise, comprehensive compendium of literature to date. In citing the Tompkins and Wiehl studies which established ambivalence toward the pregnant state as a possible universal phenomenon, a significant point was made: even in its initial phases, pregnancy tended to be an emotionally-disequilibrating process. Consequent nausea and vomiting were seen in psychogenic terms (Montagu,1962; Page, Villee, and Villee,1972; Colman and Colman,1972; Bibring,1959; Caplan,1957), and, thus, potentially alterable (Montagu,1962): "Childbirth education groups can do much toward improving the emotional state of the mother, and participation in the work of such groups appears to be helpful in reducing the frequency of nausea (Montagu,1962,p. 171)."

Further, although most ambivalence toward being pregnant was ultimately eliminated by the end of the first, and certainly the second trimester, barring severe psychiatric problems (Page, Villee, and Villee,1972; Colman and Colman,1971; Montagu,1962; Mount Sinai Hospital,1965; Grim,1967), emotional crises continually confronted the gravidum as she progressed through the gestation period. Colman and Colman (1971) in their review of maternal-fetal emotional interaction, suggested that just as the embryo-fetus goes through certain specified physiological

developmental stages, the prospective mother goes through various psycho-emotional developmental stages. That is, research tended to indicate (see Caplan,1957; Bibring,1959) the possibility of time-linked psychological processes corresponding to somatic changes in the gravidum and embryo-fetus. More specifically, the pregnant woman's mother, and mother-daughter relationship as daughter ascended to the status of mother, was dealt with in the first, and the early part of the second, trimester; the husband became increasingly significant in the second trimester; labor and delivery were first considered in the first trimester and are basically forgotten until the third trimester when the reality of the gestation process fixes the expectant mother's attention on the birth process and the coming of the baby; and, finally, also in the third trimester, reassurance from the husband became all-important as the prospective mother needed a reiteration of the marital relationship and emotional support to help compensate for a bad body-image (Colman and Colman,1971; Bibring,1959; Caplan,1957; Mead and Newton,1967). Further, Colman and Colman (1971) maintained that pregnancy, as a result of all the sociologically, psychologically, and physiologically disorienting changes experienced by the expectant mother, was an "altered state of consciousness (p. 6)", and that "all pregnant women participate to some extent in this altered emotional state (p. 8)."

Although the posited "altered state of consciousness" attending pregnancy was not seen as a necessarily debilitating,

destructive, deliterious condition, most research indicated the importance of counteracting most, if not all, negative emotional experiences in pregnancy. Montagu (1962) provided a comprehensive review of the emotional aspect of maternal-fetal interaction. A physiological explanation of the research findings of Sontag and associates at the Fels Institute, and various of the other significant researchers in the field of prenatal development, was presented by Montagu as follows:

> "Hormones passing into the conceptus will affect it in varbus ways depending to a large extent upon the stage of development which it has reached, and will have a more or less enduring effect, again, depending upon the stage of development at which the hormones are introduced into the conceptus (1962, p.198)."

Further, in concluding his remarks as to the significance of maternal emotional disturbances of fetal development, Montagu maintained:

> "...The effect wrought upon the conceptus will depend upon a multiplicity of other factors, such as stage of development, genotype, maternal health, nutrition, and the like. We have seen that during the organ-forming period of development, in the second four weeks, there is evidence that maternal emotional disturbances may even affect physical development. Maternal emotional disturbances at later stages of development may play a role in such functional physical changes in the fetus as peptic ulcer and pyloric stenosis, but of this we cannot at the present time be certain. It is, however, reasonably certain that in some cases maternal emotional disturbances are capable of producing a hyperactive fetus and a hyperirritable baby. What, if any, enduring aftereffects the fetus of an emotionally disturbed mother may suffer remains a question. Maternal attitudes, whether of acceptance, rejection, or indifference to their pregnancy, may well spell the difference, in some cases, between adequate and

inadequate development of the fetus (Montagu,1962,p. 215)."

In a speculative vein along similar lines, Grim (1967) stated:

> "...It is interesting to speculate whether, for example, hyperemesis gravidarum might be primarily a response to fear, and toxemia primarily a response to anger.
>
> ...There is another possible 'mechanism' linking psychological and physiological reactions in pregnancy. This is actually a third variable--namely, the influence of psychological factors on voluntary activities and, in turn, the effect of voluntary activities on physiological functioning. For example, do a woman's attitudes toward pregnancy or emotional reactions influence her posture; her diet, smoking, or drinking; how soon she visits a doctor for prenatal care; how well she takes care of herself during pregnancy; the degree to which she exposes herself to risk of accident; and the extent to which she indulges in self-medication? None of these possible relationships has actually been systematically studied (1967, p. 37)."

It would seem that emotional support systems for the prospective mother are critical to optimal development, both of the mother and embryo-fetus.

Peckham (1969) posited that in the prenatal stage of a mother's development, among various other factors critical to optimal maternal care, was "provision of appropriate emotional support and childbirth education with opportunity for sympathetic and intelligent counseling on matters of parental concern (p. 866)." Frank (1966) delineated the significance of optimal prenatal care in definitive, quantitative and qualitative terms:

> "In view of the large and increasing cost in terms of professional personnel, facilities, and equipment and specialized institutions to care for the infants who are premature, handicapped and impaired, and who require special and sometimes prolonged treatment as infants, and frequently for years thereafter, the need for a comprehensive program of preconceptual and prenatal supervision and care cannot be exaggerated. Such a program would not only reduce the continually rising expenditures by government and private agencies, but more importantly would foster healthier infants, and thus contribute to our national well-being (Frank,1966, p. 25)."

Preparation for Labor and Delivery

In consideration of the final area of potential prenatal educative incursion, preparatory programs for labor and delivery, it would seem that, unlike the other two areas of concern, the demand has preceded the supply. That is, for the most part, it has been the prospective mothers who have demanded preparatory training of some variety (Karmel,1959; Haggerty, 1973; Bean,1972), with certain notable exceptions (Thoms,1950; Dick-Read,1950; LaMaze,1958), rather than specific training programs being developed prior to demand. The expectant mother's concern with labor and delivery , which is heightened in the last trimester (Colman and Colman,1971) has three major components which work as a team: fear, tension, and pain (Dick-Read,1950). More specifically, in Dick-Read's words:

> "The fear of pain actually produces true pain through the medium of pathological tension. This is known as the Fear-Tension-Pain syndrome and, once it is established a vicious circle demonstrating a crescendo of events will be observed for, with the true pain, fear is justified and, with mounting fear, resistance is strengthened. The most contributory cause of pain in otherwise normal labor is fear (Dick-Read,1959,p. 46)."

Although the etiology of pain in childbirth is debatable (Fielding and Benjamin,1962), systems geared toward the management of pain are of two basic types: physiologically-oriented programs of anesthetics and analgesics, which chemically deaden, alter, or eliminate pain (Epstein and Sherline,1972; Willson, 1972; Greenhill,1960); psychologically-oriented programs, which concentrate on breaking the fear-tension-pain syndrome described by Dick-Read through highly proscribed training programs (Bean, 1972; Grim,1967; Tanzer,1967; Fielding and Benjamin,1962; Karmel,1959; LaMaze,1958; Dick-Read,1959). Obstetrical texts abound with literature specific to obstetrical anesthesia/analgesia, the relative merits of which being debatable and debated (see Haggerty,1973), although, speaking in terms of optimizing human developmental potential, delimiting the best anesthetic/analgesic methods would tend toward those methods which would have the least physiological impact on the fetus and mother (Montagu,1962). The decision as to utilization of methods of anesthesia/analgesia rests in the obstetrician's hands, and rightfully so. It should be noted, however, that only certain methods extant meet the optimization-of-potential criterion (see Epstein and Sherline,1972; Melzack,1973).

With respect to psychologically-oriented programs of pain control, there seems to be growing, <u>albeit</u> grudging, acceptance of the positive effects of such programs within the medical ranks (Grim,1967; Haggerty,1973; Miller,1971). Although there have been a number of such programs since the turn of the cen-

tury, as Grim (1967) points out, there are at present only two major schools of thought in the area, the Read school of "Natural Childbirth" and the LaMaze school of psychoprophylactic training (see Bean,1972). Emotional ambivalence seemed to surround the topic of "natural childbirth" in whatever form it appeared, as zealots have developed, pro and con. From a physician's vantage, optimal management of labor and delivery could take many forms, certainly including the component of psychological training, but definitely including whatever element he/she felt to be critical for the life and well-being of the parturient mother and neonate (Fielding and Benjamin,1962; Asch, 1965). The advocate of "natural childbirth" techniques, (psychoprophylaxis included), often maintained that it was the woman's right to experience childbirth as a natural phenomenon (Haggerty,1973). Asch (1965) summarized the situation as follows:

> "...A delivery is not an operation. What is desirable in surgery--quick and painless removal of pathology--might not be the procedure of choice for delivery. Pregnancy is not a disease, and childbirth not the termination of a pathologic state... . On the other hand, some of the proponents of natural childbirth go to the other extreme. They put the stamp of 'normal' on every woman and on the process of pregnancy and delivery to such an extent that <u>any</u> kind of interference must be considered adverse to the woman and her delivery (p. 487)."

In assessing the effects of psychological training on consequent labor and delivery Grim (1967) presented a somewhat pessimistic view:

> "The accumulated evidence..., although sometimes contradictory, suggests in general that length of labor and occurence of complications are probably not much affected by programs of preparation or education but that less medication is given and spontaneous delivery is more likely (Grim,1967, p. 29)."

Tanzer (1967) made a more optimistic appraisal of the effects of "natural childbirth" programs:

> "...From the psychological point of view, the picture we examined of the way in which a medicated woman typically goes through labor and delivery would not seem to have much to recommend it, in terms of psychological health. It is more in our province to prefer feelings of coping, succeeding, rapture, joy, excitement, and sharing to feelings of thrashing, moaning, groaning, screaming, or even snoring. And erasing of memory of the latter types of feelings--which we saw ourselves often works insufficiently--would hardly seem to make up the difference. An experience which is subjectively more positive and which is shown to promote growth and healthy functioning as well, perhaps should become more 'what the doctor ordered'. Certainly the psychologist might order it (pp. 421-422)."

Additionally, in Appendix B, Tanzer (1967) presented "Physiological and Biochemical Studies of Effects of the Psychoprophylactic Method", which listed fifteen benefits accruing to women trained by the psychoprophylactic method, including less blood loss, stronger contractions, lower frequencies in prematurity, neonatal asphyxia, stillbirth, and toxemias of pregnancy, and more rapid puerperal normalization of uterine, bladder, intestinal, and especially mammary function. Finally, Hungerford (1969) in an evaluative vein, did not contend with the forces pro or con <u>vis a vis</u> psychological or physiological effects, but presented a summary picture of the etiology and fu-

ture of childbirth education programs:

> "In the past decade, childbirth education has grown in many ways. What was labelled a fad in the fifties has gained the respect of both laymen and professionals, supporters of childbirth education, expectants, parents and grandparents, physicians, nurses, hospital administrators, public health personnel, and educators, now constitute a sizeable and influential minority.
>
> ...Our protests over bad obstetrical practices, forced medication, insensitive treatment of parturients, rejection of husbands, separation of newborns from their mothers, and artificial feeding of infants have been heard. An enlightened public has been insisting upon changes in hospital procedures and many hospitals have responded (Hungerford,1969, p.1)."

Obstetrical Social Responsibility and the Functional Aspects of an Optimal Maternal Health Care Delivery System

Obstetrical services, unlike most other areas of medical service, are experiencing an interest in evaluation of services provided. Certainly, the more prurient aspects of self-evaluation of any profession are painful and basically non-inclusive due to their self-generated geneses, that is, no one is going to cut his or her own throat. However, it should be noted that obstetrics is in a state of self- and non-self-generated evaluative flux. Miller is a major proponent of change from within the obstetrical ranks:

> "Security in our obstetrical suites is coming to mean hooking every baby up to a continuous EKG machine, catheterizing scalp veins for frequent pH determinations, continuous epidural anesthesia--making certain of course that proper equipment is at hand for treatment of respiratory arrest or cardiac arrest or whatever other complications may arise. Security is coming to mean a Caesarean section rate of 10-to-12 percent in many of our hospitals. Compare that to Holland, where their perinatal mortality

> is better than ours and where only obstetrical complications are cared for in hospitals, yet their Caesarean section rate is about 2 percent. Security for years has meant separation of mother and baby for 24 hours, and now more and more it means transferring babies to infant Intensive Care Units at the slightest suggestion of trouble where all manner of remarkable and esoteric treatments go on. The mother and father are included in this treatment only at the cashier's window where they are presented with the bills. Security means doing everything humanly possible to discourage breast feeding, so that 'we will know' what the baby is getting. Security means making sure the patient has her bill paid by the seventh month.
>
> I do not mean that we should scrap all of our sophisticated technology. I do suggest that if we are to begin thinking of the quality of life as it applies to obstetrics, nothing will do short of a total revolution of the hospital routines, attitudes, and methods as they apply to over 90 percent of patients. Is it any wonder that young people by the score are bypassing the hospital altogether, saying in effect that they will take a chance on dying of natural causes rather than subject themselves or their babies to this kind of care?
>
> It is indefensible today for a doctor to allow his patient to reach the end of pregnancy without some degree of prenatal education. It is indefensible today for any hospital people, admitting clerk, maid, orderly, nurse, intern to treat a young couple in labor with anything less than all the friendliness, compassion, respect, patience borne of their knowledge that to this particular couple, this particular adventure, labor, child is the most important and meaningful experience of their life. There is no reason today for any woman to be separated from her husband during labor and delivery unless she or he wishes it that way. There is no reason today for a mother and baby to be separated in the hospital unless one or the other is ill. The central nursery for the care of well babies is as obsolete as a Model T--a comment made in substance by Dr. Thaddeus Montgomery twenty-five years ago, and still not heard (Miller,1972, pp. 87-88)."

Romano (1965), in a similar, but less critical vein, assessed the state, and potential directions, of obstetrics as follows:

> "The moment is propitious. In a sense it is a time of crisis. Justice Douglas reminds us that when the Chinese write the word 'crisis', they do so in two characters, one of which means 'danger' and the other 'opportunity'. If we have learned our lesson properly, we know that we must act intelligently and appropriately at a moment of crisis. It appears to me that at one extreme the profession may choose to become more restrictive, in a sense more technical and manipulative. At the other, it may point toward the larger dimension of a science of womankind. What will happen will depend in great part on which the leaders in this profession decide. Much will depend, too, on the image presented to young students and to those attracted to join the specialty in the exciting years to come (pp. 198-199)."

Zarate (1966) maintained that it is the full responsibility of the physician to change his/her methods as indicated by a) change, and improvement in training and practices; and b) the human, personal needs of the client. Further, he emphasized the need to get maximum beneficial services to the patient and to increase the humanization of medical services, rather than the effectiveness of a process.

Finally, Peckham (1969) delimited the goals, and defined the directions, of childbirth care programs as follows:

> "Optimal maternal care can be defined as the accomplishment of those measures which are necessary to achieve a state of physical, mental, and social well being, and the maintenance of this state prior to planned conception, during pregnancy, and throughout the postpartum period, not just for the mother and child but the whole family... . In addition, for the care to be optimal in a free society requires that it be acceptable, and what those in need of such care consider acceptable will vary as greatly as do people themselves (pp. 862-863)."

From outside the ranks of obstetrical practice, several lay organizations started for the purpose of individualizing and humanizing obstetrical services in large urban areas, have come scathing evaluations. Haggerty (1973) epitomized such attacks as she stated:

> "To force a woman to be inoperative, passive, and uninformed at the time she feels most aggressive and dynamic is cruel. To put her down and torture her for her strong instinctual feelings is cruel. And to deny her her husband at the time she needs him most is barbaric. Despite what was promised me--and so many other women--by the doctors, nurses, and midwives, the hospital did not treat me as a person with individual needs.
>
> Too many women have been treated in this fashion and made to feel ashamed for being 'difficult' or 'hysterical'. Rather than simply feel martyred, we should pool our energies and revolutionize the system so that we can go to the delivery room fully aware of what will happen there, and confident that our expectations will not be betrayed. Smack in the middle of the expulsion phase of labor is obviously not the time to be making demands; under the present system the patient may well be disregarded as a piece of meat (p. 17)."

Finally, the question of what services should be meted out to whom arises. Medically speaking, although greater concern is being expressed with the need for translating personalized, individualized obstetrical care into practice (Haggerty, 1973; Peckham,1969; Miller,1969; Zarate,1966), this is seen as a move which precipitated problems as well as solving them. That is, obstetrics, in general, is facing a service-to-needs shortage (see Silver,1968; Jacobson,1968) childbirth education being seen as a further strain on an already-extended system. What methodology, what problems-solving approach, can be seen

as offering a potential solution to the delivery of increasingly personalized services? Frank (1966) suggested that optimal infant-care service could best be mediated through a general systems approach to the complex problem. In a similar vein, Henderson and Henderson (1969) presented a "teamwork" paradigm which encompassed the functional aspects of the general systems approach (see Appendices A and B). The four major components of their proposed system met the requirements of providing a personalized service system and of expanding the presently existing systems to encompass increased educative functions and needs. In conclusion, Hungerford (1969) summarized the future direction and character of childbirth as follows:

> "These parents who have elected to prepare themselves for their experience with childbirth are the elite. Our task for the future is to make high quality childbirth education available to every expectant, especially the low-income, high-risk expectants of our inner cities. Perhaps we can achieve something like universal childbirth education such as they have in the Netherlands within a decade if we really try.
>
> Such programs will include emotional preparation through education which brings complete familiarity with the entire reproductive process. It will include physical training for pregnancy, labor and recovery. It will include instruction in the fundamentals of nutrition aimed at families with limited resources and taking into account ethnic habits and preferences (p. 1)."

Summary

Research specific to childbirth education precluded the question, should there be childbirth education programs, and substituted in its stead the question, what types of child

birth education programs are needed by the expectant parent population of the United States and the world? That is, the indication that pregnancy prompted a normative crisis in the prospective parent(s) was seen as being relieved through acquainting these same persons with the full ramifications of the human reproductive process. To date, educative services have been available primarily to those persons who either actively sought them out, and/or who were able to afford them. It would seem that services need be broadened to encompass the bulk of the obstetrical population, and to deal with the areas of emotional support for the family, and labor and delivery, other variables being added as indicated, e.g., prenatal nutrition. A cooperative, general systems approach to unifying obstetrical services would seem to provide the most feasible solution to the problem of personalizing an expanding service system with limited personnel and temporal functioning space.

Childbirth Education Programs and Materials Available in Greensboro, North Carolina

Childbirth education services available as of June, 1973, in Greensboro, North Carolina, were as follows, (obstetricians precluded):

1) Red Cross Expectant Parent Program, (mothers and fathers), with the following emphases (see Nicely et al., 1942):

   a.) Nutrition-- pre-, and post-natal

   b.) The reproductive process, including labor and

delivery.

c.) Preparing for the coming of the child, as in readying the layette, clothing, etc..

d.) Infant care and handling.

2.) Lamaze Psychoprophylactic Training, ASPO and ICEA accredited (see Bean, 1972) with two instructors teaching classes.

3.) Private obstetrical firm parent educator, conducting classes which combined the basic elements of the Red Cross program, and psychoprophylactic training.

Childbirth education materials available were as follows:

1) Childbirth films, both for "natural childbirth" and routine hospital childbirth.

2) Obstetrical video-tape machine and tapes illustrating hospital labor and delivery rooms, and childbirth.

3) Magazines and publications available at news stands and in obstetrical offices.

4) Popular literature and books pertinent to labor and delivery, and parenthood (see Appendix E).

Although a cursory description, it should be noted that childbirth education was a loose, fragmented, hit-or-miss service in this community, precluding any in-depth analysis.

CHAPTER III

METHODOLOGY

The purpose of this pilot study was to describe the functioning of the childbirth education services available in Greensboro, North Carolina, during the period between May 5, 1973, and June 21, 1973, and to evaluate the relative utility of the Parental Decision-Making Questionnaire as a research tool, and the Pregnancy Helping System as a functioning model. More specifically, a preliminary evaluation of services available was made by participants in, (recipients of), those same services, i.e., regular prenatal obstetrical care, and prenatal training of some sort, using the PDMQ in the context of the initial phases of the PHS. The three basic question areas in the assessment process were as follows: a) the extent of educational preparation of the obstetrical population in Greensboro for the birth of their child(ren); b) a self-evaluation by each prospective mother of her particular form of preparation; and c) an evaluation of childbirth education as a singular process by the expectant parents.

Subjects

The population from which the group came consisted of all gravidae in their last month of pregnancy served by three local obstetrical firms. Since this pilot study of the Pregnancy

Helping System was constrained temporally to a six-week data collection period, and since the study population was itself limited, (there being approximately 300 births in each 6-week period in Greensboro), the need to elicit support from as many obstetrical firms as possible was seen as critical so that a meaningful study population could be reached. The significance of the prenatal nature of the study cannot be overemphasized, as repeatedly, investigators have stressed the importance of prospective studies of reactions to pregnancy, labor, and delivery (Colman and Colman,1971; Grim,1967; LeMasters,1957). The special problem presented by such a design with this given population was obvious. No one could really say what the last month of pregnancy would be, although the demand for a prospective evaluation was seen as the primary delimiting factor.

Instrumentation

The research instrument designed for use in the study was entitled the Parental Decision-Making Questionnaire (PDMQ). The PDMQ was designed by the faculty and Pregnancy Helping System research staff of the Department of Child Development and Family Relations of the School of Home Economics, University of North Carolina at Greensboro, with the following as guidelines: a) the Decision-Making Questionnaire designed by the research staff of the Problem Pregnancy segment of the Pregnancy Helping System; b) the research variables as elaborated by Schaefer and Bell in their design of the Preg-

nancy Research Questionnaire (PRQ); c) the significant environmental factors impinging upon parental prenatal adjustment as delimited by Stolz (1967) and Grim (1967); and d) research items of special interest to various local obstetricians as gleaned from personal interviews. There was both a maternal and paternal form of the PDMQ, which constituted a refinement of the research done by Tanzer (1967), and was a move in the direction of familial, rather than simply maternal, needs assessment (Colman and Colman,1971; Bean,1972; Mead and Newton, 1967; Montagu,1962).

The maternal form of the PDMQ was utilized in abbreviated form in the context of this study (see Appendix C). (Complete PDMQ with parental cover letter can be found in Appendix F.) However, full PDMQ data analysis, maternal and paternal, was to be fed back to participating physicians' groups on a monthly basis (see Appendix D). On the front of each PDMQ was attached a letter to the prospective parent explaining the thrust, design, and scope of the study, and requesting their full participation, the body of the letter being xeroxed on the letterheads of the various participating obstetrical firms. Utilization of the PDMQ in this study served two basic purposes: a) it provided a pilot feedback report on the effectiveness and reliability of the PDMQ as a research tool; and b) the PHS became a functioning reality upon the completion of the first Physicians' Monthly Summary Report (PMSR) derived from PDMQ data.

Procedure for Administration

Since the Childbirth Education segment of the Pregnancy Helping System existed, by definition, in the sphere of obstetrical medical practice, it only followed that the procedure for administration of the PDMQ should have been geared toward a medical setting. More specifically, utilization of the various physicians' firms' offices as the source of distribution seemed to be the most conducive to positive results for a number of reasons: a) the largest possible subject population could be reached with a minimum of expenditure of time, and with the greatest chance of eliciting participation from persons most diverse in terms of prenatal preparatory practices, e.g., Lamaze and Red Cross classes were immediately self-delimiting; b) the cooperation between research and medical teams was most obvious in such a setting, a characteristic of this system which made it virtually unique outside of the medical school setting; c) it seemed that the prospective mother would have been most conducive to providing information specific to her pregnancy as she waited for her prenatal visit; and d) in terms of research feedback, such a methodology seemed able to produce optimal research participation and questionnaire response and return.

The expectant mothers were handed a copy of the PDMQ, complete with cover letter, clipped to a clipboard with a pen, by the receptionist at a given office and asked to complete the form while she waited to see the physician. It was

the receptionist's task to discern those persons eligible for study participation, i.e., those gravidae in their last month of pregnancy, in general, and those who had completed Lamaze training, as a specific subset, and to hand out PDMQ's accordingly, (a copy of the Instructions for Receptionists can be found in Appendix G). The prospective parent, upon completion of the form, was then to return it to the receptionsist's desk. At appointed times each week, the researcher visited each physician's office to collect all completed PDMQ's, to replenish the supply of PDMQ's as needed, and to field and answer any and all questions the receptionists might have had about PDMQ distribution, use, direction of the study, and other pertinent research areas. Physician reaction was also elicited when available and appropriate. (Note: The stamped, self-addressed envelope initially provided by the paternal segment of this study for use in her distribution design, were also utilized in this study segment as the mother had the option of taking the Maternal PDMQ home with a copy of the Paternal PDMQ, filling it out there and mailing it to the researcher in the envelope provided. The mailed forms were collected from the office of the Chairman of the Department of Child Development and Family Relations on a weekly basis.)

Plan for Utilization of Data

Due to the nominal nature of the data utilized, frequency counts, (when meaningful), and percentages were used in

the analysis of the data. Few, if any, inferences about complex interrelationships of PDMQ variables could be drawn before the completion of this, the pilot study of the Pregnancy Helping System, thus accounting for the somewhat simplistic nature of the data analysis. (Note: Data analysis for the Physician's Monthly Summary Report was similarly designed.) That is, once the nature of the system itself, the reliability of the PDMQ variables and design, and the complexity of the population, were tested by this initial use of the PDMQ, refinement, both in terms of questionnaire design, and item information validity and reliability, could be seen as forming the potential basis for a later study.

CHAPTER IV

RESULTS AND DISCUSSION

Due to the constraints placed upon collection of data, i.e., having only three of a possible fourteen obstetrical firms participating, and having only six weeks time in which to collect data, the number of actual responses was low, (13), and not necessarily representative of the larger obstetrical population. However, since the study was a pilot investigation of the obstetrical population, the basic instrument designed for use with that same population, the PDMQ, and the Pregnancy Helping System, it may be seen that all data feedback in this report was more illustrative of the potential of the PHS than it was a definitive statistical description of that system, and of the reliability and validity of the PDMQ.

Question I: To what extent was the obstetrical population in Greensboro prepared educationally for childbirth?

The skewed nature of the initial data bank was no more evident than that pertaining to the extent of education of the population. That is, although formal childbirth training, whether Lamaze or Red Cross, reaches only an estimated one-sixth to one-eighth of the obstetrical population in any given month, (gleaned from interviews with the various teachers), trained persons comprised greater than one-half of the study population (see Table I).

Familiarity with the Lamaze Prepared Childbirth Training Program showed a similar bias, as more than half had actually experienced psychoprophylactic training. Seventy-eight percent had either experienced Lamaze training or had heard and/or read a great deal about it, while only eight percent had heard nothing about Lamaze training, (see Table I).

Table I

Familiarity with Lamaze Prepared Childbirth Training

	Frequency	Percent of Total
Not at all	1	8
Somewhat	2	15
Have read and/or heard a great deal about it	3	23
Have had or are taking Lamaze training	7	54
Total	13	100

Accounting for this discrepancy between the general population and the study population would be difficult, and only speculative at this point, although it seemed, at least initially, that those persons who were trained in psychoprophylactic techniques were more responsive to research regarding their reaction to pregnancy than were the non-trained individuals. Such a finding would be seen as being consistent with Colman and Colman's (1971) contentions, as well as Bean (1972), Grim (1967) and Tanzer (1967), although the speculative nature of such a

conclusion need be stressed.

In terms of social milieu factors influencing the prospective parents' reaction and adjustment to pregnancy, a different picture was presented (see Table II). This group of factors was primarily gleaned from the research of Stolz (1967). That is, although Lamaze training was utilized in preparation for childbirth by a majority of the respondents (54%), certain other preparatory, educative factors seemed to have had a more universal distribution. Specifically, magazine articles and books provided material for virtually all respondents (77% and 85%, respectively), followed in order by talking with friends (69%), and talking with relatives (54%). With respect to the theory that pregnancy presented a normative crisis situation to the prospective parent, it appeared that even with such a small non-representative sample that educative factors specific to childbirth became increasingly important in the pregnancy stage, reading of books being of seemingly special importance (see Table II) as the mother adjusted to her new physiological and psychological state.

Finally, educative incursions made by mass media on the preparatory process of the expectant mother were limited, at best. It should be noted, however, that under the "other" category on the item in question, books were specified without exception, consistent with the responses illustrated in Table II.

Table II

Social Milieu Factors in Preparation for Childbirth

Activities in Preparation	Before Pregnancy		During Pregnancy		Overall gain Before-After
	Frequency	Percent	Frequency	Percent	Percent
Nothing	1	8	1	8	0
Read magazine articles	8	61	10	77	16
Read book(s)	5	38	11	85	47
Talked to relative(s)	4	31	7	54	23
Talked to friend(s)	5	38	9	69	31
Talked to nurse educator	1	8	4	31	23
Regular prenatal MD care	4	31	10	77	46
Taken formal birth education course:					
Red Cross	0	0	2	15	15
Lamaze	0	0	7	54	54
Nurse-midwife	0	0	0	0	0
Other	0	0	0	0	0

Question II: How did each prospective mother evaluate her particular form of preparation for childbirth?

Responses to the PDMQ items specific to this question tended to be low, due, in all likelihood, to the complicated array of variables presented in the various questions. The social milieu items were especially affected with respect to response, they being the most intricate in design.

Within the social environment, the indication was that five different groups of persons were most helpful to the gravidum as she prepared for childbirth: close friend(s); mother; spouse; birth educator; and medical doctor (see Table III).

Table III

Persons Most Helpful in Environment In Preparing for Childbirth

Persons	Before Pregnancy		During Pregnancy	
	Frequency	Percent of total	Frequency	Percent of total
Close friend	2	15	3	23
Your spouse	1	8	4	31
Your mother	2	15	2	15
Your mother-in-law	2	15	2	15
Your father	0	0	0	0
Your father-in-law	0	0	0	0
Your sister	0	0	0	0
Your brother	0	0	0	0
Birth educator	0	0	6	46
Minister, priest, or rabbi	0	0	0	0
Medical doctor	2	15	9	69
Community agency counselor	0	0	1	8
Other	0	0	0	0

As the prospective mother made the transition between non-pregnancy and pregnancy, the relative importance of persons within the social environment appeared to change in certain specific areas. That is, although the relative helpfulness of the gravidum's close friend(s) remained fairly constant, the role of her spouse, her mother, birth educator, and medical doctor increased in terms of relative importance. Such a finding was found to be in line with prior research (Colman and Colman,1971; Grim,1967; Bibring,1959; Caplan,1957; Mead and Newton,1967; Stolz,1967) and provided a simple feedback evaluation of those factors geared to be supportive, educationally and emotionally, in the prospective mother's preparation process (Darnley,1972). It should be pointed out, too, that the reaction to the spouse and mother seemed to remain ambivalent with respect to their helpfulness, while the birth educator and physician were fairly universally acclaimed as being helpful.

Finally, in evaluating the training process itself, whether it was Lamaze, Red Cross, a combination of Red Cross and Lamaze, or self-preparation, major differences were evident, even with such a small population. Specifically, Lamaze and Lamaze with Red Cross persons either highly recommended (83% and 100%, respectively), or recommended (17% for Lamaze) their training program for other prospective parents. The best that self-preparation fared was 40% of their group recommending that route, with the majority (60%) responding in the "No Opin-

ion" column. These results were not taken to be definitive as one major factor gleaned from earlier research needed to be considered: Lamaze-trained persons tend to have an almost-hypnotic allegiance to their program (Bean,1972; Fielding and Benjamin,1962; Grim,1967; Tanzer,1967). There seemed to be an over-all lack of enthusiasm expressed for self-preparation as compared to Lamaze, possibly a function, too, of the general lack of crisis resolution provided by self-preparation. In projecting spouse's responses, the expectant mothers augmented the differences in evaluation of the relative programs, as the Lamaze mothers felt the husband would highly recommend Lamaze training 100% of the time, with 40% of the self-prepared persons expressing no opinion for their husbands. Only more data could resolve the basic discrepancies extant in this particular area.

Question III: How did each prospective parent feel about being formally prepared for childbirth?

In terms of logistics in the design of a universal (here meaning available to each gravidum in Greensboro) childbirth education program, this segment was most critical. That is, it was projected that a forced-education package would not be acceptable to the general obstetrical population in the United States (Fielding and Benjamin,1962) and, thus, it would seem imperative to know the potential population toward which a program could be geared. If a childbirth education program were available to all prospective parents in Greensboro, 69% of the

study population would have taken part, and only 15% would have abstained. When asked what type of program they would like to see available in Greensboro rated against their rating of the importance or childbirth education, most of the subjects not only chose Lamaze training (69%), but also universally rated childbirth education as a positive process.

Finally, and further refining the overall positive evaluation of childbirth education, a breakdown of evaluative response was made according to form of preparation chosen by the gravidum. Irrespective of what preparation process the expectant mother experienced, her response to childbirth education was positive. It should be noted, however, that a positive response was felt to be a response on either of two items in the question. Logistically speaking, the second item, which read "It (childbirth education) is a good idea if you have the opportunity to be trained" drew the heaviest response (9 out of a possible 13, or 69%), a further indication of the size of the potential educative population.

The PDMQ as a Research Tool

The Parental Decision-Making Questionnaire was initially designed with three major information sections: a) a pregnancy adjustment section to be used later in long-term studies relating initial reaction to pregnancy to any of a number of parenting variables; b) an educative section, which was designed to elicit a cursory description of the adjustmental process of the gravidum to her pregnancy, including both specific educa-

tive program items and general social milieu items; and c) a reaction to childbirth education section, which was directed toward providing evaluative feedback on educative programs in Greensboro and in general, and on potential programs universally available. The efficacy of the PDMQ as it was utilized in the framework of this specific study, and its potential use in the larger PHS has indicated both limitations of its reliability and validity and recommendations for elimination of those problems.

The primary weakness of the PDMQ lay in the variability of the depth of appraisal in its various items. Specifically, certain items (8,9, and 10) were too complicated in design. That is, the complexity of information desired from, and the complexity of design of, these sections, were seen as delimiting factors with respect to responses received. The reason for the breakdowns in the questions, i.e., "Before Pregnancy" and "During Pregnancy", and the numerous social milieu factors, was to elicit the gravidum's evaluation of the variable significance of key support persons and activities in her environment as she went from a non-pregnant state to full-blown pregnancy. Although certainly a key target for research incursion, attitudinal and behavioral change on the part of the expectant mother was not fully tapped by the PDMQ--nearly without exception responses were either identical on both sections, or the entire pre-pregnancy section was omitted. Additionally, the applicability of certain items to pre-pregnancy and pregnancy

was dubious, e.g., the role of birth educator and prenatal physicians' care during the pre-pregnancy period.

In a different vein, certain items on the PDMQ were found to be lacking in specificity. That is, information could be gathered utilizing the PDMQ which would indicate, for example, that an individual was self-prepared, had read numerous books and articles pertaining to childbirth, had consulted with her mother and husband, highly recommended her particular form of preparation, felt that childbirth education was critical, and that Lamaze training should be available to everyone in Greensboro. These responses may seem illogical and improbable, but it may very well have been that the individual was highly motivated and intelligent. A refinement in this area seemed to be indicated to increase the reliability and validity of the PDMQ items in question.

Finally, general phraseology was found to be cumbersome and obstruse, further limiting the validity and reliability of the items of the instrument. That is, although great care was given to making the information and questions on the PDMQ clear and concise, some reworking of the language seemed indicated.

The PHS as a Research System

The Pregnancy Helping System was the result of the fusion of two complex-problem-solving models: a) the multidisciplinary maternal health care model of Henderson and Henderson (1972); and b) the general systems format as delineated by Watson (1973). The system was composed of four different stages, each stage

being tri-planar (see Appendix B). That is, after conceptualizing the problem, here, childbirth education availability, the four steps which followed were designed to flow cyclically into one another, forming the basis for the ongoing system. As mentioned, each stage had three levels of function: a) medical-physiological; b) technical, that is, anesthesiology, childbirth training, and the like; and c) psychological-sociological.

This study was designed, in part, to begin the psychological-sociological plane of the needs assessment segment of the general system. It was found, however, that no portion of this system was able to begin without the full cooperation of, and input from, all levels of that system component. That is, without assistance from the physicians, trainers, and receptionists, the psychological-sociological component was left isolated and without its necessary support base. Thus, it was necessary to convince the private physicians' firms that the pilot study which was being attempted was merely the initial stage in a more complex, long-term system which would have as its outcome a qualitatively-positive benefit package for them, as well as their patients. To elicit research support from private physicians, it was seen, required one major component: an immediate gain in terms of the firm's cost-benefit ratio. There were, however, three firms that noted that Greensboro was behind most of the United States in terms of obstetrical innovations, and felt, consequently, that their cooperation with this study and

PHS, would provide them with a qualitative depth of service unique outside of the medical-school setting. Perhaps the fear of an accountability factor entering the research picture kept the remainder of the obstetrical firms from participating. However, it was for that reason that a systems approach with the depth and breadth of the PHS was adapted: through participation in an innovative program, accountability would be eliminated by definition. If the physician were fully attuned to his patient population, for example, a work such as Our Bodies Ourselves (The Boston Woman's Book Collective, 1972) would never have come about.

Although admittedly a crude beginning, this first step of the PHS had the portent of offering long-term qualitative benefits to physician and patient. However, since the system was designed to function on three levels, and this study dealt only with one such level, i.e., the psychological-sociological, the following can be seen as requiring attention: a) input from the other two planes of each research segment, i.e., the medical-physiological and the technical, as the research takes an increasingly medical-technical bent; b) instrumentation and design be clarified and refined as the research becomes more medically-technically oriented; and c) research be at least partly realigned so as to speak to an immediate positive cost-benefit ratio for the physicians and trainers, both monetarily and behaviorally in their practice. The slow responsiveness of the system, and the slow data flow within the system, were seen

as a function of both the general problems attending initiation of any system, and the special reluctance on most of the physicians' parts to cooperate fully in such an effort.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

As this study was designed primarily as a pilot descriptive study of the potential for initiating a larger, more-inclusive childbirth educational system, the Pregnancy Helping System, indicators of future directions for the overall program design and the initial research instrument, the PDMQ, could be seen as more appropriate than actual research conclusions. This is not to say that certain tentative conclusions were not forthcoming, but is to maintain that the significance of the study was three-fold: a) as a pilot study for a newly-designed research instrument, the PDMQ; b) as a preliminary, albeit constrained, step in a larger overall research design (see Appendices B and H); and c) as an indicator of the cooperative potential between medical personnel and research personnel outside of the medical-school setting.

Summary

Conclusions, per se, were not seen as being appropriate outcomes of this study. Instead, certain obstetrical population tendencies with respect to childbirth education were presented. First, formal childbirth preparation classes were well-publicized, and childbirth education materials were readily available and utilized, in the Greensboro obstetrical community.

This observation was as much a result of research findings as it was of personal canvassing in local bookstores and libraries. The logistics of training availability, i.e., the fact that only approximately 60 out of a potential 300, couples were reached by formal training per month, may be only one reason why more persons did not, and do not, participate in such classes. It would seem likely that the basic contention that Lamaze was the "be-all and end-all" of childbirth preparation was less conducive to overall population acceptance than was the understanding of the importance of proper prenatal care for the development of each infant and mother (Frank,1966; Montagu, 1962). Specifically, individualization of childbirth education programs need be optimized to maximize its scope and effectiveness (see Lane and Williams,1966; Peckham,1969; Fielding and Benjamin,1962).

Second, educative programs, both in terms of social educative experiences and formal training programs, were rated highly by the prospective parent population. Familial and medical support systems were found to be the most significant as the expectant mother adjusted to her physiological condition. Due to the basically self-selected nature of the training population, no real conclusions were seen as forthcoming. However, in light of the contention that educative experiences might form the basis for the resolution of the normative crisis attending pregnancy, labor, and delivery, an active medical-familial program of some type appeared to be indicated.

Finally, the potential for initiation of such an active program in terms of population receptivity, would seem to be high. The major complicating factor in initiating such a program appeared to center around the question: What service(s) needed to be meted out to whom, when, and by whom? That is, prenatal nutrition is meaningful only when practiced during the extent of the prenatal period, calling for an early prenatal component. Fathers are usually allowed in the delivery rooms of hospitals only when trained to be there, indicating a familial component of a program. The list of potential childbirth preparation course components is virtually endless, it being the role of future research in this area to assess the relative merits of each segment with respect to the health of the gravidum and embryo-fetus-neonate, the psychological well-being of the mother and father, to increase the coping competency and humanity of all those individuals involved in the process of pregnancy and childbirth, and to design and implement a system geared to meet those needs.

Recommendations for Future Research

The most salient aspect of a study of this kind was that it provided future researchers with an invaluable feedback on the nature of all those forces involved in the scope of its design. As mentioned previously, certainly, but to be continually stressed, cooperative efforts between research groups and medical groups outside of the medical-school setting tend to be unique, and at times, mutually anxiety-provoking. The recom-

mendations made here are to be concerned with the following three areas of research design and functioning: a) the future of the PDMQ; b) the future of childbirth education research, with specific reference to refinement of the methodology utilized in this study; and c) and similarly, the potential for a systems, cooperative approach to prenatal care by both medical and non-medical research personnel.

The Future of the PDMQ

Certain items on the PDMQ were found to be complicated and cumbersome in design and language (items 8,9, and 10). Other PDMQ questions were too simplistic in design and did not elicit sufficient information to be reliable, in terms of use in generalizing from data received and processed. A number of changes seemed to be indicated with respect to instrument design which would reduce the aforementioned ambiguities to a minimum.

Recommendations with respect to the first section are three-fold (items 8,9, and 10): a) separate items for social milieu factors, before and during pregnancy, are indicated, possibly best handled if there were two distinct sections dealing with the two temporal periods; b) a breakdown of significant persons be patterned after that in the PMSR (see Appendix D), reducing the complication further; and c) longitudinal studies be conducted with the same population before and during pregnancy with respect to their attitudinal and behavioral stances, thus eliminating the speculative nature of much of

the information gathered. (Note: The cross-check between the ratings obtained in items 9 and 10 should be maintained until further data collection is completed, the elimination of the other breakdowns being seen as improving the reliability of those two questions.)

Countermanding recommendations to receiving data which would be inutile with respect to study utilization due to its incomplete nature were seen as being twofold: a) a minimal biographical section may be included, covering only such characteristics as occupation, husband's occupation, parity number, age, and address; and b) the section eliciting information about books, magazine articles, and mass media influences, could be made open-ended to allow the respondent to specify the exact sources utilized.

As mentioned previously, but to be stressed, if the PDMQ were to be used with a health clinic population as projected, or any population for that matter, more care need be given the wording of the items. That is, all questions should be phrased so as to require a minimum of reflection on the subject's part, but which would allow for the in-depth appraisal desired from the instrument.

Overall, in a redesigned state, the PDMQ could be used in its present role as the basic needs-assessment instrument of the Pregnancy Helping System. Upon redesign of the instrument, it would provide an invaluable tool for use in both prospective and longitudinal studies of obstetrical population attitudes

and adjustment. Combined with the Physicians' Monthly Summary Report, the PDMQ forms the foundation for a solid cooperative research-medical effort in further personalizing obstetrical services.

Further, Grim (1967) noted that the ultimate research evaluation of childbirth education programs could come only when a population of persons who desired training but were denied it was matcned with a trained population. The use of the PDMQ could delineate two such populations for such a study.

Additionally, a study designed to assess the reason(s) that a prospective mother has for not attending formal classroom training opportunities, whether free or fee-assessing, could be initiated through the use of the PDMQ in approximately the seventh month of pregnancy. Similarly, cognitive dissonance plays no small part in the selection of a training program by the prospective mother. A study designed to utilize the change variables on the PDMQ in a cognitive dissonance study of pregnancy, and crisis resolution in pregnancy, would seem to be productive.

In general, the systems design of the PHS allows for a diversity of personnel involved, which is projected to accomodate a diversity of study emphases and design both with and without the PDMQ. Thus, it would seem that the potential of the PDMQ, in terms of research utulization, is as open as the system in which it was planned to function.

The Future of Childbirth Education Research: Refinement of Methodology

Since the limitations of this study were seen as the primary guidelines for refining the methodology of further studies, countermanding recommendations are as follows:

1) An attempt should be made to involve the entire obstetrical population of Greensboro in a study designed to last at least eight weeks, including the Public Health Clinic population.
2) A redesigning of the PDMQ needs to include the changes as indicated in the previous section.
3) Administration of the instrument need be made uniform, either in the individuals' homes or in the obstetricians' offices. In either case, the following should be stressed: a) the mother **should** not consult with anyone about her responses until she has finished the questionnaire; and b) the type of response she gives is not as important as is the accuracy and fullness of her response.
4) Personal contact should be maximized between the researcher and the subjects so that greater participation in the study could be facilitated. With this personal contact, it is hoped that the bias of the population could be reduced, if not eliminated. Further, the potential for more comprehensive studies would be increased with the more personal system.
5) Probably the key to the implementation of the other recommendations, and greater functioning vitality and depth of

the system in general, is greater participation on the physicians' part. It is hoped that the basic anxiety and distrust which often characterize researcher-physician relationships can be eliminated as both parties work toward a common goal. Specifically, this new role would entail providing researchers with patients' (subjects') names and addresses, a positive word on the researchers' behalf as he/she consults with the patients, and feedback to the researchers as to what they would like to see researched. Physicians' Monthly Summary Reports would encompass any and all new research data, and would reflect the nature of a changing system. There would be, more simply, a mutually-satisfactory system implemented.

The Potential for a Systems Approach to Prenatal Care

In the course of approximately five years, childbirth education has come a long way in Greensboro. Lamaze was only a new idea at that point in time. Now, it is a functioning reality. Actual delimitation of the potential for further efforts along similar educative lines could only be presented sketchily at this time from personal interviews with educative trainers and certain local physicians. The summary picture was actually simple: The relations among the obstetrical firms in Greensboro are competitive in nature. Therefore, any major change made in the general obstetric environment need speak to the mutual benefit of all the physicians in Greensboro. If,

through research efforts, it can be demonstrated that an expanded, city-wide program of prenatal education would be to everyone's benefit, physician and patient alike, success and acceptance would appear well-assured. The Lamaze and Red Cross instructors have expressed considerable interest in such a planned program. It seems now that it is the role of researchers to delimit the scope, nature, and components of such a program with respect to maximization of the experience of pregnancy and childbirth, and of the health and welfare of all concerned.

In closing, perhaps the words of a local pediatrician and obstetrician are most appropriate, adding specificity to the positive indications of obstetrical change (Greensboro Prepared Childbirth,1972):

> "I am impressed by the aims of Prepared Childbirth. Both parents' being involved in the prenatal period sets a precedent that will not be broken postnatally. This is what families should be about. A healthy emotional setting surrounding the birth of the baby will go a long way towards building good parents which invariably provides emotionally and physically healthy children (Greensboro Pediatrician)."

Further:

> "The goal of all obstetrics is the obtaining of a healthy child and a healthy mother. The Lamaze method of preparation for childbirth helps significantly to accomplish this end. Such an experience can be rewarding to both mother and father, thus contributing to the emotional health of the family (Greensboro Obstetrician)."

It would seem, then, that the obstetricians in Greensboro are concerned with all phases of their patients' health, including the psychological and familial components, and are, consequently, receptive to measures which speak to the maximization of all those variables which impinge upon their patients. It is posited that the Pregnancy Helping System can function as the medium through which that goal can be best accomplished.

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APPENDIX A

SYSTEMS PARADIGM FOR MULTIDISCIPLINARY APPROACH (from Henderson and Henderson, 1972)

1) Responsiveness to this community
   a) Descriptive analysis of needs and services in Greensboro
   b) Social-psychological aspects of Greensboro community (predictive, evaluative, and directive)
2) Coordination through communication
   a) Feedback evaluative reports to physicians
   b) Training services available in community
   c) Intake data and physiological data as needed from physicians
3) Responsible leadership
   a) Patient comes first
      1) In research
      2) In medical practice
   b) Coordination of research and medical practice
      1) Longitudinal and continuing research
      2) Possible equalization of services with needs
4) Continuous evaluation
   a) Constant picture of community needs
   b) Service, (childbirth education), geared to continuing needs of community, (continued demographic studies and descriptive studies)

APPENDIX B

DIAGRAMMATIC MODEL WITH ACCOMPANYING SYSTEMS FORMAT

1) Systems format

   a) Conceptualize

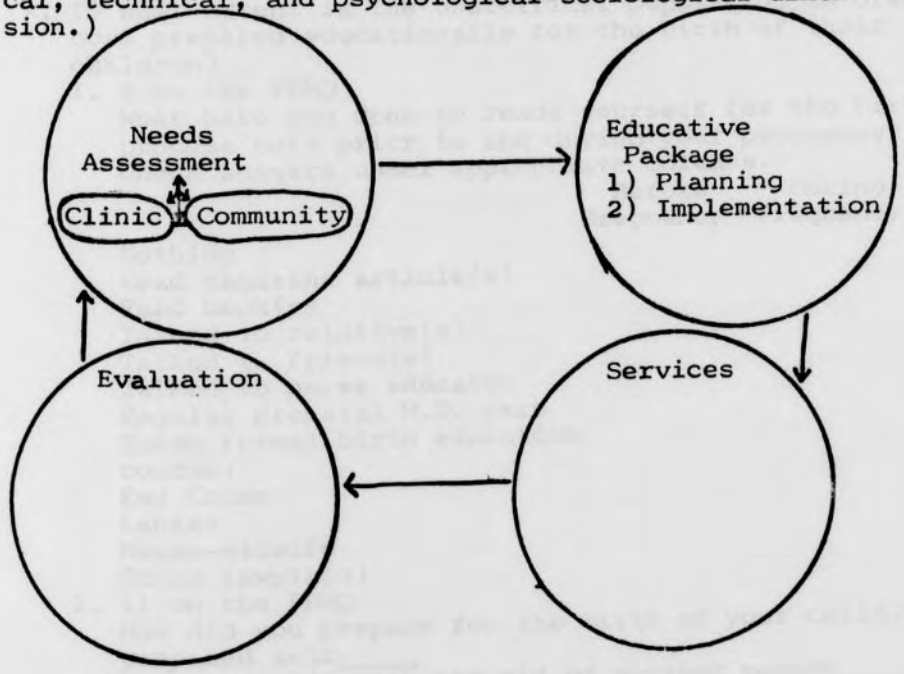
   b) Identify problem

   c) Planning

   d) Implementing

   e) Evaluation

2) System Model: (Note: All conceptual circles represent a tri-planar system, consisting of a medical-physiological, technical, and psychological-sociological dimension.)



APPENDIX C

PDMQ DISTRIGUTION AND USE IN INITIAL CHILDBIRTH EDUCATION STUDY

I. Distribution
   A. Population
      1. Primigravidae
      2. Multigravidae
      3. Prospective mothers in eighth and ninth month of pregnancy drawn from local obstetrical firms
   B. Method
      1. Distributed by receptionists in obstetricians' offices
      2. Forms completed and returned during waiting time in obstetricians' offices
      3. Collection of forms weekly at obstetricians' offices by researcher

II. Use--PDMQ item match-up with research questions
   A. To what extent is the obstetrical population in Greensboro prepared educationally for the birth of their children?
      1. 8 on the PDMQ
         What have you done to ready yourself for the birth process both prior to and during your pregnancy? Check answers under appropriate columns.

	Before Pregnancy	During Pregnancy
Nothing		
Read magazine article(s)		
Read book(s)		
Talked to relative(s)		
Talked t_ friend(s)		
Talked to nurse educator		
Regular prenatal M.D. care		
Taken formal birth education course:		
Red Cross		
Lanaze		
Nurse-midwife		
Other (explain)		

      2. 11 on the PDMQ
         How did you prepare for the birth of your child?
         prepared self_____
         prepared self with the aid of another person_____
          specify other person's position_____
         training program_____
                (specify)

3. 15 on the PDMQ
   Other than the persons contacted, please check below the other sources of information which influenced your decision to take training for your child's birth:
   movie____; TV show____; radio program____
   advertisement____; other____

B. How does each prospective parent evaluate her particular form of preparation for childbirth?
   1. 9 on the PDMQ
      Whose recommendations were most helpful in preparing yourself for childbirth before and during your pregnancy?

	Before Pregnancy	During Pregnancy
Close friend		
Your spouse		
Your mother		
Your mother-in-law		
Your father		
Your father-in-law		
Your sister		
Your brother		
Birth educator		
Minister, priest, or rabbi		
Medical doctor		
Community agency counselor (specify)		
Other (explain)		

   2. 10 on the PDMQ
      Rate the helpfulness of the recommendations of each of the following as you have prepared yourself for childbirth, before and/or during your pregnancy. Use these numbers: "1" means very helpful; "2" means somewhat helpful; "3" means only slightly helpful; "4" means not helpful at all.

	Before Pregnancy	During Pregnancy
Close friend		
Your spouse		
Your mother		
Your mother-in-law		
Your father		
Your father-in-law		
Your sister		
Your brother		
Birth educator		
Minister, priest, or rabbi		
Medical doctor		
Community agency counselor (specify)		
Other (explain)		

3. 12 on the PDMQ
   Please rate your birth preparation, be it self-prepared, formally-trained, or self-prepared with aid, according to its desirability for other prospective mothers.
   Highly recommend___; Recommend___; No opinion___; Not advise___
4. 14 on the PDMQ
   If yes, how do you think your spouse would rate the birth training or preparation?
   Highly recommend___; Recommend___; No opinion___; Not advise___

C. How does each prospective parent feel about being formally trained for childbirth?
   1. 7 on the PDMQ
      Are you familiar with Lamaze Prepared Childbirth Training?
      not at all___; have read and/or heard a great deal about it___; have had or are taking Lamaze training___
   2. 16 on the PDMQ
      What do you think of being prepared formally by a birth educator before the birth of your child? Check only one.
      ____It is critical in preparing for the birth.
      ____It is a good idea if you have the opportunity to be trained.
      ____It may be good, but it may be a waste of time and money.
      ____It is of no value.
   3. 17 on the PDMQ
      If you had the opportunity to take part in a childbirth education program, would you?
      Yes_____; No_____
   4. 18 on the PDMQ
      Specifically, what type of education would you like to see available for persons, in general, in Greensboro? Check one.
      Lamaze____; Nurse-midwife____; Red Cross____; Nurse educator____; None____; Other_____ (specify)

Physicians' Monthly Summary Report (PMSR)

Projected population:

Study population:

	Your firm %		General population %	
	Mother	Father	Mother	Father
1. Worry of getting pregnant:				
Very much				
Some				
Not much				
None				
2. Initial reaction to pregnancy:				
Exuberant				
Pleased				
Surprised				
Neutral				
Depressed				
Displeased				
Horrified				
Other (specify)				
3. Final reaction to pregnancy:				
Same				
Change: Positive				
Negative				
4. Pregnancy planned:				
Yes				
No				
5. Familiarity with Lamaze training:				
Not at all				
Somewhat				
Have read and/or heard a great deal about it				
Have had or are taking Lamaze training				
6. Preparation process of prospective mothers:				
Nothing				
Read magazine articles				
Talked to relative(s)				
Talked to nurse educator				
Regular prenatal MD care				
Formal birth education:				
Red Cross				
Lamaze				
Nurse-midwife				

	Your firm %		General population %	
	Mother	Father	Mother	Father
7. Most helpful recommendations:				
Close friend				
Spouse				
Mother				
Other relatives				
Medical doctor				
Birth educator				
8. Actual training process:				
Self-prepared				
Self-prepared with aid of other person				
Training program				
Lamaze				
Red Cross				
Both				
9. Rating of preparation process:				
Highly recommended				
Recommended				
No opinion				
Not advised				
10. Mass media influences:				
Movie				
TV show				
Radio program				
Advertisement				
Other				
11. Evaluation of childbirth education:				
It is critical in preparing for the birth.				
It is a good idea if you have the opportunity to be trained.				
It may be good, but it may be a waste of time and money.				
It is of no value.				
12. Projected participation in childbirth education program if provided with the opportunity:				
Yes				
No				
13. Type of education program desired for general obstetrical population in Greensboro:				
Lamaze				
Nurse-midwife				
Red Cross				
Nurse educator				
None				

Written Summary:

APPENDIX E

POPULAR LITERATURE PERTINENT TO CHILDBIRTH EDUCATION (from ICEA)

CHILDBIRTH, including pregnancy, childbirth preparation and related subjects

Alk, Madelin, Editor, THE EXPECTANT MOTHER, 1967 .75#
From the Redbook Magazine series.

Barfield, Mary, RELAXATION FOR CHILDBIRTH, 1954 1.80
A British exercise manual.

Bean, Constance A., METHODS OF CHILDBIRTH, A Complete Guide to Childbirth and Maternity Care, 1972 6.95
A compendium of the current methods of childbirth with clear non-technical explanations of what prospective parents will encounter.

Bing, Elisabeth, editor, THE ADVENTURE OF BIRTH, Experiences in the Lamaze Method of Prepared Childbirth, 1970 4.95
A collection of forty labor reports with comments.

Bing, Elisabeth, SIX PRACTICAL LESSONS FOR AN EASIER CHILDBIRTH, 1967 4.95/1.00#
A simple step-by-step guide to prepare women for smoother, natural childbirth. Lamaze.

Bing, Karmel and Tanz, A PRACTICAL TRAINING COURSE FOR THE PSYCHOPROPHYLACTIC METHOD OF CHILDBIRTH (Lamaze Technique) 1961 2.50#
A.S.P.O. manual.

Birkbeck and Keen, CONTROLLED CHILDBIRTH 1969 3.25#
Well-illustrated manual of childbirth preparation as taught in Vancouver B.C.

Boston Children's Medical Center, PREGNANCY, BIRTH & THE NEWBORN BABY, A Complete Guide for Parents and Parents-to-be, 1972 10.00
Written by experts in all related fields—obstetrics and gynecology, pediatrics, psychiatry, child development, genetics and nutrition. This is a highly readable, comprehensive guide.

Bradley, Robert A., HUSBAND-COACHED CHILDBIRTH, 1965 4.95
Thousands of husbands who helped their wives give birth with pride, love and fulfillment furnish the material for this doctor's account.

Flanagan, Geraldine Lux, THE FIRST NINE MONTHS OF LIFE, 1962 5.95/1.25#
The story, told in words and photographs, of a baby's development from conception to birth.

Fromm, Erich, THE ART OF LOVING, 1956 1.25#
An understanding book on the integral and necessary role of love in the personality.

Gamper, Margaret, PREPARATION FOR THE HEIR MINDED, 1971 2.75
Based on 25 years experience as a childbirth educator.

Genne, William, HUSBANDS AND PREGNANCY: Handbook for Expectant Fathers, 1956 1.00#
A guide to the changes which occur during pregnancy with hints for husbands on how to help.

Goodrich, Frederick W., PREPARING FOR CHILDBIRTH, 1966 5.95
By an obstetrician with many years experience with participating patients.

Guttmacher, Alan F., PREGNANCY AND BIRTH, 1962 .95#
Factual answers to many questions that parents ask.

Hazell, Lester, COMMON SENSE CHILDBIRTH, 1969 5.95/1.25#
Childbirth educator, anthropologist and mother of three presents birth as a dignified, creative experience.

Heardman, Helen, RELAXATION AND EXERCISES FOR NATURAL CHILDBIRTH, London 1966 .75#

Heardman, Helen, A WAY TO NATURAL CHILDBIRTH, rev. by Ebner 1970 4.25
An exercise manual for physiotherapists and parents.

Hungerford, Mary Jane, CHILDBIRTH EDUCATION, 1972 11.75
Comprehensive text of childbirth training and parentcraft.

ICEA CHILDBIRTH PREPARATION GUIDE, 1967 2.00
A compilation of valuable material for childbirth education classes. May be used alone where classes are not available.

Jacobson, Edmond, HOW TO RELAX AND HAVE YOUR BABY, 1959 2.95#
The master of relaxation writes about childbirth.

Karmel, Marjorie, THANK YOU, DR. LAMAZE, A Mother's Experience in Painless Childbirth, 1959 5.95/1.45#
A graphic account of pregnancy, labor and delivery following the precepts of Dr. Lamaze.

Brecher, Ruth and Edward, editors, AN ANALYSIS OF HUMAN SEXUAL RESPONSE, 1966 1.25#
An explanation and interpretation of the Masters and Johnson study with significant supplementary material by other experts.

Chabon, Irwin, AWAKE AND AWARE: Participating in Childbirth, Through Psychoprophylaxis, 1966 .95#
Psychoprophylaxis presented with historical perspective.

CHILD FAMILY DIGEST, 19 volume set, 1949 to 1960 (lacks a few issues) 10.00
Six sample copies 1.00
Classic articles on childbirth, breast feeding, rooming-in, education, family life, edited by Gayle and Charlotte Aiken.

Colman, Arthur and Libby, PREGNANCY: The Psychological Experience, 1971 6.50
An analysis of the psychological states of all members of the "pregnant family."

Davis and Maisel, HAVE YOUR BABY, KEEP YOUR FIGURE, 1964 3.50/1.00#
Well illustrated book of exercises with pointers on everyday activities.

Deutsch, Ronald, THE KEY TO FEMININE RESPONSE IN MARRIAGE, 1968 6.95
A frank treatment of important aspects of sexual response. A "key" is control of the pelvic floor muscles, which is also useful in controlled childbirth.

Dick-Read, Grantly, CHILDBIRTH WITHOUT FEAR, rev. 1972 7.95
This classic of natural childbirth, reorganized and edited by Helen Wessel and Harlan F. Ellis, incorporating the best of Dr. Dick-Read's writings from a variety of sources.

Dick-Read, Grantly, CHILDBIRTH WITHOUT FEAR, 1959 .95#

Dick-Read, Grantly, NATURAL CHILDBIRTH PRIMER, 1956 2.50
A detailed explanation of Dick-Read's method, with illustrations.

Ewy, Donna and Rodger, PREPARATION FOR CHILDBIRTH, 1970 3.95/1.25#
A Lamaze guide. Makes a convincing case for preparation and participation by both husband and wife. Illustrated with diagrams and delightful pictures.

Fitzhugh, Mabel Lum, PREPARATION FOR CHILDBIRTH, 5th ed. 1970 1.00#
With added material for instructors 1.50#
Prenatal exercises by childbirth education's pioneer U.S. physiotherapist.

Kitzinger, Sheila, EXPERIENCE OF CHILDBIRTH, rev. 1972 7.50
Physical and emotional preparation for the expectant mother by a sociologist and ante-natal teacher. She focuses particularly on the psychological aspects of child bearing and parenthood. Substantially revised for this first U.S. edition.

Kitzinger, Sheila, editor, GIVING BIRTH, 1971 5.50
Birth experiences by new parents with emphasis on childbirth as a pivotal point in the husband-wife and parent-child relationships.

Lamaze, Fernand, PAINLESS CHILDBIRTH, France 1956, U.S. 1970 5.95/1.25#
How the Lamaze method of childbirth preparation was taught by its French originator.

Liley, Margaret, MODERN MOTHERHOOD, 1969 5.95
Perceptive and scientifically accurate account of pregnancy, labor and infancy explained in detail from the mother's and the infant's perspective.

Llewellyn-Jones, Derek, EVERYWOMAN and Her Body, 1971 6.95
A frank, objective guide to every aspect of a woman's biological being.

Maternity Center Association, A BABY IS BORN, 1964 3.95
Picture book using the Dickinson-Belskie sculptured models to show prenatal development and birth process.

Maternity Center Association, A GUIDE FOR EXPECTANT PARENTS, 1969 1.95#
Answers common questions in simple straightforward language.

Maternity Center Association, PREPARATION FOR CHILDBEARING, 1969 1.00#
A practice guide to breathing, relaxation and exercises for avoiding stress and for muscular coordination and post-partum restoration.

Miller, John S., CHILDBIRTH: A Manual for Pregnancy and Delivery, 1963 5.95
By a sensitive obstetrician who emphasizes the importance of preparation for expectant parents.

Montagu, Ashley, LIFE BEFORE BIRTH, 1964 .95#
Specific ways an expectant mother can influence the physical and emotional development of her child before he is born.

Montagu, Ashley, TOUCHING, 1971 8.95/1.50#
A thought-provoking presentation of the thesis that tactile experience is as important as breathing, eating or resting to the survival of the human organism.

Montgomery, Eileen, AT YOUR BEST FOR BIRTH AND AFTERWARDS, 1964 3.00#
A British exercise manual.

Naismith, Grace, PRIVATE AND PERSONAL, 1966 **5.50**
Warm, wise and accurate guide for women in all aspects of sexual life.

Nilsson, Ingelman-Sundberg and Wirsen, A CHILD IS BORN, 1966 (Sweden 1965) **9.95/3.95#**
A dramatic pictorial revelation of human reproduction from conception to birth by a photographer, obstetrician and embryologist.

Rugh and Shettles, FROM CONCEPTION TO BIRTH, 1971 **12.00**
The prenatal history of the child with chapters on genetics, family planning and the effects of drugs, diseases and radiation. Accurate, detailed and magnificently illustrated.

Tanzer, Deborah, WHY NATURAL CHILDBIRTH? 1972 **7.95**
A striking documentation of the psychological as well as physical advantages of unmedicated, participating childbirth—to mothers, fathers and babies.

Vellay, Pierre, CHILDBIRTH WITH CONFIDENCE, 1969 **6.95**
Titled "Sexual Development and Maternity" in England.

Vellay, Pierre, CHILDBIRTH WITHOUT PAIN, 1959 **6.95**
By Lamaze's chief disciple of psychoprophylaxis in obstetrics.

Wessel, Helen, NATURAL CHILDBIRTH AND THE CHRISTIAN FAMILY, 1963 **5.95**
Emphasizes spiritual and emotional significance as well as the physical.

White, Gregory, EMERGENCY CHILDBIRTH, 1968 **3.00**
Primarily for emergency birth attendants but of great value for every expectant parent.

Wright, Erna, THE NEW CHILDBIRTH, 1967 **5.95/1.50#**
A clear and practical British account of psychoprophylaxis for parents and professionals.

APPENDIX F

SAMPLE PARENTAL DECISION-MAKING QUESTIONNAIRE, (PDMQ), WITH COVER LETTER TO PARENTS

H. B. PERRY, JR., M. D. DONALD C. SCHWEIZER, M. D. KARL L. BARKLEY, M. D.
OBSTETRICS AND GYNECOLOGY
DIPLOMATES AMERICAN BOARD FELLOWS AMERICAN COLLEGE
1305 WEST WENDOVER AVENUE
GREENSBORO, NORTH CAROLINA 27408

Prospective mothers,

The Department of Child Development and Family Relations of the University of North Carolina at Greensboro, in cooperation with your physician, is initiating a descriptive study of the childbirth readiness process in the Greensboro-Guilford County area. The investigation is designed to elicit your reaction to your pregnancy, your preparation for pregnancy, labor and delivery, and your reaction to the various people who have been of assistance to you throughout your pregnancy. We, the researchers and physicians, ask only that you volunteer sufficient time and energy to do the following:

1. Fill out the Parental Decision-Making Questionnaire(attached) completely and accurately, and return it to the receptionist's desk.

2. Pick up from the receptionist a Father Parental Decision-Making Questionnaire and have him fill it out fully, either while you are seeing your physician (if the father is with you) or at home. Please see that it is returned to us in the attached stamped addressed envelope or at the receptionist's desk.

Your full participation will assist us in improving services for your next pregnancy, if you have one, and for prospective mothers in the coming years. Your answers will be kept strictly confidential and will be used only for the research purposes mentioned above. If you have difficulty with any of the items on the Parental Decision-Making Questionnaire, please ask the receptionists as they will answer your questions. Any questions you may have pertaining to your participation in the study may be answered by your physician and/or by calling 379-5315.

Thank you for your time and energy expended in assisting us.

PARENTAL DECISION-MAKING QUESTIONNAIRE - *MOTHER'S FORM*

Your Name _____ Spouse's Name _____

Please complete each item fully and accurately. Your responses will be kept strictly confidential. If you have any questions, please ask the receptionist.

1. Before this pregnancy, have you worried for fear of getting pregnant?
   very much ___; some ___; not much ___; none ___

2. When you were first confirmed pregnant, what was your reaction?
   exuberant ___; pleased ___; surprised ___; neutral ___; depressed ___;
   displeased ___; horrified ___; other _____
   (explain)

3. Has your reaction changed since you were first confirmed pregnant? Yes __ No __

4. If Yes, how did it change? _____

5. How do you think your husband felt about your being pregnant?
   exuberant ___; pleased ___; surprised ___; neutral ___; depressed ___;
   displeased ___; horrified ___; other _____
   (explain)

6. Was your present pregnancy planned? Yes ___ No ___

7. Are you familiar with Lamaze Prepared Childbirth Training? not at all ___;
   somewhat ___; have read and/or heard a great deal about it ___; have had
   or are taking Lamaze training ___

8. What have you done to ready yourself for the birth process both prior to and during your pregnancy? Check answers under appropriate columns.

	Before Pregnancy	*During Pregnancy*
Nothing		
Read magazine article(s)		
Read book(s)		
Talked to relative(s)		
Talked to friend(s)		
Talked to nurse educator		
Regular prenatal M.D. care		
Taken formal birth education course: Red Cross		
Lamaze		
Nurse-Midwife		
Other (explain)		

9. Whose recommendations were most helpful in preparing yourself for childbirth before and during your pregnancy?

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	Before Pregnancy	During Pregnancy
Close friend		
Your spouse		
Your mother		
Your mother-in-law		
Your father		
Your father-in-law		
Your sister		
Your brother		
Birth educator		
Minister, priest, or rabbi		
Medical doctor		
Community agency counselor (specify)		
Other (explain)		

10. Rate the helpfulness of the recommendations of each of the following as you have prepared yourself for childbirth, before and/or during your pregnancy. Use these numbers: "1" means very helpful; "2" means somewhat helpful; "3" means only slightly helpful; "4" means not helpful at all.

	Before Pregnancy	During Pregnancy
Close friend		
Your spouse		
Your mother		
Your mother-in-law		
Your father		
Your father-in-law		
Your sister		
Your brother		
Birth educator		
Minister, priest, or rabbi		
Medical doctor		
Community agency counselor (specify)		
Other (explain)		

11. How did you prepare for the birth of your child?

prepared self___;

prepared self with the aid of another person___; specify other person's position _____

training program_____;
(specify)

12. Please rate your birth preparation, be it self-prepared, formally-trained, or self-prepared with aid, according to its desirability for other prospective mothers.
Highly recommend___; Recommend___; No opinion___; Not advise___;

13. Did your spouse participate in the birth training or prepare himself as you did?

Yes___; No___;

14. If yes, how do you think your spouse would rate the birth training or preparation?

Highly recommend___; Recommend___; No opinion___; Not advise___;

15. Other than the persons contacted, please check below the other sources of information which influenced your decision to take training for your child's birth:

movie___; TV show___; radio program___; advertisement___;

other_____
(explain)

16. What do you think of being prepared formally by a birth educator before the birth of your child? Check only one.

___It is critical in preparing for the birth.

___It is a good idea if you have the opportunity to be trained.

___It may be good, but it may be a waste of time and money.

___It is of no value.

17. If you had the opportunity to take part in a childbirth education program, would you? Yes___; No___;

18. Specifically, what type of education would you like to see available for persons, in general, in Greensboro? Check only one.

Lamaze___; Nurse-Midwife___; Red Cross___; Nurse Educator___;

None___; Other_____
(specify)

THE UNIVERSITY OF NORTH CAROLINA
AT GREENSBORO

INSTRUCTIONS TO RECEPTIONISTS:

You, the physician's receptionists, are to play the key role in the implementation of the Childbirth Education Research segment of the Pregnancy Helping Systems Research model for the Greensboro-Guilford County area. We, the research staff, are fully aware that your days are as busy as you would probably like already, but, in order to conduct our research, we ask your assistance. There are two color-coded forms involved in the initial research project; the mother form, yellow and the father form, green, for your convenience. We ask that the following be done:

Mother Forms-(Yellow)

1. Mother forms of the Parental Decision-Making Questionnaire be distributed to all prospective mothers in their eighth or ninth month of pregnancy (if they are Lamaze-trained, distribution is to be on the first prenatal visit after the completion of training).

2. Please encourage each prospective mother to fill out the questionnaire completely, and if she is reluctant, please have her talk to her physician about participating.

Father Forms-(Green)

3. Father forms of the Parental Decision-Making Questionnaire distributed to all prospective mothers in their eighth or ninth month of pregnancy when mother forms are distributed.

4. The fathers may then fill out the Parental Decision-Making Questionnaire in the office if they have accompanied the mother to the physician. After filling out the questionnaire the father will then return it to you. If the father is not present at the office, the mother is instructed to take the questionnaire home and encourage the father to fill it out. He will return it to the researchers by mailing it in the attached stamped, addressed envelope.

5. Be prepared to answer questions pertaining to questionnaires(sample form completed will be provided).

6. Please indicate at the top of each questionnaire whether that patient is a primigravida, ("P"), or a multigravida, ("M").

7. Place completed questionnaires in the envelopes which will be collected each week.

In order to keep participation time in the Childbirth Education Research project to a minimum, we, the research staff, are providing you with the following:

1. Clipboards with pen to have mothers (and fathers) use while filling out forms

2. Envelopes in which to deposit completed questionnaires

3. A sample completed Parental Decision-Making Questionnaire for both mothers and fathers, to use in answering patients' questions about the questionnaire.

If any questions arise, please call:

Fred Darnley 379-5376 (9:00-5:00)
379-5315
272-5451 (after 5)

Diana Burke 379-5315 (9:00-5:00)
292-0590 (after 5)

APPENDIX H

PROJECTED FUTURE PREGNANCY HELPING SYSTEM RESEARCH WITH FLOWCHART (as distributed)

The Childbirth Education Research project is a collaboration between obstetricians and childbirth educators with faculty and graduate students of the Department of Child Development and Family Relations of the University of North Carolina, Greensboro. This project is conceived as a over-all research plan, as well as a vehicle for individual research projects. The over-all plan is projected to proceed in three phases.

PHASE I - Needs Assessment

This phase of the research will include a survey of the obstetric population of Greensboro to determine the needs of the community.

PHASE II- Services

Phase II will entail an analysis of currently available services in childbirth education.

PHASE III - Evaluation

The third phase of the research will consist of evaluation of the various educational programs to determine their impact in terms of functioning in childbirth, effect on the family and mother-child interaction.

PHASE IV - Educational Package

The outcome of this project as a team effort of medical and university personnel can be an evolving of the kinds of prenatal, intranatal and postnatal educational packages needed by the community. No one method is envisioned,

but a variety of educational experiences should be available to women. Techniques can be developed to determine what woman needs what kind of training.

Conceived as systems research, the project will at all times have feedback to the physicians and childbirth educators.

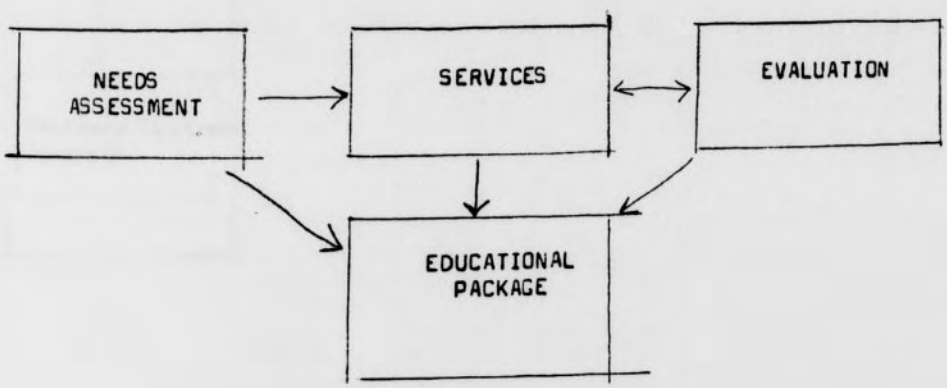
PHASES

I. Needs Assessment

II. Services

III. Evaluation

IV. Educational Package

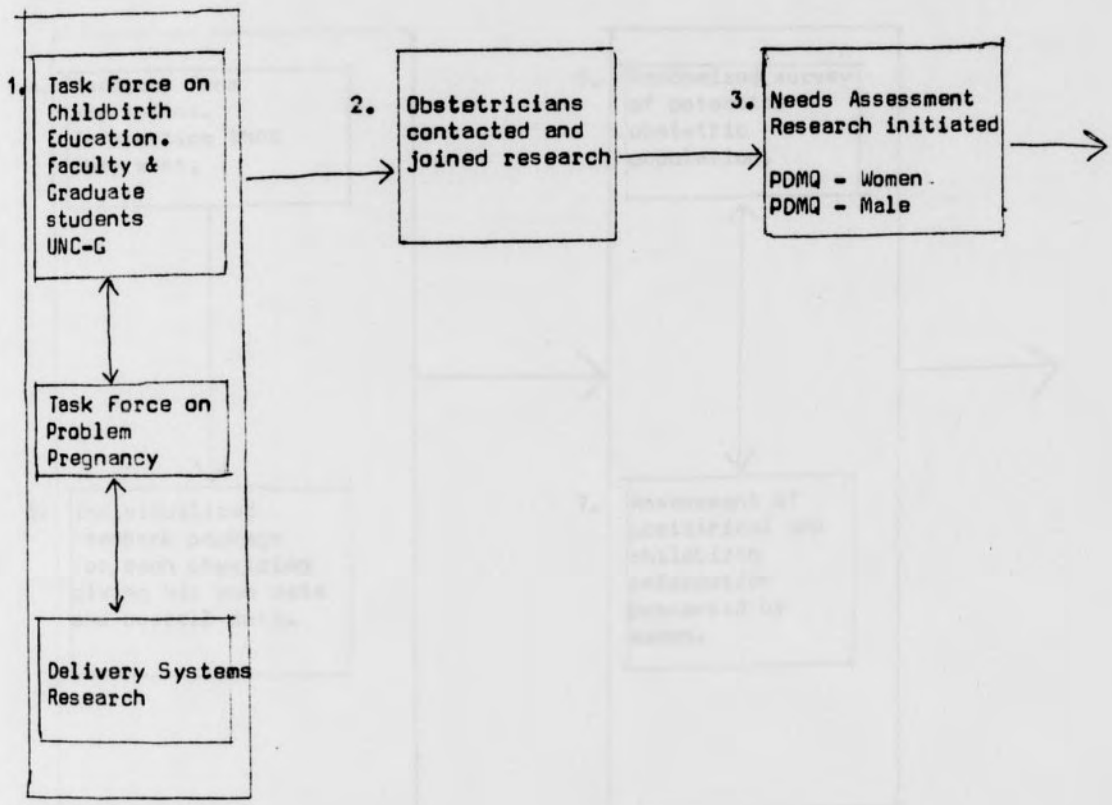


FLOW CHART: CHILDBIRTH EDUCATION RESEARCH

PHASE I

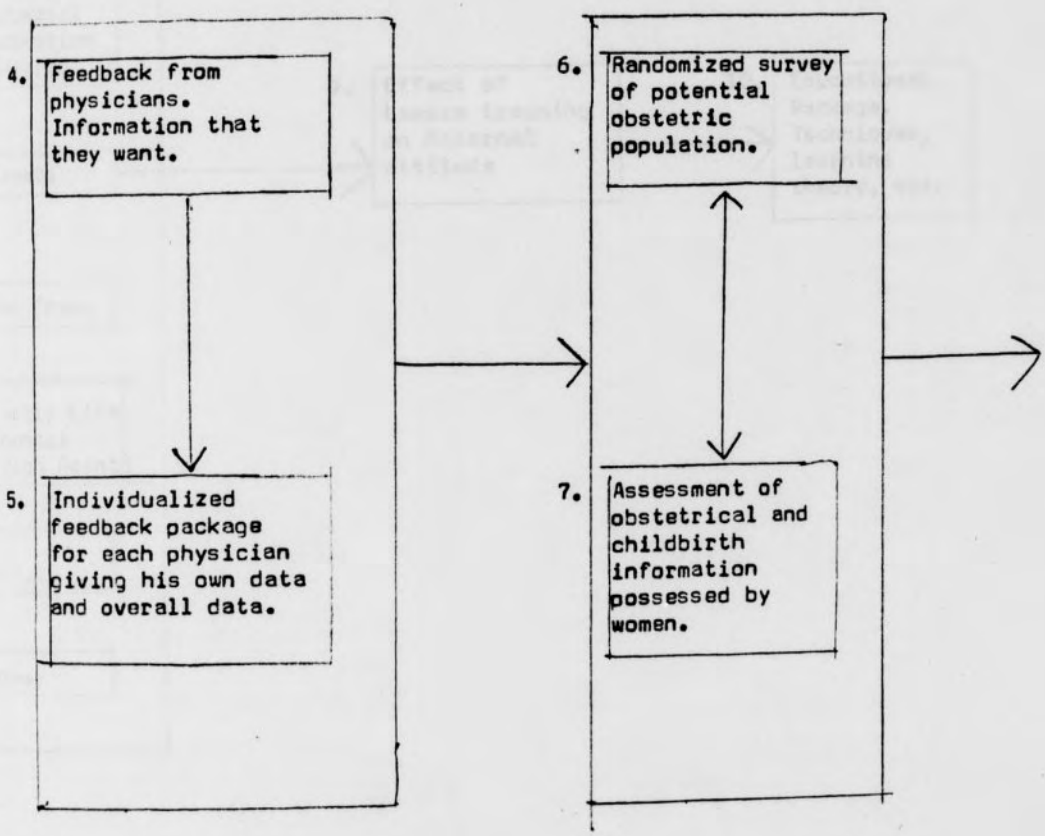
1973

April 1973



PROJECTED RESEARCH
(Phase I)

April-May 1973



PHASE II

1973-74

PHASE III

1973-74

PHASE IV

1974-75