A STUDY OF SOME FACTORS WHICH INFLUENCE THE OBTAINING OF INFORMATION ABOUT LABOR AND DELIVERY BY TWO GROUPS OF PRIMIPARAS

by

Patricia Bells Kariel, R.N., A.B., M.N.

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[redacted]

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CHAPTER I

INTRODUCTION

Introduction to the problem

In recent years, various professions have become increasingly interested in family life education, and concerned about the welfare of the family in our society. In addressing the Fifth American Congress on Obstetrics and Gynecology in 1952, Dr. Nicholson Eastman[12] expressed the need for considering family life education as a part of maternity care:

> Maternity care in the narrower sense consists in the care of the pregnant woman for safe delivery, her postnatal examination, the care of her newly born infant, and the maintenance of lactation. In the broader sense it begins much earlier, in measures aimed to promote the health and well-being of the young people who are potential parents and to help them to develop the right approach to family life, and to promote the place of the family in the community.

Dr. John Parks [41] states that,

> Science has made childbirth safe; our educational efforts in the future should be directed not only toward increasing this margin of safety, but toward a healthy, wholesome attitude regarding reproduction and parenthood as free from fear and misunderstanding as possible.

One result of this family-centered emphasis in maternity care has been the establishment throughout the country of classes which not only help prospective

parents learn to care for their new baby, but also help them understand something of the physiology of pregnancy and the course of normal labor. In addition, numerous books have been written for expectant parents, pamphlets are published by the U.S. Children's Bureau as well as by many commercial firms interested in promoting the sale of baby foods and supplies, and almost every month one or more articles on the subject appears in the popular women's magazines. Other mass media also aid in the dissemination of this information to a lesser extent: radio, TV, movies, newspapers, and other magazines from Look and Life to the confession magazines. Thus, it is reasonable to believe that any woman who desired information about normal pregnancy, childbirth or the care of children would have access to it from a variety of sources.

Experience has shown, however, that there is a wide variation in the amount of knowledge which different women acquire about these subjects. While some approach pregnancy and labor with fear bred of a mixture of ignorance, superstition and pseudo-truths, others are more relaxed and confident because they have some understanding of the physiology of pregnancy and labor, and are prepared to care for their children. This variation is not surprising, in view of the many factors affecting

both the amount of information which any individual acquires on a given subject and the sources from which she acquires this information. Some of these factors may be considered to be primarily psychological, in that they deal with the individual's intelligence, motivation, attitudes and emotions. Others, however, may be classified as sociological, in that they concern the individual in her relationship to society and as a member of various social groups. The present study will be concerned with some of these sociological factors. Studies (10, 21, 30, 33, 44) have shown that the actions of an individual are strongly influenced by the accepted modes of behavior of the social group to which he belongs. And, conversely, people with similar interests and values tend to associate, and to identify themselves as members of a particular group.

Statement of the problem

In general, the aim of this study is to determine what influence, if any, certain sociological factors have upon the amount of information which is acquired about labor and the sources from which that information is acquired, in a selected group of postpartum patients.

More specifically, the aim is to determine

whether, in the selected group, there is a statistically significant relationship between each of the independent variables and all of the dependent variables. The independent variables are the sociological factors.

1. Social class of the family
2. Education of the patient
3. Age of the patient
4. Area of residence of the family--whether urban or rural.

Patients will be grouped according to each of these independent variables, and studied with respect to the following dependent variables:

1. What information about labor and delivery is ever obtained.
2. Whether it is obtained prior to the onset of labor or not.
3. Whether the information is considered important by the individual.
4. From what sources the information is obtained.

Specifically, it is hypothesised that:

1. A relationship exists between social class and
   a. information ever obtained--women in the higher social classes will tend to obtain more information than those in the lower social classes.

b. information obtained prior to labor--women in the higher social classes will obtain more information prior to labor than those in the lower social classes.

c. information considered important--women in the higher social classes will consider the information obtained more important than those in the lower social classes.

d. sources of information used--women in the higher social classes will obtain most of their information from books, parents' classes, and their doctors; women in the lower social classes will obtain most of their information from friends and relatives.

2. A relationship exists between education and

a. information ever obtained--women with more formal education will tend to obtain more information than those with less formal education.

b. information obtained prior to labor--women with more formal education will tend to obtain more information prior to labor than those with less formal education.

c. information considered important--women with

more formal education will consider the information obtained more important than those with less formal education.

d. sources of information used--women with more formal education will tend to obtain most of their information from books, parents' classes and their doctors; women with less formal education will tend to obtain most of their information from friends and relatives.

3. No relationship exists between age and
   a. information ever obtained.
   b. information obtained prior to labor.
   c. information considered important.
   d. sources of information used.
4. No relationship exists between area of residence (urban or rural) and
   a. information ever obtained.
   b. information obtained prior to labor.
   c. information considered important.
   d. sources of information used.

It is anticipated that, as results of the study are tabulated and evaluated, other items of interest will emerge. These will be discussed and pertinent compari-

sons made both between and within groups. For example, one aim of the study will be to determine which of the questions are answered for most mothers before labor begins, and which during labor or not at all.

Limitation of the problem

1. The study will be limited to a selected group: namely, all primiparas who deliver a live infant vaginally in the selected hospital from the date of the beginning of the study until 50 interviews have been obtained.

2. Data will be obtained by means of a guided interview and recorded on a check sheet.

3. Respondents will be questioned as to the sources of information contained in a set of ten questions about labor and delivery which are considered representative of such information.

4. The selected group is composed of members of only two small segments of society, and in no way represents a cross-section of any particular community. In addition, the two groups receive different types of prenatal care, education, and orientation to the hospital routine, as detailed in Chapter III.

5. No attempt is being made to evaluate what the mother actually knew about labor, or the extent to which her knowledge affected the progress of her labor.

6. The results of the study must be considered as applying only to this group at this time, although it is hoped that certain of the findings may be suggestive of further study.

Assumptions

1. Much of the information about labor and delivery which is considered important for prospective parents to know can be included in ten major questions.

2. Women included in the study group will be willing and able to answer the questions posed in the interview accurately.

3. Throughout the course of the study, no factors will be operating in the setting which would affect responses to the interviews.

Importance of the problem

In our society today, the public is taking an increasing interest in many things which were once considered the exclusive province of specific professional groups. Dr. Mario Castallo(5) tells what has happened in the field of medicine:

> To the education of the public has been attributed the longevity of the people of the United States in general and the eradication of many diseases, because the progress of medicine has encompassed the participation of the patients with their doctor in their better care. In

> particular, educational programs, both for the profession and the laity, have done the same in reducing maternal and infant mortality and improving infant and mother care.

The number of articles in popular magazines related to all aspects of the cause and treatment of disease also illustrates the interest of the public in matters of health. If nurses as health educators are to capitalize on this increased interest and concern, it is important for them, together with others interested in health education, to try to find out what the members of the public want to know about various aspects of health and disease. And, if this information is to be most effectively disseminated, it follows that health educators should also determine the sources from which this information is usually obtained. For example, it would appear to be of little value to offer information through a series of formal classes to a group which shied away from such classes, and preferred to get its information from some of the more lurid magazines, or from families and friends. Shops[34] points out the need for research in the field of health education:

> There is a great need for applied research leading to the development of methods of education and service which will most effectively raise the level of health practices of individuals and communities and increase the quality and availability of health care. It has

> been amply demonstrated in the field of nutrition, for example, that an alteration of attitudes or behavior cannot be brought about without an adequate knowledge of the psychological and cultural factors which affect them.
> ...sociological studies have shown that participation in community organizations varies greatly with social class and income group and ethnic group. And yet, by and large, health educators have tended to assume that everybody in that community is interested to the same degree and will react in the same way to certain approaches.

It is hoped that by studying the sources from which different groups of women get their information, as well as the amount and type of information gained from these sources, it may be possible to reach some tentative conclusions as to desirable ways of meeting some of the expressed needs of the different groups. While the findings of this study can in no way be considered conclusive, it is hoped that they will be of interest and assistance to those engaged in parent education.

Overview

The study will be carried out on the obstetrical service of a 1,000 bed general hospital affiliated with a midwestern university. There are three categories of patients: private, who pay for both hospitalization and medical care; clinical pay, who pay for hospitalization but not for medical care, and indigent, or state, for

whom the state pays the total expense of hospitalization and medical care. The private patients will not be included in this study. Patients in the clinical pay category are students and wives of students or of young faculty members. The indigent patients are referred in from counties throughout the state by their private physicians and the welfare departments of the counties in which they reside.

Sources of data:--The primary source of data will consist of the responses to a guided interview carried out by the writer with each member of the study group. As stated above, this group will consist of all primiparas included in the state and clinical pay categories who deliver a live infant vaginally in the selected hospital from the date of the beginning of the study until 50 interviews have been obtained.

In deciding upon the number of patients to be interviewed, the attempt was made to choose enough patients to indicate the range of responses without, however, getting unnecessary repetition. The study by Lesser and Keane,[23] Nurse-Patient Relationships in a Hospital Maternity Service, was used as a guide. The authors decided that interviews with from 50 to 75 patients should be adequate to indicate the range of needs expressed by obstetrical patients in the hospital

in which the study was done. Experience showed that this estimate was correct. It seems reasonable to assume, therefore, that a total of 50 patients should provide sufficient data for the present study. A review of delivery records in the selected hospital indicates that it is reasonable to expect that 50 primiparas will deliver within three months or less; therefore the interviews will probably not extend over a longer period of time.

Procedures to be used in the collection of data:--It is intended to interview each mother included in the study group designated above. An interview guide has been set up composed of (1) general information about the patient, (2) a series of questions which mothers might ask about labor and delivery, and (3) a set of suggested sources which might provide answers to these questions. It is felt that the "Kinsey-type interview," a guided interview in which possible answers have been anticipated and responses are coded by the interviewer, is desirable for such a study. It is more flexible than a questionnaire but easier to tabulate and to manipulate than an interview with open-end answers. This type of interview has been used successfully in other studies in the social and health fields.(3,21,46) It improves the reliability of the responses by assist-

ing the individual who does not think and respond freely to questions. Responses will be recorded on the Form for Recording Responses to Interview. (see Appendix) The information on these forms will comprise the primary data of the study.

Construction and validation of measuring tool:-- The interview guide consists of two parts: a list of ten questions about labor and delivery and a set of suggested sources from which answers to each of these questions might be obtained. The List of Questions and List of Sources of Information (see Appendix) were set up in the following manner:

1. A series of approximately 25 patients not included in the study group was informally interviewed to determine what these women had wanted to find out about labor and delivery while they were pregnant, what they had learned from their own experiences in labor and delivery, and from what sources they had obtained their information. In addition, the major items relating to labor and delivery in the Red Cross course in "Mother and Baby Care"(1) were reviewed. The responses of the women interviewed and the items taken from the course were then formulated into the questions in the List of Questions. The list was then checked with various books and pamphlets written for expectant mothers.

(11, 14, 15, 28) In this way the writer hoped to include information which most expectant mothers might have wanted to know as well as that which few would have sought prior to the onset of labor, although it would have been helpful to them during labor.

Sources of information included were those most frequently given by the mothers interviewed as well as those, such as magazines, which offered information about labor and delivery to the public.

The guided interview, as it was tentatively set up, was submitted to a group of experts--teachers and administrators in the field of maternity nursing--for criticism and suggestion. After revision, it was submitted to the writer's adviser for further criticism, again revised, and the process repeated until it appeared to be a valid instrument.

Treatment of Data:--A separate sheet will be used to tabulate each sub-group of each independent variable.

1. Each of the dependent variables will be derived as follows:

A. What information is sought? This can be determined by subtracting the total number of "No information responses for each question from the number of respondents in the category.

b. From what sources is it obtained? This will not be tabulated for each question; the frequency with which each source is given by each respondent will be tabulated.

c. When was this information obtained? Totals under each heading, i.e., "Prior," "During Pregnancy," and "During Labor" will be figured.

d. Is this information considered important? This will be tabulated for each question.

2. Each of the independent variables will be derived as follows:

a. Social class. Three Classifications will be used: I, "above the common man," II, "the common man," and III, "below the common man."(21) Each individual will be assigned to one of the three classes by using a combined index of occupation and education. Wherever possible, these will refer to the husband; otherwise, to the wife or her family. Each of these items will be grouped on a seven-point scale: occupation according to the revised Edwards scale, and education according to the groups used by Redlich and Hollingshead.(30) The combined index will range from a score of 2 (high) to 14 (low.) A score of 2-5 will be designated as Class I, 6-10 Class II, and 11-14 Class III.

b. Education of the wife will be grouped into

seven classes, as above.

c. Age will be grouped into six classes, ranging from 1 (15-19 years) to 6 (40 and over.)

d. Area of residence will be grouped into two classes: Urban (those residing in towns or cities of 2500 or more population) and Rural.

e. For purposes of statistical analysis, the Chi-square test will be applied to the tabulated data, in order to determine whether a relationship exists between any two of the dependent and independent variables given. Because $N < 100$, Yates' correction will be employed. If Chi-square (χ^2) is found to be above a critical level, determined by use of a table, the null hypothesis that no relationship exists may be rejected. Acceptance or rejection of the hypotheses will rest upon this test; the null hypothesis will be rejected at the 5% level of significance.

It is hoped that, in addition, certain interesting facts can be ascertained relative to the group studied, e.g.: What per cent attended mothers' classes? Do the patients feel that teaching is being done by the nurse in the hospital situation? How do patients feel about the importance of education for labor and ways in which it might be carried out most effectively? Since the primary goal of this study is to provide information

which may be of value in improving not only the quality but also the coverage of prenatal teaching, it is hoped that some of the findings will at least suggest needs which are being unmet and possible ways of meeting these needs. Thus, although one would not be on firm ground in generalizing on the basis of a sample obtained in the fashion proposed for this study, one would have to assume that there is sufficient generality in the findings to apply outside the immediate study group. It is also hoped that suggestions for further study will arise.

CHAPTER II

REVIEW OF THE LITERATURE AND RELATED STUDIES

As a background for the present study, the literature was searched for some of the answers to the following questions:

1. What is "preparation for childbirth?" Why is preparation considered desirable? How successful has it been, and by what criteria has this success been measured?

2. What are some of the needs of pregnant women for education about childbirth? How are these needs being met?

3. What factors influence attitudes toward and knowledge of health, including the obtaining of information about childbirth? If social class is an important factor, how may it be defined and measured?

"Preparation for Childbirth"

During the early part of the 20th century, emphasis in maternity care was placed upon the reduction of maternal and neonatal mortality and morbidity. The resultant drop in these rates was attributable partly to an increase in the percentage of deliveries by doctors and in hospitals, which gave more mothers the advantages of modern medical knowledge and care. In this

shift of scene from home to hospital, the mother was no longer surrounded by her family during and following the birth of the baby. Instead she was engulfed by the hospital, separated from her family, and was often so heavily drugged that she was not aware of her child's birth until several hours after it had occured. Feeling that this change was not wholly desirable, certain physicians in this country sought a way of combining the advantages which medical knowledge brought to maternity care with those of home delivery. The term "family-centered maternity care" gradually came to be used to denote this approach.

In 1947, Dr. Thoms and his associates were studying the relationship between psychological and physiological aspects of pregnancy and labor. They turned to the work of Dr. Edmund Jacobson,(16) Progressive Relaxation, and to Dr. Grantly Dick Read's(29) experiences in England, reported in his Childbirth Without Fear, which propounded the fear-tension-pain syndrome in childbirth. Read's aim was to prepare patients for childbirth by helping them to gain an understanding of the physiological process which would decrease fear and apprehension. In addition, his patients were taught relaxation "exercises" developed by Miss Helen Heardman,(15) a physiotherapist, and

described in her book A Way to Natural Childbirth.

Believing that such a program of preparing patients for childbirth was possible not only for a private physician but also in a clinic setting, Dr. Thoms and his associates instituted a "preparation for childbirth program" at Yale University. In describing this program, Thoms and Goodrich[37] stated,

> In its broad application it represents an attempt on the part of those who care for pregnant and parturient women to gain further understanding of the physiology of pregnancy and labor, including its emotional aspects, so that these functions may be viewed with better understanding and less apprehension by patients and greater skill may be developed by those who attend them.

The educational program itself consisted of one lecture by a member of the resident staff and two exercise classes led by a nurse, which patients were encouraged to attend in the early part of the second trimester of pregnancy; and a second lecture and two exercise classes which patients attended in the latter part of the third trimester. The first lecture covered basic facts of pregnancy and labor; the exercise class was devoted primarily to teaching of good body mechanics, and to discussion and review of information covered in the lecture. The second lecture included a more detailed explanation of normal labor, covering the signs and symptoms of labor, when to come to the hospital, admission

procedures, the usual reaction of the mother to normal labor, the importance of relaxation technics, and the availability of analgesic and anesthetic aids. This was followed up in the exercise classes by practice in relaxation and breathing technics to be used during labor, a review of the admission procedure, a rehearsal for labor, and a tour of the obstetrical department.

In evaluating the results, Thoms[37] states, "Although it is our definite opinion that attendance at classes plays an important role in the final outcome of labor and delivery, this is difficult to prove statistically." Of the 546 patients included in the original study, 109 (27.5%) attended no classes, while 97 (17.8%) attended all six. The remainder attended varying numbers of classes. As evaluated by their attending physicians, 21.3% of those attending no classes had poor reactions to labor while only 5.2% of those attending all classes had poor reactions. Thoms adds that "support during labor accounts for the high degree of success in all groups."

These results were sufficiently encouraging that the program of "prepared childbirth," as Dr. Thoms preferred to call it, was continued. Describing the results of the program up to 1957, Buxton[4] cited the review of 2000 deliveries made by Thoms and Karlovsky in

1954.

> It was their impression that these patients had shorter, less traumatic labors, that they needed less medication, that there was less fetal anoxia and that, therefore, the obstetric competence of this technique was such that it had actual physiologic value in addition to its psychologic attributes.

Characterizing the aims of the program in 1949, Thoms(38) said, "We prefer to think of our program in a broad sense as being directed toward childbirth with understanding and support rather than toward childbirth without fear." It is interesting to compare this with Buxton's(4) statement, in 1957,

> Possibly, in essence, the "preparation for childbirth program" is designed to educate and prepare a woman for the inevitable natural and expected travail and pain associated with labor and delivery so that she need not approach it with apprehension and fear, but rather with anticipation and confidence.

The "preparation for childbirth" program spread as various hospitals, clinics, and private doctors sent nurses to Yale University and to the Maternity Center in New York for training. Vera Keane(19) describes the classes at the New York Hospital, which are held weekly for 1½ hours. Experience there shows that parents appreciate (1) gaining a familiarity with professional terms and a clear description of the probable sensations of labor, (2) a detailed tour of the unit and (3) the

detailed rehearsal for labor. In evaluating this program, the main criterion is: "how do parents feel about the total childbearing experience when the job is done?" The favorable reaction of those parents taking part is shown by the growing enrollment of both clinic and private patients.

Laird and Hogan[22] describe an elective program instituted at the Sloane Hospital for Women in New York City. 38% of the clinic patients were willing to participate. Although there was a lesson plan for each class, this was not closely followed, and classes were held on an informal discussion basis. Emphasis was on labor and on teaching the mother and father how they would participate in the actual coming of the baby. The program was evaluated both subjectively, by patients and doctors, and objectively by the doctors. Patients and obstetricians were pleased with the results. Objective evaluation was more difficult, but in general the prepared patients needed less analgesia and anesthesia, and had a higher proportion of spontaneous deliveries; in addition, the smaller amount of medication was beneficial to the babies. In conclusion, the authors state, "This program fills a big need in the general preparation of the patient, which will be manifested in less anxiety

and in more intelligent cooperation than can be statistically measured."

Castallo[5] describes a similar program at Jefferson Medical College Hospital in Virginia. He adds, "It has been observed that only a few of the total number of women who are delivered at any one particular hospital avail themselves of instruction classes." At this hospital, 10% of the ward and 25% of the private patients attend classes. Those who do attend require less analgesia and anesthesia, and have a higher proportion of spontaneous deliveries.

Obstetricians in private practice also attest to the success of preparation for childbirth. Miller[26] follows the same general pattern of doctor's lectures and exercise classes taught by a nurse. He strongly urges patients to attend at each pregnancy; in the series reported, 94% attended the exercise classes and 74% the lectures. His evaluation of objective results is more enthusiastic than many, but follows the same trend of shorter labors, less medication, and more spontaneous deliveries. Satisfaction of patients is evidenced by their returning for succeeding babies, and by sending their friends. In addition, he feels that patients gain emotional as well as physical satisfaction.

Kartchner[18] compares a study made in 1950 with

one made in 1958. In the earlier one, patients were cared for by different physicians with no consistent approach; in the later one, all were under his care and had received instruction. 92% of the first group had labors which were classified as either "excellent" or "satisfactory," while 98% of the second group fell into one of these two categories. Dr. Kartchner feels that in spite of this small difference in percentages, the psychosomatic approach to obstetrics is highly beneficial in ways which cannot be measured. To get the patients' reaction to the educational program, an evaluation sheet was sent to each patient following her discharge from the hospital. Among the questions asked was, "What contributed most to your satisfaction in labor?" The five answers most frequently given by a total of 468 patients (196 primiparas, 272 multiparas,) were:

Being awake during labor and delivery	87%
Abdominal breathing in the first stage	68%
General relaxation between contractions	36%
Having husband in the labor room	29%
Pre-delivery medication	24%

These answers would seem to indicate the importance of psychological satisfaction in labor and delivery.

Emphasis on "family-centered maternity care" is still on the upswing, as shown by an article published in January, 1960.(13) This tells of a re-orienting of

the entire obstetrical service at the Cleveland Clinic, not only through remodeling of the physical facilities but also through intensive in-service training of personnel. Revisions made were "designed to provide not only excellent physical care, but also strong emotional support for puerperal patients." The program includes preparation of both parents, since it is felt that including the father contributes to making a stronger family. Education begun prenatally continues after admission of the patient in labor with instruction by the nursing personnel. Beside evaluating the program as successful by objective criteria listed in the studies reported above, the author states, "The chief significance of the training program...is that it affects the parent at the point where healthy emotions with which nature equips him and her can turn into unhealthy emotions unless given positive encouragement from the outside."

Reports of studies dealing with the needs of women during the maternity cycle

In the preceding section, the development of education for childbirth has been traced and various studies evaluating such programs have been reported. As professional awareness of the value of these pro-

grams grew, studies were carried out to determine what the needs of expectant mothers were and how well these needs were being met.

One such study carried out before the program at Yale University was initiated, brings out certain relevant findings. In 1948, Augusta Clay,[6] working on her PhD dissertation at Yale University, visited eleven mothers weekly for two months before and two months after the birth of their first babies. In free discussion, she tried to interpret to the parents symptoms which the mother might be having, and to anticipate any problems. Although five of the mothers enrolled in a class sponsored by the Visiting Nurse Association, only one completed the ten lessons. The others complained that too much was discussed at one time, they could not ask personal questions in public, and the long sitting was tiring. The author found that interest of the parents followed a regular sequence. Early in pregnancy they were concerned about the care of the mother; when the baby began to move, they wanted to know about its development; and toward the eighth month the mother became apprehensive about the baby and about delivery. The father also wanted to know about childbirth and what to do when labor started. Just before birth, both parents asked about the hospital

regulations and medical treatment.

In postpartum interviews, the fathers spoke of fear, loneliness and the need for professional explanation and reassurance while their wives were in labor; the mothers spoke of the need for instruction from the doctor prior to labor and for personal interest and continuous care.

During pregnancy, most of the parents did not seek information from any source; only one went to the library. None read the pamphlets given them by the clinic. They felt that the information in books was too impersonal, and that they could not put theory into practice without help. They did, however, read books and pamphlets which the writer brought to them with specific sections marked.

Although the study group was small, the findings of this study relating to concerns which parents have, sources from which information was sought, and their need for personal interest and reassurance are of interest.

A more recent study was carried out by Christine Smith[36] in a rapidly growing Colorado community. The aim was to define needs of patients for help throughout the maternity cycle. Questionnaires were administered to 250 patients who were under private medical care and

delivered in the hospital in which the study was carried out. "The answers suggested that the importance of antepartal education in this community had not been recognized by a sufficient number of responsible and professional groups in key positions."

One of the questions asked was, "Throughout this pregnancy, were all your questions about yourself answered to your satisfaction or were you wanting to know more?" Answers indicated that the mothers had wanted to know more, but hesitated to ask, or did not know what questions to ask. This pointed out the need for anticipatory guidance. In replying to another question, "How did your doctor prepare you for this hospitalization?" 50.4% stated that they had had no information; most of the remaining 49.6% had received information about costs only. To the question "How did your doctor prepare you for, or what did he tell you about labor?" 70.8% stated that they had had no preparation; 29.2% had had very minimal preparation.

As a result of the study, an antepartal educational program, which included a pre-delivery tour of the obstetrical unit, was established. In addition, a more family-centered emphasis was given to the labor procedure; as more and better supportive care was given to patients, they in turn reported more satisfying

experiences in labor and delivery.

Marion Lesser and Vera Keane,[23] in Nurse-Patient Relationships in a Hospital Maternity Service, report on an extensive study carried out for the purpose of improving maternity care through investigation of the needs of women during the maternity cycle. The study group was drawn from women expecting their first or second babies during August or early September, 1954, and included clinic, semi-private, and private patients. (Since clinic patients pay a flat fee for all medical and hospital services which is based on ability to pay, the very lowest income group is not represented.) Because the aim of the study was to determine the general range of needs, the study was qualitative rather than quantitative, and was restricted to women "who, to the best knowledge available, possessed no physical, social or cultural characteristics which might create atypical needs."

Both nurses and mothers were interviewed; the interviews were recorded on tape and later abstracted. Nurses were interviewed to determine what they considered the needs of mothers during the maternity cycle to be, and what the nurse's role was in meeting these needs. Mothers were interviewed antepartally some time during the fifth to the seventh month of pregnancy concerning

their needs; sources and approaches used to meet these needs; their expectations, hopes, desires and needs anticipated during labor and delivery and the postpartum period; and their anticipation of the role nurses might play in meeting these needs. Postpartum interviews dealt with needs experienced in the intra- and postpartal periods; the mother's evaluation of the role played by nurses in meeting these needs; relationships between mothers and nurses; satisfactions and dissatisfactions; anticipations and desires regarding future childbearing experiences; and an idealization of the roles that nurses might play during pregnancy, labor and the puerperium.

The institution in which this study was made is described as "the Department of Obstetrics and Gynecology, within a large university medical center, located in one of the East Coast cities of the United States. Although an integral part of the center, this 206 bed division operates in many ways as a hospital in its own right."

On her first antepartal visit to the clinic, the mother receives the usual medical exam. In addition, she is told about the educational and counseling services available and receives a booklet prepared by the hospital which discusses pregnancy, recognition of

labor, and when to come to the hospital. She is also given information about parents classes, reading material, exercises and hospital services. There are two series of classes. One, offered free, consists of eight one-hour sessions for women and five one and one-half hour sessions for men which deal with pregnancy, labor and delivery, and care of the baby. A small fee, based on ability to pay, is charged for an additional series of seven two-hour classes in preparation for labor. About 1/6 of the couples planning to deliver at the hospital attend one or both series.

Since this study is so extensive and since, as the title suggests, it deals primarily with the role of nurses in maternity care, only those findings directly related to the present study will be discussed here. Antepartal interviews revealed that the pregnant woman becomes concerned about labor as her date of delivery approaches. This creates two major needs for her: (1) to be informed about the nature of childbirth and what happens to a woman during it and (2) to have fears allayed during the months before delivery. The specific informational needs most frequently mentioned by mothers were recognizing the signs of labor, knowledge about anesthetics, and familiarity with the hospital and its procedures. It is interesting that

> none of the women reported learning anything about the hospital or its procedures from professional people during antepartal visits. Similarly, women are more apt to seek knowledge about anesthetics, labor in general, and its specific signs, from other mothers, books, and classes, rather than by questioning the doctor or nurse at the time of their visits.

Classes were the most frequently used source of information. Mothers often stated that information obtained from books or from other women was of little help. Women who did not attend class stated that they would welcome individual instruction if it were offered. "In general, the interviews make it quite evident that accurate information about labor signs, sensations, pain relief and hospital procedures is difficult for the pregnant woman to get, unless she herself actively and persistently seeks it."

Not all women, however, felt that preparation for labor was necessary or even desirable. Three patterns were identified among the women studied: (1) The "information-seeker" attends classes, reads books, and asks her doctor, family and friends for information. She is most likely to have these informational needs met because of her persistence. (2) The "information-acceptor" welcomes knowledge or advice offered, but waits for professional people to take the initiative in meeting her needs. She is often deterred from finding

out by the apparent "busyness" of doctors and nurses. (3) the "information-resistor" is unwilling to receive information from any source. Significantly, neither is the nurse thought of by mothers as a source of information nor does she visualize herself in this role.

While some women fail to attend class because of a lack of awareness of the existence of such classes, a more important reason seems to be that

> the concepts women hold about labor needs and how to meet them, seem to be affected very little by organized instruction on the subject. Rather, it is the woman's existing convictions about her anticipated needs that are apt to determine whether or not she will undertake such instruction while pregnant.

In summary, while most mothers were satisfied with their physical care, their needs for information and emotional support were less well met. This might be explained by the fact that physical care is incorporated into the institutional routine, but other aspects are not. As a way of supplementing the organized classes with informal sources of information, it was thought that it might be desirable to discuss particular aspects of information during each antepartal visit. In addition, warm interpersonal relationships between patients and professional people are essential in order to meet the mothers' needs for emotional support. This information and support should be offered

equally to all patients. The authors conclude,

> Since the need of women during the maternity experience for health supervision is universally accepted, it is well to point out that our evidence indicates that patients' needs for information and emotional support appear to be equally universal. While these needs are subject to many individual differences, they do not appear to depend upon any particular group characteristics. The college graduate and the woman with little education may be equally uninformed concerning the changes that take place during pregnancy; concerning labor and the birth itself; and concerning infants and children. Fears, dependency needs, and anxieties are found among women with diverse cultural, economic, and educational backgrounds.

Definition of and methods of determining social class

In the foregoing sections, "preparation for childbirth" has been defined and its advantages demonstrated; and the needs of women for information and emotional support during childbirth have been pointed out. But although these needs may be universal, the ways in which they can best be met may vary with the woman's social class status, education, or other factors. The purpose of this section is to clarify the meaning of the term "social class" and to point out ways in which this may be determined. The following section will deal with studies which relate social class to various aspects of health.

Although the terms "social class" and "socio-economic status" are in common usage, the actual deli-

neation of various groups is not always clear. The work of Warner and others[40] in this field is "classic." They sought not only to define these terms, but, more importantly to "provide an objective method for establishing the social level of everyone in the community, and to do so by a simple, objective means." Warner's method of determining the Index of Status Characteristics (ISC) for any individual involves three steps: making the primary ratings which comprise the index--namely, occupation, source of income, (e.g. wages, salary, investments, inherited wealth,) type of dwelling, and neighborhood in which it is situated; (2) securing a weighted total of these ratings and (3) conversion of the total into a form indicating social-class equivalence. He points out that the four characteristics chosen are "no more than evaluated symbols which are signs of status telling us the class levels of those who possess the symbols." Since it is useful for predicting what the probable social-class participation of an individual will be, this ISC has been used in many studies relating social class to innumerable other variables from speech defects to televiewing habits.

A similar type of index, the Index of Social Position, was developed by Hollingshead[30] in order to study the relationship between social class and various

aspects of mental illness. This index "attempts to delineate operationally the socially discriminating comparisons people make with each other in their day-to-day behaviors." Its development was premised on three assumptions:

> (1) that a class status structure exists in the community, (2) that class status positions are determined mainly by a few characteristics and (3) that the characteristics symbolic of class status may be scaled and combined by the use of statistical procedures so that a researcher can quickly, reliably and meaningfully stratify the population.

Three characteristics were chosen: area of residence (i.e. neighborhood,) education and occupation. It was found that a combined index of these three yielded a correlation (r) of .942 with social class as judged by a panel of experts. Using two of the variables, a correlation of .926 was found to exist between judged class and area of residence combined with occupation; and of .906 to exist between judged class and education combined with occupation.

Kahl and Davis,[17] review the various indexes which have been developed. They state, "The research man who wants to use our results as a guide for his procedures...can tentatively conclude that "socio-economic status" is an accurate though clumsy term... The best single index of it is an occupational scale."

Warner's scale of occupations provides the best predictive results in a study which seeks to correlate any aspect of human behavior with social class. Either source of income or education may be used as a secondary criterion.

Reports of studies relating health practices to social class

Koos,[21] a sociologist, studied a community in upstate New York. He characterized his study as pure social research, in that it was not done for the purpose of improving health facilities in the community as such. Both the methodology and findings are of interest in connection with the present study.

He began with the hypothesis

> that the health attitudes and behavior of a family are related to its position in the social class hierarchy of the community, and are significantly affected by the prescriptions and proscriptions regarding health shared by those who are members of the same social class. Further, there is a difference in the way and degree to which people participate in health activities in the community which is significantly associated with their membership in a social class.

An "average" small community in upstate New York was chosen, and a panel of 550 families, representing a little over 20% of the households in the community, selected by a systematic sampling process. A

series of 17 interviews was then carried out with each family over a period of four years, beginning about 1945, to determine the attitudes and opinions of the respondents to various aspects of health and medical care. Each interview was constructed to include other topics in order to conceal its true purpose, and each was conducted by a different person in order that the interviews might not appear related.

The independent variable, social class, was determined on the basis of occupation: Class I consisted of business and professional men, Class II of skilled and semi-skilled workers and farmers, and Class III of industrial and farm laborers and unemployed. This mode of classification was validated on the basis of identification and association of individuals with others in the same social class. A series of dependent variables consisted of attitudes toward and opinions of many aspects of health such as illness, medical and dental care, and the hospital.

In explaining the method chosen for analysis of the data, the author states,

> The use of data such as those collected in this study requires that relationships which are not strictly quantitative must be tested for their significance. Chi Square (χ^2) was employed for this purpose, since it enables the worker to assess the significance of nonquantitative data,

> and also gives proportionate importance to each case in the distribution. A probability of 1 percent was accepted as the criterion of significance; in other words, if $P < 0.01$, it meant that there was only a 1-to-100 chance that the relationship was due to chance.

The only specific finding relevant to the present study concerns sources of information about health and illness. It was found that less than 45% of the respondents had had contact with one or more common sources of health information (newspapers, magazines, radio, meetings in the community.) "Health information was gained, apparently, more through personal contact with medical and non-medical sources than through these media." The overall conclusions, however, are of interest. The original hypothesis was borne out by results of the study; the author concluded that

> The use of health resources...is largely determined by the whole array of social and psychological factors which influence human behavior. ...in almost every examination of opinions, attitudes and behavior in health and illness, there appeared a significant difference (χ^2) among the three social strata. There is evidence, then, that in this community, at least, health behavior is related to class membership...

A later study was carried out, also in upstate New York, as a guide for the improvement of maternal and child health services.(3) This was made under the auspices of the New York State Department of Health with the cooperation of many colleges in the area. As the

reports of the study states,

> This study was designed to probe several facets of the relationship of social class to health and the methods by which this relationship could be further explored. ... certain health practices of the families and their utilization of public health services were also solicited and their social class relationships analyzed.

A directed interview guide was drawn up which could be objectively scored and machine tabulated. Each participating college was assigned an area; students carried out home interviews with parents 3 months or more after the birth of a surviving infant. Parents of from 1 to 36% of the births in the area at the time of the study were interviewed, depending on how many each college could complete. The Warner ISC was used for determination of social class. Although five classes were defined, Classes I and II were combined in tabulating results because of the small numbers in each.

Tabulation and analysis of the data revealed many interesting findings. For the group studied, neither location (metropolitan or non-metropolitan) nor age of mothers appeared to be factors affecting social class differences. Social Class V (the lowest) had the largest average number of pregnancies, the highest average number of children born dead, more born alive

per mother, and more per mother living at the time of interview. Lower class mothers also sought medical care later in pregnancy. A larger proportion of higher class mothers were cared for by an obstetrician, while lower class mothers more often were cared for by a family doctor or a clinic.

Parents were also asked whether either of them had ever attended classes for expectant parents. 87% never had; 10% of the mothers and 2% of the fathers had attended at some time. More Class I and II mothers had attended than any of the others.

> Each mother was asked whether or not there were classes near her and whether or not she or her husband had attended...Where classes were available, 66% of the mothers either were not sure or reported that "none were available."...In areas where classes were available and mothers knew it, 21 percent attended.

Mothers were also asked to name any books or pamphlets or other literature they had found especially helpful during pregnancy or after the birth of the baby. Twenty-one per cent did not list any; the percentage ranged from 14% of Classes I and II through 16% of Class III, 22% of Class IV, to 29% of Class V. Social class differences thus proved to be real.

Another study by the New York State Department of Health dealt with Pregnancy, Childbirth, the Neonatal

Period and Expectant Parents Classes.[44] 283 primigravidae in Westchester County who had recently given birth to a living baby were interviewed "as a preliminary exploration of some of the experiences, practices, attitudes and knowledge of primigravidae during the prenatal and neonatal period." The interview followed a pretested schedule of carefully worded questions.

Certain of the findings are of interest to the present study. Women who attended a parent's class were more likely to know the answers to informational questions about pregnancy. In addition,

> There was a general tendency for more upper class mothers to answer these informational questions correctly which correlated with differences in sources of knowledge. In general upper class mothers were more likely to give school, college, or reading materials as a source of their information while lower class mothers were more likely to give relatives, friends and neighbors.

Mothers who attended classes came from higher social classes, and both they and their husbands tended to have more formal education. Nevertheless, a significant portion of those who attended classes came from families of relatively low socio-economic status and had no education beyond high school.

Reactions to and comments about expectant parent's classes were analyzed. About 1/4 of the primigravidae in the communities where interviewing was done

attend these classes. Many mothers stated that they did not know about them; 2/3 of those who did not attend stated that they would have done so had they known about the classes. Of those attending, almost half rated the class as their most important source of information. When questioned as to what the most valuable part of the classes was, 37% mentioned "understanding and caring for baby" while 34% mentioned "understanding labor, delivery, and hospital in advance." It is interesting to note that all the mothers who had visited a hospital during pregnancy, whether or not it was part of a class, stated that it made having the baby easier.

While studies of the relationship of social class to health have been relatively few in the United States, the British have been more concerned with this over a longer period of time. A major study of various aspects of maternal behavior was carried out in Aberdeen, Scotland by Scott and others.(32) Certain findings of this study are relevant to the present one. A sample of married primigravidae was grouped into five social classes. It was found that those in the lower classes tended to marry younger and had a higher rate of premuptial conception. In order to gain knowledge about maternity,

> ...women in the upper social groups and those with higher intelligence test scores used more or less accurate sources of information such as clinics and radio talks, pamphlets, books, etc. more often. The lower class patients derived most of their information from relatives and friends... and articles in women's magazines.

The upper class patients showed a much stronger desire for information; lower-class patients often said, "I'd rather not know" or "I'd only worry if I knew." In discussing implications of these findings for health education, the authors say,

> The acceptance of a rational approach, based on expert information, may be alarmingly difficult for persons of limited educations whose attitudes more frequently reflect the familiar and intimate gossip of their group...When health education aims at cultivating attitudes and kinds of behaviour which conflict markedly with existing conventions, it is unlikely to be rewarding unless promulgated personally by those who have taken the time and trouble to win the patient's confidence. Impersonal methods of education, such as by pamphlets, posters, or even lectures, are least likely to reach and affect those who have the most need of education.

They feel that since the behavior of an individual is most strongly affected by the pattern of his group, the concentrated education of receptive groups within these classes may help change the pattern of members of the class.

No significant relationship was discovered between social class and the length of labor or the

mother's reaction to it. For the entire study group, it was found that, in general, the "well-adjusted" patients had the shortest labors. A "dysfunction temperament" identified in about 10% of the patients appeared to be related to concealed anxiety and was not affected by childbirth education.

Although it would be unwise, because of cultural differences between Scotland and America, to apply these findings directly to American women, the findings of this study are of decided interest; many are similar to those of the New York State studies.

Summary

On the basis of findings reported in the studies reviewed, certain generalizations may be made.

1. "Preparation for childbirth," plus strong emotional support of the woman in labor, has proved valuable not only in ways that can be measured statistically, but even more in psychological satisfaction to the patient.

2. The information about labor and delivery desired by women included in various studies concerned knowledge of the nature of labor, recognizing the signs and symptoms of labor, information about anesthetics, and some acquaintance with hospital procedures.

3. Many studies have shown that attitudes toward health and health practices are related to social class status and to education. Although less well documented, studies have also shown that a relationship exists between sources of health information used and social class and educational level of the individual concerned.

CHAPTER III

REPORT OF THE STUDY

A. Procedure

Description of the setting

As was proposed in Chapter I, this study was carried out on the obstetrical service of a 1,000-bed general hospital affiliated with a large midwestern university. The university, including the College of Medicine and the University Hospitals, is located in a relatively small city of about 33,000 population near the eastern border of the state. Because the hospital is intended by law to serve the population of the entire state, many patients must be transported to the hospital in order to receive care. In order to do this, ambulances cover the state on a regular schedule and make extra trips as necessary.

The obstetrical service is organized as part of the obstetrics and gynecology service. There is an average of about 130 deliveries a month. At the time of the study, extensive remodeling of the area was under way; certain changes in routines and nursing service will be instituted upon completion of the project. Facilities are described as they were at the time the

study began. These physical facilities consist of four units. The labor and delivery unit contains labor rooms, delivery rooms, a postpartum recovery area, and intensive care facilities for patients with conditions such as eclampsia and postpartum hemorrhage. The postpartum unit for indigent and clinical pay patients contains 37 beds; in addition, 10 beds for private patients are located on another floor. All babies are kept in the central nurseries unless they are isolated. Occasionally, a mother may wish to have her baby in the room with her. This is allowed for private and clinical pay patients, but no special rooming-in facilities are available. One antepartum unit contains 32 beds for patients who have complications or require special medication or observation; another 20-bed unit is provided for those whose pregnancies are uncomplicated. This large number of antepartum beds is attributable to the fact that since most indigent patients live so far away, they are brought to the hospital by ambulance two to three weeks before the estimated date of delivery to await the onset of labor.

Medical care is provided by the departmental resident and attending staff found in most teaching hospitals. Since this hospital shares the general problems of the nursing shortage, concerted attempts

are made to make the best use of professional and non-professional nursing personnel. The most intensive nursing staffing is thus found in the labor and delivery unit. Student nurses spend 12 weeks on the service: four weeks each in labor and delivery, nursery, and ante- and post-partum combined.

As explained in Chapter I, there are three categories of patients: private, clinical pay, and indigent, or state (the terms will be used interchangeably.) Most of the obstetrical clinical pay patients reside in or near the city. These patients receive their antepartum care through the obstetrics and gynecology clinic. Each patient, on her first visit, is assigned to one of the second-year residents, who cares for her throughout the maternity cycle. At the time of the first visit, the doctor examines the patient, talks with her and answers questions, and gives her a copy of the U.S. Children's Bureau Publication, Prenatal Care.(28) She is informed about the series of lectures on pregnancy and childbirth, usually given three or four times yearly. The residents present the lectures, with the assistance of nursing personnel for certain classes. Suitable films are also shown. Topics covered in these lectures are:

I. Anatomy and physiology of pregnancy.

II. Antepartal care.

III. Labor and delivery.

IV. Postpartum care of the mother.

V. The newborn.

VI. Baby bath demonstration

Between 150 and 200 persons attend most of the classes. Since they are open to anyone interested, this number does not represent only patients expecting to deliver at this hospital.

Education of expectant mothers continues throughout the prenatal period. On each return visit, the doctor discusses certain aspects of pregnancy with the patient and encourages her to ask questions. The various types of anesthesia are discussed, and the patient given the opportunity to state a preference, with the understanding that the final decision rests with the obstetrician. About one month prior to the expected date of delivery, labor and delivery are discussed; an attempt is made to allay any fears which might be present. The obstetrician reviews with the patient the signs of labor, and informs her of when she should notify him. He reminds her of the value of relaxation during labor, and assures her that she will receive help with this. Hospital procedures may be briefly reviewed if the patient indicates an interest in them.

Indigent patients, on the other hand, are not

seen by members of the resident medical staff until they come in prior to delivery. Whatever antepartal care they have received has been provided by their local doctors. On admission, they receive a complete physical examination, including laboratory work and a chest X-ray. Types of anesthesia are explained, and the patient encouraged to express a preference. Patients may be referred to other specialty clinics for care of abnormal conditions which are found. Those women who have no complications or require no special medications are assigned to an antepartal unit, which happens to be located in a separate building. During the period of waiting antepartal patients of course continue under medical supervision.

Among the indigent group are a large number of patients with social problems--unmarried mothers, women who are divorced or separated from their husbands, and those who are having marital difficulties. All share the problem of inadequate finances. As problems are recognized, patients are referred to the social service department through co-operative efforts of the medical and nursing staffs.

Antepartal patients appear to pass the time primarily by watching TV, talking, and reading movie and confession magazines. Primiparas are constantly

exposed to the stories of older and more experienced women about their own deliveries. Although no regularly scheduled classes are provided at present, films used in the lecture series described above are sometimes shown to this group on the day following their use in the lecture series. One of the residents is present to explain and answer questions.

All three classifications of patients are cared for on the labor and delivery service. They receive the same care, the only difference being that the private patients are delivered by their own obstetricians, members of the faculty of the College of Medicine; clinical pay patients by the second-year residents; and state patients by interns and first-year residents. When complications arise, consultation, supervision and assistance are, of course, always available. Support during labor is considered to be essential. Whenever possible, a registered professional nurse or a student nurse under the supervision of a registered professional nurse remains with each patient in active labor to provide emotional support as well as good physical care. Patients are instructed in breathing and relaxation techniques, and any explanations considered necessary are given.

Medical policies follow those of good modern obstetrical practice. Analgesia is administered on an individual basis. A combination of phenergan and demerol is used with the aim of keeping the patient as comfortable as possible while at the same time not endangering the fetus. For delivery, unless deep anesthesia is indicated, saddle block, pudendal block, or occasionally local infiltration anesthesias are employed, with whiffs of nitrous oxide as needed during the second stage.

The setting can be seen to be similar to that in many teaching hospitals as regards facilities, arrangements for medical and nursing care, and categories of patients given care. The major difference is that indigent patients are not, as a rule, cared for in the clinic during pregnancy.

Collection of data

Beginning on February 22, 1960, all clinical pay and state primiparas who had delivered vaginally and whose infants were living were interviewed on the postpartum unit, usually between the second and the fourth postpartum days. Exceptions to the procedure for choosing the study group were few. One patient could not be interviewed because she was unable to

comprehend what the interview was about. Another was missed when the clinical pay patients were temporarily moved to the private floor during the remodelling. The other two patients not seen at this time were interviewed in their own homes two to three weeks following delivery. Although this introduced a longer time between delivery and the interview, it was done to get as large a number of clinical pay patients as possible. Interviews were completed on April 20.

The primary purpose of the interviews was to obtain data for the dependent and independent variables which could be coded on the Sheet for Recording Responses to Interviews (see Appendix.) This sheet included two parts: (1) identifying information, used for determination of the independent variables, (2) a list of 10 questions about labor and delivery, and a list of anticipated sources from which answers to these questions might be obtained, which together comprised the dependent variables. The questions used were:

1. What can I do to prepare for labor?
2. How can I tell when labor begins?
3. When should I call my doctor? When should I go to the hospital?
4. What happens during each stage of labor?
5. What will be done for me when I go to the

hospital?

6. What should I do during each stage of labor to make it easier and quicker?

7. Will I be given medication for pain?

8. What is natural childbirth? Is it a good idea to have a baby without any anesthetic?

9. What will happen in the delivery room? What does it look like?

10. Will I be put to sleep when the baby is born? If not, what will happen?

The interview was not merely a series of questions to be answered; rather, patients were encouraged to talk freely about their experiences in labor and delivery, antepartal experiences and attitudes toward labor, and other pertinent topics. With most patients, a brief explanation of the purpose of the study and a leading question such as, "Do you think you found out enough about labor and delivery before your baby was born?" were usually enough to start the mother talking.

Some women denied knowing anything about labor and delivery. These woman were further questioned more specifically: "What made you decide you were in labor? What did you think labor would be like?" These questions usually elicited some response indicating knowledge or lack of it. Other questions asked were some such as,

"When did you first go to a doctor during this pregnancy? Did he tell you anything about labor or delivery? Did he give you any books to read?" If the answer to this was, "Yes," it was followed by, "Do you remember what they were?" and "What were they about?"

Mothers were also questioned as to why they had or had not used various sources of information, how helpful they found these sources to be, and what information had been most useful to them. Comments made by the respondents were followed up with a question such as, "Why do you feel that way?" Consequently, some of the women who verbalized more freely and showed greater insight and interest in the subject of the study were interviewed more intensively.

Although no attempt was made to determine the presence of social problems, these were often spontaneously brought up by patients. Comments which showed that these problems had influenced the person's attitude toward obtaining information were recorded. For example, one unmarried mother said that she had received no prenatal care before coming to the hospital because she had been afraid to go to a doctor. She felt also that she had been so concerned about her personal difficulties that she had not thought very much about labor until she came to the hospital.

One of the limitations of the study was that no attempt would be made to determine what patients actually knew about labor and delivery. It was found, however, that in order to determine whether to record "no information" for certain questions it was necessary to determine whether a basic minimum of knowledge had been obtained. For example, a woman might deny that she had any idea of how to tell when she was in labor. The question, "What made you decide you were in labor?" might then be asked. If the answers to this and succeeding questions showed some knowledge of the signs of labor--usually the presence of regular contractions plus one or more other signs--she was coded as having obtained the information.

An assumption of the study design was that women would be willing and able to answer the questions in the interview accurately. Experience showed that this assumption, although not completely valid, was probably sufficiently so to make the results of the study meaningful. There appeared to be little, if any, question as to the willingness of individuals to answer questions. Some problems did, however, arise as to various individuals' abilities to answer questions accurately. All questions were probably answered to the best of each individual's ability, but that ability

varied, especially on the two extremes of those who had received little information and those who had received a great deal of information from many sources. Frequently, patients who had received the least information had learned what they did accidentally rather than by design. They might answer, "Well, I suppose it's just something everyone knows." On the other hand, those patients who had read books, attended classes, and talked with their doctors sometimes did not remember who had said what. When asked whether a certain question had been discussed in class, one patient replied, "I suppose it was, but since I already knew about it, I didn't pay much attention."

Another aspect of the study design calls for caution in the interpretation of some of the results. Some of the questions are virtually "self-answering" in the course of a woman's experience in labor, while others may remain unanswered by experience alone. Thus, although it is almost impossible for a woman not to know what labor feels like after she has experienced it, she still may not know anything about the process of labor, and what happens during each stage.

Finally, it must be remembered that the whole study rests upon the subjective evaluation of each individual concerned. One person might say she had learned

nothing about labor from a book which another person had found very informative. This is in itself a significant aspect of the study, in that it reveals attitudes toward various sources of information as well as abilities to profit from them.

B. Results of the study

Method of analyzing the data

Four independent variables were identified in the study design: social class, educational level and age of the mother, and area of residence. The last three were determined as planned. Some difficulty was, however, encountered in determining social class for the clinical pay group. Information was obtained as to the occupation and education of the patient's father for two purposes: (1) to determine the social class of unmarried patients and (2) to ascertain whether the social class origin of patients in the clinical pay category might be used to determine their present social class. Table 1 shows the social class origin for all mothers.

Social class determination ultimately rests upon identification and association of the individual with a segment of society.(21, 30, 40) Since students and

TABLE 1

SOCIAL CLASS ORIGIN OF 34 STATE AND 16 CLINICAL PAY PRIMIPARAS, BASED ON OCCUPATION OF PATIENT'S FATHER

Social class	Occupation of patient's father	State		Clinical pay	
		No.	%	No.	%
I	Professional man, owner of business	-	-	2	12.5
II	Skilled worker, farmer salesman	2	5.9	9	56.3
III	Unskilled laborer, farm laborer, unemployed	29	85.3	3	18.7
Not classified	Deceased, divorced, separated	3	8.8	2	12.5
	Total	34	100.0	16	100.0

their wives who come from lower-class families are in the process of moving upward socially and no longer identify themselves with the lower social classes, it appeared to be unrealistic to classify them on the basis of social class origin. The father of one patient, for example, was an immigrant laborer with only a primary education; she was, however, a college graduate and her husband had almost completed his PhD in biochemistry. Obviously, these latter factors would be more important than the mother's social class origin in determining her present social class identification. Because any assignment of social class on the basis of the interviewer's subjective estimate would not conform to the study design and because some sociologists feel that the validity of assigning a social class to students is questionable,(40) it was decided to treat all clinical pay patients as an intact social class group, and to compare this group with the entire group of state patients, which was essentially homogeneous as to social class.

No difficulties were encountered in classifying the sample on the bases of education of the mother, age of the mother, and area of residence. Results of these classifications are shown in Tables 2, 3, and 4.

TABLE 2

EDUCATIONAL LEVELS OF 34 STATE AND 16 CLINICAL PAY PRIMIPARAS

Education	State		Clinical pay	
	No.	%	No.	%
Grades 7-9 completed	12	35.3	-	-
Grades 10-11 completed	17	50.0	-	-
High school graduation	5	14.7	4	25.0
Some college, business college, nursing school	-	-	8	50.0
College graduation	-	-	3	18.8
Graduate or professional training	-	-	1	6.2
Total	34	100.0	16	100.0
Range	7-12 years		12-18 years	
Mean	10.0 years		14.3 years	

TABLE 3

AGES OF 34 STATE AND 16 CLINICAL PAY PRIMIPARAS

Age	State		Clinical pay	
	No.	%	No.	%
15-19 years	25	73.5	3	18.8
20-24 years	8	23.6	11	68.7
25-29 years	1	2.9	2	12.5
Total	34	100.0	16	100.0
Range	15-25 years		19-25 years	
Mean	18.6 years		21.7 years	

TABLE 4

AREA OF RESIDENCE OF 34 STATE AND 16 CLINICAL PAY PRIMIPARAS

Area of residence*	State		Clinical pay	
	No.	%	No.	%
Urban	27	79.4	11	68.7
Rural	7	20.6	5	31.3
Total	34	100.0	16	100.0

* Area of residence for the clinical pay group was based on the patient's family home.

Although the original study design involved comparison of each of the dependent variables for each of the independent variables, this was found not to be feasible. The following adjustments were therefore made.

1. As stated above, instead of comparing the groups on the basis of social class, the two intact groups were compared for each of the dependent variables. It should be emphasized that this is still essentially a comparison on the basis of social class, even though no specific class is assigned to each clinical pay patient.

2. Because of the small number of clinical pay patients, and the homogeneity of the data obtained, no intra-group comparisons were made for the clinical pay group. Comparisons as to age and education were made for the state group only.

3. No rural-urban comparisons were made, as the number of rural patients was too small. Little difference existed between the state and clinical pay groups in this respect. This finding was unexpected, as the population of the state in which this study was made is about 50% rural. Because of the lack of evidence, no definitive explanation for this can be given; it is possible that it may be due to chance.

Comparison of the state and clinical pay groups

Four dependent variables were identified in the study design: (1) what information was ever obtained, (2) whether it was obtained prior to the onset of labor or during labor, (3) whether it was considered important by the individual and (4) from what sources it was obtained.

Topics of the ten questions constituting the information studied include: Question 1, preparation for labor; 2 and 3, signs of labor and when to notify the doctor; 4, physiology of labor; 5, hospital routines during labor; 6, breathing and relaxation during the first stage of labor and when and how to push in the second stage; 7, availability of analgesic aids during labor; 8, natural childbirth; 9, appearance of the delivery room and routines during delivery; and 10, types of anesthesia.

Information ever obtained--In order to determine what information was ever obtained by each patient, a "yes" answer was tabulated for each item for which "no information" had not been checked on the Sheet for Recording Responses to Interview. The number and per cent of patients obtaining the answer to each question are shown in Table 5.

TABLE 5

STATE AND CLINICAL PAY GROUPS COMPARED:
QUESTIONS EVER ANSWERED.

Question No.	State		Clinical pay		
	No.	%	No.	%	
1	5	14.7	16	100.0	*
2	33	97.0	16	100.0	
3	33	97.0	16	100.0	
4	23	67.6	16	100.0	*
5	33	97.0	16	100.0	
6	33	97.0	16	100.0	
7	32	91.1	16	100.0	
8	13	38.2	15	93.8	*
9	31	91.1	16	100.0	
10	33	97.0	16	100.0	

* Difference between the two groups is significant ($p < .05$).

The χ^2 test was used to determine whether any of the differences between the two groups were significant. The null hypothesis was rejected at $p<.05$. The computation of χ^2 is illustrated with data from Table 5, question 1. The simplified method for a 2 x 2 table is employed; since $N < 100$, Yates' correction is used.

The general formula is

$$\chi^2 = \frac{N\left[(BC) - (AD) - \frac{N}{2}\right]^2}{(A+C)(B+D)(A+B)(C+D)}$$

where each letter stands for one cell in the table, as shown below.

SAMPLE TABLE FOR THE COMPUTATION OF χ^2

Was the question ever answered?	State	Number of patients Clinical pay	Column totals
Yes	A (5)	B (16)	A+B (21)
No	C (29)	D (0)	C+D (29)
Row totals	A+C (34)	B+D (16)	N (50)

By substitution of the figures given above into the general formula,

$$\chi^2 = \frac{50\left[(16)(29) - 0 - 25\right]^2}{(34)(16)(21)(29)} = 29.086$$

Since the critical value of χ^2 at $p<.05$ for a 2 x 2 table, which has one degree of freedom, is 3.841, the value obtained here is well above the chosen level of significance. The probability that the difference between the two groups is due to chance is thus less than 5 out of 100.

Using this method of computation for each of the questions, the difference between the two groups was found to be significant at the 5% level for questions 1, 4 and 8. These are the only questions which cannot be answered by experience. It is interesting to note, however, that even for question 2, one state patient did not know what the signs of labor were after she had experienced labor.

Information obtained prior to the onset of labor and during labor--Two tabulations have been made. Table 6 shows the number of patients for whom each question was answered; Table 7 shows the number of questions answered per patient. Table 8 summarizes the information in Table 7 for purposes of statistical comparison.

For information obtained prior to the onset of labor, a significant difference exists between the two groups. A significantly larger proportion of the clinical pay group had answers to all questions except 2, 3, 5 and 10. It seems surprising that over 20% of the state

TABLE 6

STATE AND CLINICAL PAY GROUPS COMPARED: QUESTIONS ANSWERED PRIOR TO THE ONSET OF LABOR AND QUESTIONS ANSWERED DURING LABOR.

	Prior to labor					During labor			
Question No.	State No.	%	Clinical pay No.	%		State No.	%	Clinical pay No.	%
1	5	14.7	16	100.0	*	-	-	-	-
2	27	79.4	16	100.0		6	17.7	-	-
3	27	79.4	16	100.0		5	14.7	-	-
4	21	61.8	15	93.8	*	3	8.8	1	6.3
5	27	79.4	16	100.0		16	47.1	2	12.5
6	17	50.0	16	100.0	*	27	79.4	11	68.8
7	15	44.1	15	93.8	*	22	64.7	5	31.3
8	10	29.4	15	93.8	*	-	-	-	-
9	13	38.2	13	81.2	*	17	50.0	4	25.0
10	26	76.5	16	100.0		12	35.3	2	12.5

* Difference between the two groups is significant ($p < .05$).

TABLE 7

STATE AND CLINICAL PAY GROUPS COMPARED:
NUMBER OF QUESTIONS ANSWERED PRIOR
TO THE ONSET OF LABOR.

Number of questions answered	State		Clinical pay	
	No.	%	No.	%
0 or more	34	100.0	16	100.0
1 or more	33	97.0	16	100.0
2 or more	29	85.3	16	100.0
3 or more	27	79.4	16	100.0
4 or more	26	76.5	16	100.0
5 or more	25	73.5	16	100.0
6 or more	19	55.9	16	100.0
7 or more	13	38.2	16	100.0
8 or more	7	20.6	15	93.8
9 or more	6	17.7	14	87.5
10	2	5.9	12	75.0
Range	0-10 questions		7.10 questions	
Mean	5.5 questions		9.5 questions	

TABLE 8

SUMMARY OF TABLE 7: STATE AND CLINICAL PAY GROUPS COMPARED; NUMBER OF QUESTIONS ANSWERED PRIOR TO THE ONSET OF LABOR

Number of questions answered	State		Clinical pay		
	No.	%	No.	%	
0-5	15	44.1	-	-	*
6-10	19	55.9	16	100.0	*

* Difference between the two groups is significant (p .05).

patients did not know either the signs of labor or when they should notify the doctor.

No tests of significance were made for information obtained during labor. Many state patients who had little information prior to labor learned the answers to certain questions during labor. Clinical pay patients who already had the answers to most questions prior to labor learned less during labor, the greatest number stating that they had help with relaxation and breathing during the first stage, as did the state patients.

The information presented in Tables 7 and 8 also shows that less information was obtained by state than by clinical pay patients prior to labor. Whereas a little over half of the state patients had from 6 to 10 questions answered prior to labor, all the clinical pay patients were in this category. This difference is significant at the 5% level.

Information considered important--Table 9 shows the number and per cent of patients who considered each question important.

Results are similar to those shown in Table 6. Differences between the two groups are significant at the 5% level for all questions except 2, 3 and 6, and some difference exists for these two. While the majority of

TABLE 9

STATE AND CLINICAL PAY GROUPS COMPARED: QUESTIONS CONSIDERED IMPORTANT.

Question No.	State		Clinical pay		
	No.	%	No.	%	
1	2	5.9	12	75.0	*
2	29	85.3	16	100.0	
3	26	76.5	16	100.0	
4	20	58.8	16	100.0	*
5	22	64.7	16	100.0	*
6	24	70.6	16	100.0	
7	22	64.7	16	100.0	*
8	4	11.8	13	81.2	*
9	14	41.1	15	93.8	*
10	21	61.8	16	100.0	*

* Difference between the two groups is significant ($p < .05$).

state patients considered information about all but questions 1 and 8 to be important, the percentage was significantly smaller for this group than for the clinical pay group.

Sources of information used--Two tabulations have been made to determine what sources were used and the relative importance of each source. Table 10 shows the number of patients in each category who used each source at least once. Table 11 gives the mean number of questions answered per patient by each source (or the mean frequency with which this source was given by the respondents in each group) and the rank order of importance of each source for both groups.

Fewer questions were answered for the state than for the clinical pay group by each source, and fewer sources of information were used. The major sources of information for state patients were, in order of importance, friends or relatives, other (which included a film shown to some of these patients) and the nurse during labor. Clinical pay patients, on the other hand, obtained their information primarily from books, class attendance, and their doctors.

Summary--It has been shown that certain trends are apparent. State patients gain less total information than patients in the clinical pay group; they gain less

TABLE 10

STATE AND CLINICAL PAY GROUPS COMPARED:
SOURCES OF INFORMATION USED BY
PATIENTS AT LEAST ONCE.

Sources of information used	State		Clinical pay		
	No.	%	No.	%	
During pregnancy					
All doctors	18	53.0	14	81.4	*
Local doctor	3	8.8			
Book or pamphlet	7	20.6	12	75.0	*
Magazine	4	11.8	2	12.5	
Friend or relative	22	64.7	12	75.0	
Class attendance	-	-	11	68.8	*
Other	14	41.1	4	25.0	
During labor					
Nurse	25	73.5	10	62.5	
Doctor	12	35.3	3	18.7	
Own experience	16	47.0	5	31.3	
Other patients	1	2.9	1	6.3	

* Difference between the two groups is significant ($p < .05$).

TABLE 11

STATS AND CLINICAL PAY GROUPS COMPARED: MEAN NUMBER OF QUESTIONS ANSWERED BY EACH SOURCE PER PATIENT AND RANK ORDER OF IMPORTANCE OF EACH SOURCE.

Sources of information used	Mean number of questions per patient		Rank order of importance	
	State	Clinical pay	State	Clinical pay
During pregnancy				
All doctors	0.8	4.4	5.5	3
Local doctor	0.5			
Book or pamphlet	0.8	6.4	5.5	1
Magazine	0.4	0.6	7.5	6
Friend or relative	2.7	3.7	1	4
Class attendance	-	4.5	-	2
Other	1.5	0.5	2	7
During labor				
Nurse	1.3	0.9	3	5
Doctor	0.4	0.3	7.5	8.5
Own experience	0.9	0.3	4	8.5
Other patients	0.3	0.1	9	10
All sources	9.1	21.7		

information prior to the onset of labor, and they consider the gaining of such information less important. Information the state patients obtain during pregnancy comes primarily from friends or relatives, or from fortuitous or unidentified sources; while information for the clinical pay group comes primarily from books, class attendance, and their doctors. Magazines were an insignificant source of information for either group, and so need receive no further consideration. The importance of the contrasts between the groups, as well as possible explanations for them, will be discussed in Chapter IV.

Comparison of the state patients by education and age

In order to make intra-group comparisons of the state patients on the bases of education and age for each of the four dependent variables, the entire group was split into sub-groups for each category. So that each sub-group would be approximately equal in size, a split was made near the means of the category. For education, grades 7-10 completed were designated as low, and grades 11-12 completed as high. A similar split was made for age, 15-18 years being designated as low, and 19-25 years as high. The composition of these sub-groups is shown in Tables 12 and 13.

TABLE 12

HIGH- AND LOW-EDUCATION STATE PATIENTS COMPARED BY AGE.

Age	High Education		Low Education	
	No.	%	No.	%
15-18 years (low)	7	53.9	12	57.1
19-25 years (high)	6	46.1	9	43.9
Total	13	100.0	21	100.0
Range	17-25 years		15-21 years	
Mean	19.0 years		18.5 years	

TABLE 13

HIGH- AND LOW-AGE STATE PATIENTS
COMPARED BY EDUCATION

Education	High age		Low age	
	No.	%	No.	%
Grades 7-10 completed (low)	9	60.0	12	63.1
Grades 11-12 completed (high)	6	40.0	7	36.9
Total	15	100.0	19	100.0
Range	7-12 years		8-12 years	
Mean	10.2 years		9.7 years	

Inspection of the tables shows that there is little difference in age between the high- and low-education groups, or in education between the high- and low-age groups. Correlation (r) between education and age of the state patients is .26, which indicates that only a slight positive relationship between these two items exists for this group. Thus, comparisons made separately for age and education do, in fact, use different criteria.

Information ever obtained--Tables 14 and 15 give the same information for state patients grouped according to education and age as does Table 5 for state and clinical pay groups compared. Succeeding tables are also comparable to those for the state and clinical pay groups compared.

No significant differences exist between the two groups either on the basis of education or on the basis of age. In fact, considering the small size of the sample, the degree of homogeneity is remarkable.

Information obtained prior to the onset of labor and during labor--Comparisons are given in Tables 16 and 17 for number and per cent of patients for whom each question was answered, and in Tables 18 and 19 for number of questions answered per patient.

TABLE 14

HIGH- AND LOW-EDUCATION STATE PATIENTS COMPARED: QUESTIONS EVER ANSWERED

Question No.	High education		Low education	
	No.	%	No.	%
1	2	15.4	3	14.3
2	13	100.0	20	95.2
3	13	100.0	20	95.2
4	10	66.7	13	62.0
5	13	100.0	20	95.2
6	13	100.0	20	95.2
7	13	100.0	19	90.5
8	3	23.1	10	47.7
9	12	92.3	19	90.5
10	13	100.0	20	95.2

TABLE 15

HIGH- AND LOW-AGE STATE PATIENTS COMPARED: QUESTIONS EVER ANSWERED.

Question No.	High age		Low age	
	No.	%	No.	%
1	3	20.0	2	10.5
2	15	100.0	18	94.7
3	15	100.0	18	94.7
4	10	66.7	13	68.4
5	14	93.3	19	100.0
6	14	93.3	19	100.0
7	14	93.3	18	94.7
8	7	53.8	6	31.5
9	12	80.0	19	100.0
10	14	93.3	19	100.0

TABLE 16

HIGH- AND LOW-EDUCATION STATE PATIENTS COMPARED: QUESTIONS ANSWERED PRIOR TO THE ONSET OF LABOR AND QUESTIONS ANSWERED DURING LABOR.

Question No.	Prior to labor				During labor			
	High education		Low education		High education		Low education	
	No.	%	No.	%	No.	%	No.	%
1	2	15.4	3	14.3	-	-	-	-
2	10	76.9	17	81.0	3	23.1	3	14.3
3	10	76.9	17	81.0	2	15.4	3	14.3
4	8	61.5	13	62.0	3	23.1	-	-
5	8	61.5	19	90.5	10	76.9	6	28.5
6	6	46.1	11	52.4	10	76.9	17	81.0
7	5	38.4	10	47.7	11	84.6	11	52.4
8	3	23.1	7	33.3	-	-	-	-
9	5	38.4	8	38.0	7	53.8	10	47.7
10	9	69.2	17	81.4	7	53.8	5	23.8

TABLE 17

HIGH- AND LOW-AGE STATE PATIENTS COMPARED: QUESTIONS ANSWERED PRIOR TO THE ONSET OF LABOR AND QUESTIONS ANSWERED DURING LABOR.

Question No.	Prior to labor				During labor			
	High age		Low age		High age		Low age	
	No.	%	No.	%	No.	%	No.	%
1	3	20.0	2	10.5	-	-	-	-
2	14	93.3	13	68.4	1	6.3	5	26.4
3	14	93.3	13	68.4	1	6.3	4	21.0
4	10	66.7	11	57.9	-	-	3	15.8
5	14	93.3	13	68.4	6	40.0	10	52.5
6	9	60.0	8	42.1	12	75.0	15	74.0
7	10	66.7	5	31.5	7	46.5	15	79.0
8	6	40.0	4	26.3	-	-	-	-
9	7	46.7	6	31.5	5	33.3	12	63.2
10	14	93.3	12	63.1	3	20.0	9	47.5

TABLE 18

HIGH- AND LOW-EDUCATION STATE PATIENTS COMPARED: NUMBER OF QUESTIONS ANSWERED PRIOR TO THE ONSET OF LABOR.

Number of questions answered	High education		Low education	
	No.	%	No.	%
0 or more	13	100.0	21	100.0
1 or more	12	92.3	21	100.0
2 or more	10	76.9	19	90.5
3 or more	9	69.2	18	85.7
4 or more	9	69.2	17	81.0
5 or more	9	69.2	16	76.2
6 or more	7	53.7	12	57.2
7 or more	5	38.4	8	38.1
8 or more	2	15.4	5	23.8
9 or more	2	15.4	4	19.2
10	1	7.7	1	4.8
Range	0-10 questions		1-10 questions	
Mean	5.1 questions		5.8 questions	

TABLE 19

HIGH- AND LOW-AGE STATE PATIENTS COMPARED: NUMBER OF QUESTIONS ANSWERED PRIOR TO THE ONSET OF LABOR.

Number of questions answered	High age		Low age	
	No.	%	No.	%
0 or more	15	100.0	19	100.0
1 or more	15	100.0	18	94.7
2 or more	14	93.3	15	78.9
3 or more	14	93.3	13	68.4
4 or more	14	93.3	12	63.1
5 or more	13	86.7	12	63.1
6 or more	10	66.7	9	47.4
7 or more	8	53.3	5	26.3
8 or more	5	33.3	2	10.5
9 or more	5	33.3	1	5.3
10	2	13.3	-	-
Range	1-10 questions		0-9 questions	
Mean	6.7 questions		4.6 questions	

No significant differences exist between the high- and low-education groups; the only notable differences are for questions 5 and 10. More high-education patients had question 10 answered, while more low-education patients had question 5 answered. Overall, the balance is in favor of the low-education patients, but the variation is so slight as to be probably attributable to chance.

No significant differences exist between the high- and low-education groups; notable differences which did not quite meet the test of significance are present for questions 2, 3, 5, 7 and 10. In addition, for every question the difference was in favor of the high-age group.

Since this is merely another way of expressing the information in the preceding tables, it is not surprising to find that the high-education patients had fewer questions answered prior to labor than the low, but that this difference was small. The high-age patients also had more questions answered prior to labor than the low, but the difference between the two groups was larger. This contrast is summarized in Tables 20 and 21.

Although the difference is larger for age than for education, it does not meet the test of significance.

TABLE 20

SUMMARY OF TABLE 18. HIGH- AND LOW-EDUCATION STATE PATIENTS COMPARED: NUMBER OF QUESTIONS ANSWERED PRIOR TO THE ONSET OF LABOR.

Number of questions answered	High education		Low education	
	No.	%	No.	%
0-5	6	46.3	9	42.8
6-10	7	53.7	12	57.2

TABLE 21

SUMMARY OF TABLE 19. HIGH- AND LOW-AGE STATE PATIENTS COMPARED: NUMBER OF QUESTIONS ANSWERED PRIOR TO THE ONSET OF LABOR.

Number of questions answered	High age		Low age	
	No.	%	No.	%
0-5	5	33.3	10	52.6
6-10	10	66.7	9	47.4

Information considered important--This is shown in Tables 22 and 23.

For this item, contrasts appear to be somewhat greater on the basis of education than of age. Although none of the differences between the two education groups meets the test of significance, those for questions 5, 6 and 7 are borderline, and sufficiently large to be of interest. More patients in the high education group considered all questions except 8, 9 and 10 to be important, and the differences for these three questions were small.

Differences between the two age groups are small, and probably largely the result of chance.

Sources of information used--Sources used by patients at least once are shown in Tables 24 and 25.

A significantly larger proportion of low-education patients obtained information from their friends and relatives prior to labor. No significant differences exist for other items; it is of interest to note, however, that during labor more high-education patients obtained information from the doctor while more low-education patients obtained information by their own experience.

A significantly larger number of high-age patients obtained information from their doctors during pregnancy; a significantly larger number of low-age patients obtained

TABLE 22

HIGH- AND LOW-EDUCATION STATE PATIENTS COMPARED: QUESTIONS CONSIDERED IMPORTANT.

Question No.	High education		Low education	
	No.	%	No.	%
1	1	7.7	1	4.8
2	13	100.0	16	76.2
3	12	92.3	14	66.7
4	9	69.2	11	52.4
5	11	84.6	11	52.4
6	12	92.3	12	57.2
7	11	84.6	11	52.4
8	1	7.7	3	14.3
9	5	38.4	9	42.9
10	8	61.5	13	62.0

TABLE 23

HIGH- AND LOW-AGE STATE PATIENTS COMPARED: QUESTIONS CONSIDERED IMPORTANT

Question No.	High age		Low age	
	No.	%	No.	%
1	1	6.7	1	5.3
2	13	86.7	16	84.3
3	12	80.0	14	73.7
4	9	60.0	11	58.0
5	11	73.3	13	68.5
6	12	80.0	12	63.2
7	11	73.3	11	58.0
8	1	6.7	3	15.8
9	5	33.3	9	47.5
10	8	53.3	13	68.5

TABLE 24

HIGH- AND LOW-EDUCATION STATE PATIENTS COMPARED: SOURCES OF INFORMATION USED BY PATIENTS AT LEAST ONCE.

Sources of information used	High education		Low education		
	No.	%	No.	%	
During pregnancy					
All doctors	7	53.8	11	52.4	
Local doctor	-	-	3	14.3	
Book or pamphlet	3	23.1	4	19.0	
Magazine	2	15.4	2	9.5	
Friend or relative	5	38.4	17	81.0	*
Other	6	46.1	8	38.1	
During labor					
Nurse	10	76.9	15	71.5	
Doctor	7	53.8	5	23.8	
Own experience	5	38.4	11	52.4	
Other patients	-	-	1	4.8	

* Difference between the two groups is significant ($p < .05$).

TABLE 25

HIGH- AND LOW-AGE STATE PATIENTS COMPARED: SOURCES OF INFORMATION USED BY PATIENTS AT LEAST ONCE.

Sources of information used	High age		Low age		
	No.	%	No.	%	
During pregnancy					
All doctors	12	80.0	6	31.5	*
Local doctor	2	13.3	1	5.3	
Book or pamphlet	4	26.7	3	15.8	
Magazine	2	13.3	2	10.5	
Friend or relative	11	73.3	11	57.9	
Other	7	46.7	7	36.8	
During labor					
Nurse	14	93.3	11	57.9	
Doctor	5	33.3	7	36.8	
Own experience	2	13.3	14	73.6	*
Other patients	-	-	1	5.3	

* Difference between the two groups is significant ($p < .05$).

information through experience during labor.

The mean number of questions answered by each source per patient and the rank order of importance of each source are shown in Tables 26 and 27.

Inspection shows that slightly more information was obtained per patient by the high-education group; for each category, however, the difference is small. Rank order of importance of each category is very similar for the two groups.

A greater difference exists between the high- and low-age groups. While friends or relatives were the most important source of information for both groups, the high-age group had more questions answered by this source. As was shown in Table 25, doctors were a more important source of information for the high-age group and experience more important for the low-age group.

Summary--Few significant differences were found to exist within the group of state patients related to either education or age. There was a slight trend for the high-age patients to obtain more information prior to labor and to obtain more information from all sources than the low-age group. The high-education group, however, had more patients who considered obtaining information to be important. A significantly smaller proportion of this group obtained information from friends or

TABLE 26

HIGH- AND LOW-EDUCATION STATE PATIENTS COMPARED: MEAN NUMBER OF QUESTIONS ANSWERED BY EACH SOURCE PER PATIENT AND RANK ORDER OF IMPORTANCE OF EACH SOURCE.

Sources of information used	Mean number of questions per patient		Rank order of importance	
	High education	Low education	High education	Low education
During pregnancy				
All doctors	0.5	1.0	8	4
Local doctor	-	0.8		
Book or pamphlet	0.9	0.7	5.5	5
Magazine	0.7	0.1	7	7.5
Friend or relative	1.8	2.9	2	1
Other	1.9	1.2	1	2
During labor				
Nurse	1.4	1.1	3.5	3
Doctor	0.9	0.1	5.5	7.5
Own experience	1.4	0.4	3.5	6
Other patients	0.1	-	9	-
All sources	9.6	7.5		

TABLE 27

HIGH- AND LOW-AGE STATE PATIENTS COMPARED: MEAN NUMBER OF QUESTIONS ANSWERED BY EACH SOURCE PER PATIENT AND RANK ORDER OF IMPORTANCE OF EACH SOURCE.

Sources of information used	Mean number of questions per patient		Rank order of importance	
	High age	Low age	High age	Low age
During pregnancy				
All doctors	1.9	0.2	3	7
Local doctor	0.9	0.1		
Book or pamphlet	0.8	0.8	5	5
Magazine	0.7	0.1	6	8.5
Friend or relative	3.3	1.8	1	1
Other	2.2	1.0	2	4
During labor				
Nurse	1.5	1.1	4	3
Doctor	0.4	0.5	7.5	6
Own experience	0.4	1.2	7.5	2
Other patients	-	0.1	-	8.5
All sources	11.2	6.8		

relatives.

Comments and reactions of state patients

It is a truism that statistics apply to the group rather than to the individual. A brief sketch of the comments and reactions of some of the individuals interviewed is necessary to complete the report of this study. Since the interviews were not tape recorded, the comments as presented are, of necessity, paraphrases rather than exact quotes.

Adequacy of information received prior to labor--In a preceding section, the amount of information received prior to labor was measured in two ways: first, the number of patients for whom each question was answered, and second, the number of questions answered per patient (cf. Tables 6 and 7, Figure 1.) Although no attempt was made to do so, it would have been possible to establish objective ratings of the adequacy of a patient's preparation for labor. For example, 0-4 questions answered might be rated as low, 5-7 questions as average, and 8-10 questions as high. Essentially, however, this study is concerned with the subjective evaluation of the respondents. Item 11 of the Sheet for Recording Responses to Interviews, "What did you not know before labor began that might have

helped you during labor?" was included in order to determine how respondents felt about the adequacy of their preparation for labor. Answers to this revealed that 9 patients felt the information they had received was adequate; 14 expressed a desire for more information, and the remaining 11 had no opinion.

Among the patients who stated that their information was adequate were some who might be classified by Lesser and Keane[23] as "information seekers." One unmarried mother, who had received no medical care or information about labor prior to her admission to the hospital about one week before she delivered, said, "I always want to know exactly what will happen to me. I won't even let the dentist do anything until he explains everything he is going to do. So, when I came here, I asked the doctor all about labor and he told me." Others of this group might be classified as "information avoiders." One of these women said, "After all, experience is the best teacher." None said anything such as "I'd rather not know," as reported by the Aberdeen study.[32]

Among the patients with no opinion were four who appeared to be extremely dull. This impression of the interviewer was strengthened by the fact that all four had left school in seventh or eighth grade because of

academic inability. The rest of this group appeared merely to be unconcerned. Verbal expression of this lack of concern was often supplemented by the unemotional tone of the responses, which is difficult to record objectively or to tabulate.

It seems important, however, that 13, or 38% of the state patients interviewed, expressed a desire for more information from reliable sources. Some who had had only one or two questions answered prior to the onset of labor said, "I knew so little that anything would have helped," or, "I didn't know anything at all about labor. I should have known all about it."

Occasionally, the lack of reliable information could have had serious consequences. The interviewer was surprised at the lack of information and vagueness about the signs of labor on the part of some of the patients. Typical of the less-informed patients was one who knew only "I would have bad pains;" there was no concept of regularity, or how these pains might feel. This lack of information was partially responsible for one delivery in a wheelchair. A woman who lived about 80 miles from the hospital had begun having cramps about two months before her due date. She called her doctor who, according to the patient, told her "to go to bed and not make any noise." (He presumably had suggested

that she keep quiet.) Although she did so, the cramps continued. When the pain got worse, she went into town; since her doctor would not see her in the middle of the night, she went to another doctor who sent her to the hospital immediately. The only reason she had gone to see the doctor was to obtain relief of the continuing pain; she had no idea that anything might be amiss. The baby arrived soon after its mother reached the hospital. What might have been an uneventful, although premature, delivery was complicated by being unsterile; the patient had a second-degree tear as well. The mother stated that she had no idea that her due date was anything other than an estimate, nor had it occurred to her that the baby could arrive prematurely. This patient's reaction to her delivery was, "My mother said having a baby would be hard, but I never had any hard time at all. The baby was born before I even knew what was happening."

Another patient almost came to grief because she did not know the difference between "show" and frank bleeding. Fortunately, when she had a "bloody discharge," she came to the hospital, assuming that she was in labor.

These reactions and experiences of individual patients tend to support the statistical evidence that many of the state patients did not have adequate infor-

mation prior to the onset of labor.

Attitudes toward sources of information used prior to the onset of labor--The sources of information used were reported in two ways: first, the number of patients using each source and second, the mean number of questions answered per patient by each source. (cf. Tables 9 and 10.) The results showed that, while the doctor, books and class attendance were important sources of information for the clinical pay patients, the state patients tended to rely primarily on their friends and relatives for information.

Information received from other antepartal patients was recorded in this category. Some of the personnel on the obstetrical service had expressed their concern to the interviewer as to the effect which listening to the gossip of the more experienced women might have upon the young primiparas in the antepartal units. When interviewed following delivery, only six of the patients admitted having been "scared" before delivery. One said, "The talk of the other women scared me--everyone said something different. My mother died when I was 13, so I didn't have anyone at home to talk to. But I talked to the nurses, and that made me less afraid."

Another said, "The other women give you an odd

idea of what labor is like. I was very scared, and that made it hard for me to relax. I didn't know what dilating meant, and what was supposed to dilate."

A third commented, "The stuff the other ladies say frightens you. I didn't know much except what I heard them talk about. I would have liked a doctor or a nurse to tell me the right things."

Other patients said that what the other women told them was their major source of information about labor and delivery, and did not frighten them.

The rest of the information in the "friends or relatives" category was received from mothers or mothers-in-law, sisters or sisters-in-law, and friends at home. Most of this information was felt by the patients to have been helpful and reassuring. "My sister-in-law told me not to get scared because nothing bad would happen."

All three patients who had received information from their local doctors found it extremely helpful. Others who had not received any information from their doctors expressed a desire for reliable information from a doctor. One said, "My doctor didn't tell me anything--I wish he had. The doctor is able to explain in general, while each woman tells only her own experience." Some said they had either been afraid to ask their doctors for

information or did not know what to ask.

Attitudes expressed by some of the patients toward reading and books help to explain why books were not an important source of information for the state patients. Only eight of this group received any information from books; three of these were able to identify the books they had read. One identified the books she had read as, "a whole stack of books my doctor gave me." Others made such comments as, "I read a doctor book we have at home, but I couldn't understand it," and "I like to read, but I only read novels. I never could remember anything I read in school books." It should be noted that these comments were from those who had read books.

Eight patients saw the film on labor and delivery. Some said they didn't remember much that was in it, others that it was very helpful. The number of questions answered by it ranged from 3 to 6. For five patients the film was a major source of information, as they had known virtually nothing about labor until they saw it.

The evidence presented above tends to support the contention that state patients received most of their information from friends and relatives. Many would have liked more information from their doctors.

Few, if any, felt that they could have learned much by reading books, or were interested in doing so. For those seeing the film on labor and delivery, it was a helpful, and often an important source of information.

Attitudes toward information received during labor, and toward labor and delivery--Those patients who knew very little prior to the onset of labor often stated that they had received reliable information during labor, and had found this reassuring. This is in keeping with the findings reported in Tables 5 and 6. The general opinion was that labor was harder than delivery. Many patients said, "I would have been much more scared if someone hadn't been with me all the time I was in hard labor." Almost all spoke of how much the nurse had helped them with relaxation and breathing techniques, and how these were more helpful than any medication they had received. Some patients felt that they should have known in advance "about the breathing, and how it could take the edge off the pain." Others felt that this was unnecessary, since someone was always there to help them when they needed it.

Reactions to delivery were almost universally favorable. Most of the patients were awake at the time of the baby's birth. These stated that "it was wonderful to be awake when the baby was born," and that this

experience immediately made them forget the pain of labor. A few patients stated spontaneously that they thought they wouldn't want any anesthesia when the next baby was born, other than "for the cutting and the stitches," because delivery had been so much easier than they had anticipated.

When asked whether they had been frightened about the delivery room, or would have liked to know in advance what it looked like, all but two said, in effect, "I was so eager for that baby to get here, I didn't care what the delivery room looked like. I don't even remember much about it now." Only one mentioned being disturbed at having her hands strapped down. This lack of concern about the appearance of the delivery room is shown by the fact that only 38.6% of the state patients felt that information on this subject was important to have.

These reactions point out how important support during labor was for most patients, and how it helped to compensate for their lack of knowledge about labor and delivery, as well as providing emotional assistance at a time when it was much needed.

Comments and reactions of clinical pay patients

As might be expected, most of the clinical pay

patients verbalized more easily than the state patients. Since many had husbands who were graduate students, their first reaction when approached for this study was, "Are you writing a thesis?" They were interested in the study and eager to contribute any information which might be helpful.

Adequacy of information received prior to labor--As might be expected on the basis of the findings reported in Table 6, all the clinical pay patients stated that they had been adequately prepared for labor; some added that "of course, some things you can learn only by experience." All the patients felt they had known the signs of labor; one said that although she thought she knew what to expect, she had not known when she was in labor.

12, or 75% were aware in advance of the importance of relaxation and breathing techniques during labor. Three of these were nurses; they had reviewed their obstetrical nursing texts, and had practiced breathing and other exercises during pregnancy. Another, a singer, said that she had figured out that the type of breathing required during the first stage of labor would be similar to that used in singing, and had found that she had no difficulty with abdominal breathing during labor. A fifth, a graduate student in psychology, said that she had

not practised breathing during pregnancy because she thought that its benefits were probably due to its distraction value. She stated that during labor she had tried both abdominal breathing and other methods of distraction, and found them equally helpful. Three patients said that they had had difficulty doing abdominal breathing during labor, and thought that "exercise" classes might have helped. Another two said that, although they had not practised breathing or relaxation during pregnancy, they had decided in advance "to relax and do as I was told during labor."

Attitudes toward sources of information used prior to labor--The findings reported in Tables 9 and 10 show that books, class attendance, and the doctor were the three most important sources of information for the clinical pay patients.

All but one patient had read one or more books; only one said that she did not remember what was in the book she read. The books identified by this group as sources of information are shown below.

Title of book	Number of patients
Prenatal Care[20]	7
Better Homes and Gardens Baby Book[2]	3
"Obstetrical nursing text"	3

"Some pamphlets the doctor gave me"*	3
Read, G. D. Childbirth Without Fear(29)	2
Eastman, N. J. Expectant Motherhood(12)	1
Jacobsen, E. Progressive Relaxation(16)	1
Thomas, H. and Roth, L. Understanding Natural Childbirth(38)	1
"Obstetrics text"	1
"A book from the medical library written by a doctor in Nova Scotia."	1

* Presumably, these included Prenatal Care.

Only three patients said they had received little or no information about labor from their doctors; two of these stated that their doctors had been planning to discuss labor on the next visit, but the baby arrived first. The other patient was a nurse, who said that her doctor always asked her if she had any questions, and she had never had any about labor. All patients said they felt free to talk to their doctors, and that their doctors were interested in answering their questions.

Four patients did not attend any classes; two were nurses, who felt class attendance to be unnecessary. The other two said that they had intended to go to class, but had been unable to do so. Only one attended all five sessions; all the others attended at least the session on

labor and delivery, which they felt was most important.

Two contrasting attitudes were expressed toward information from friends and relatives. A few said that what they had learned from their mothers, sisters or friends was very helpful. One patient represented the opposite point of view when she said, "I got two kinds of information, the good and the bad. The bad kind was mostly from well-meaning relatives or friends who told me how terrible labor would be; the good kind was from books and my doctor." Others also said that they had tried to ignore what their friends told them. It appears that because this group used more sources of information than the state patients did, they relied on friends and relatives less for information than for reassurance and support, unless they felt the information received was frightening rather than reassuring.

Attitudes toward information received during labor, and toward labor and delivery--Since these patients had more information prior to the onset of labor than the state group, they acquired less new information during labor (cf. Tables 5 and 6.) Reactions to labor itself were, however, similar to those of the indigent group. Many individuals spoke of the importance of support during labor. One complained of having

a medical student trying to distract her by "chit-chatting" while she was attempting to concentrate on breathing and relaxation; she solved this by asking him to keep quiet. One person spontaneously said that she "got pretty hysterical" during labor; she thought this might have been partly the result of having had "so many hypos," and hoped that next time she would "behave better."

None of the group expressed any anxiety about the appearance of the delivery room. A tour is usually scheduled as part of the class on labor and delivery, but for some reason none of these patients had been on that tour. Three said they would have liked to have had a tour, but that it was mostly curiosity and really didn't matter. One of these said that she and her husband were unable to find the labor department when she came to the hospital in labor, and that the tour would have helped in this respect.

As with the state patients, the clinical pay patients were generally happy about delivery and enthusiastic about having been awake when their babies were born. They felt that their labor and delivery had been more satisfactory because of the information they had obtained prior to labor and the support they received during labor.

CHAPTER IV

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A. SUMMARY

The general aim of the study was to determine whether, in a selected group, any relationship existed between the amount of information about labor and delivery which was obtained, the sources from which it was obtained, and specified sociological factors. Specifically, four dependent variables were included in the study design: (1) what information about labor and delivery was obtained, (2) whether it was obtained prior to the onset of labor or during labor, (3) whether it was considered important by the individual and (4) from what sources it was obtained. Three independent variables were used: social class, education and age. A fourth, rural or urban area of residence, was not used because of the small number of rural patients found in the sample.

Data were obtained by means of interviews with 50 patients on the postpartum service of a large teaching hospital. 34 indigent patients comprised the "state" group; 16 wives of university students comprised the "clinical pay" group. Unstructured interviews were

carried out with the patients to determine, for each of ten questions about labor and delivery, (1) from what sources answers to the questions had been obtained and when, if at all; and (2) how important the respondent considered the information to be. Responses were coded on a data sheet by the interviewer during the interview.

The data obtained from the interviews were tabulated to obtain the figures for the dependent and independent variables. In order to study variations related to social class differences, the state and clinical pay groups were compared for each of the four dependent variables. Variations related to age and education were studied only within the state group, also for each of the four dependent variables. In order to determine whether a relationship existed between any of the dependent variables and any of the independent variables, differences between the two groups were tested for significance by the use of χ^2. The null hypothesis was rejected at $p < .05$.

B. CONCLUSIONS

Testing of the hypotheses

The analysis of the responses to questions by patients in the state group helps to validate the list

of questions used, and is important to the interpretation of the findings for testing of the hypotheses. In setting up the list of questions, the attempt was made to include some questions to which almost all of the patients would be likely to seek answers, some to which few would be likely to seek answers, and some between these extremes. The results of the study show that this was accomplished. One-third or less of the state patients obtained answers to questions 1, 4 and 8 prior to labor; the same fraction considered information contained in these questions important. Two-thirds or more obtained answers to questions 2 and 3 and considered this information important. All other questions fell in the middle third for both items.

Questions 1, 4 and 8 are the only three which cannot be answered by experience, at least to some extent. They are also the most remote from a prospective mother's immediate concern. These may be contrasted with questions 2 and 3, which it was supposed would be of concern to every pregnant woman. Any of the questions falling in the intermediate group can be ignored until the moment when they must be faced, which may be when the woman is actually in labor. Although she must know enough about the signs of labor to get to the hospital at the proper time, once she has been admitted someone

else will take over and the other questions will be answered in one way or another.

Testing of hypotheses for each of the four dependent variables with social class as the independent variable--The study was carried out as proposed in Chapter I, with the modifications which were explained in Chapter III. Comparisons using social class as the independent variable were made by using the two intact groups of state and clinical pay patients. Conclusions drawn from these comparisons were used to test the hypotheses put forth in Chapter I.

1. Information ever obtained: Significant differences were found in the proportion of patients in the two groups who obtained answers to questions 1, 4 and 8. Since all the other questions could have been answered by experience, the difference for these three questions appear to be a sufficient basis for acceptance of the hypothesis that a relationship exists between social class and the amount of information ever obtained. This is supported by evidence from Table 11: a mean of 9.1 questions per patient was answered by all sources for state patients, whereas a mean of 21.7 questions per patient was answered for the clinical pay group.

2. Information obtained prior to labor: Significant differences were found in the proportion of

patients in the two groups who obtained information on all but two questions, and a fairly large difference existed for these two. There was also a significant difference between the proportion of state and clinical pay patients who had six or more questions answered prior to labor. These two items present overwhelming evidence for acceptance of the hypothesis that a relationship exists between social class and the amount of information obtained prior to labor.

3. Information considered important: Significant differences were found in the proportion of patients in the two groups who considered all questions but 2 and 3 important. These were the two questions which it was thought that almost all patients would consider important. This seems to be an adequate basis for acceptance of the hypothesis that a relationship exists between social class and information considered important.

4. Sources of information used: A significantly greater proportion of clinical pay patients obtained information from books, class attendance, and their doctors; in fact, 75% of the total information obtained during pregnancy by this group came from these three sources. While these sources are highest in rank order of importance for the clinical pay patients, friends and relatives are of greatest importance for the state

patients, providing 43.5% of the information obtained by them during pregnancy. Because clinical pay patients also obtained information from friends and relatives during pregnancy, a significant difference between the two groups did not exist for this source of information. Therefore, acceptance of this hypothesis rests partially upon rank order comparison. Evidence is sufficient to accept the hypothesis that a relationship exists between social class and the sources of information used.

Testing of the hypotheses within the state patient group using education and age as the independent variables--In Chapter I, it was hypothesized that a relationship existed between education and each of the dependent variables, and that no relationship existed between age and each of the dependent variables. The study revealed, however, that, for this group almost no relationships existed between either education or age and any of the dependent variables. In most instances, the two sub-groups were essentially homogeneous when compared either as to education or as to age.

1. Using education as the independent variable, the following relationships were found for each of the dependent variables:

a. Information ever obtained: No evidence

exists to support the hypothesis that a relationship exists between education and the amount of information ever obtained. This hypothesis must therefore be rejected.

b. Information obtained prior to labor: The evidence does not support the hypothesis that a relationship exists between education and information obtained prior to labor. This hypothesis must be rejected.

c. Information considered important: Since the evidence does not support the hypothesis that a relationship exists between education and information considered important, this hypothesis must be rejected.

d. Sources of information used: The only significant difference which was found to exist was that a larger proportion of low-education patients obtained information from friends and relatives. This hypothesis is not supported by any other evidence; no large differences were found in the rank order of importance of the various sources of information for the two sub-groups, and the differences in the mean number of questions answered by each source were small. It is necessary, therefore, to reject the hypothesis that a relationship exists between education and the sources of information used.

2. Using age as the independent variable, the following relationships were found for each of the dependent variables:

a. Information ever obtained: The evidence supports the hypothesis that no relationship exists between age and information ever obtained. The null hypothesis that no relationship exists between age and information ever obtained must therefore be accepted.

b. Information obtained prior to labor: There is some evidence to indicate that a relationship may exist between age and the amount of information obtained prior to labor. Significant differences existed between the two age groups for questions 3 and 10, and a consistent trend in favor of the higher age group was found for all other questions. In addition, a significantly larger proportion of the lower age group gained information through experience during labor, suggesting that this group had been less-informed prior to labor. Although this evidence indicates that some relationship may exist between the two variables, the hypothesis that no relationship exists between age and the amount of information obtained prior to labor must be accepted.

c. Information considered important: Since the evidence supports the hypothesis that no relationship

exists between these two variables, the hypothesis that no relationship exists between age and information considered important must be accepted.

d. Sources of information used: A significantly greater proportion of higher age patients obtained information from doctors; a significantly smaller proportion of higher age patients gained information by their own experience. Differences in the rank order of importance of the various sources of information between the two sub-groups were small. There was a larger difference between the two sub-groups in the mean number of questions answered by all sources than existed for the two education sub-groups. The evidence is not, however strong enough to call for rejection of the null hypothesis. Therefore, the hypothesis that no relationship exists between age and the sources of information used must be accepted.

Comparison of the results of this study with those of similar studies

Because each of the studies which are relevant to the present one have presented the results in different ways, no direct comparisons can be made on a percentage or other numerical basis. It is, however, possible to compare certain of the general conclusions

which have been reached.

Class attendance--In those studies for which some information was given as to the percentage of different groups attending class, the classifications used differed. Some were given as social class groups; some as clinic, semi-private or private patients, and other's according to the father's or mother's education. For this reason the actual figures could not be compared. For all studies, however, more patients in the higher socio-economic and educational levels attended classes. This was found to be true in this study also.

Use of books and pamphlets--Both the Aberdeen[32] and the New York State[3, 44] studies found that more patients in the higher social classes used books and pamphlets and found them helpful, as was found in this study.

Desire for information--Lesser and Keane[23] concluded that the extent to which information was sought by the respondents in their study was more a function of the individual's personality than of her social class or education. It should be noted, however, that this sample included no indigent patients, and only 15.1% had not graduated from high school. This conclusion would not, then, be likely to apply to the lowest social class, from which the state patients in this

study are drawn.

The authors of the Aberdeen study[32] state that "Upper-class patients had a much stronger desire for information." Lower-class patients often said, "I'd rather not know," or "I'd only worry if I knew." This attitude was not expressed by any of the state patients in this study; the patients who did not consider the obtaining of information to be important simply did not care one way or the other.

These are the only items for which comparable results from other studies are available.

Explanations of the findings

The findings of the study have been reported, analyzed, and used to test the proposed hypotheses. Possible explanations for some of the results are suggested below.

Clinical pay patients--The clinical pay group has access to and uses many sources of information about labor and delivery. Members of this group feel that they have adequate information; this subjective evaluation is borne out by the objective findings. The existing sources of information are apparently serving the informational needs of this group.

It is not too difficult to rationalize the

findings for the clinical pay patients. All but three have had some education beyond high school, and are living in a milieu which emphasizes education. The doctors caring for them are also, in a sense, students, and are likely to identify with others in the same position. In addition, as residents they are not under the pressure of time which confronts most doctors in private practice, and so are able to spend more time talking with their patients. They are, in fact, encouraged to do so by the attending staff obstetricians, who consider patient education to be an integral part of obstetrical care. The fact that a series of classes is held not only offers patients the opportunity for organized instruction, but also presents the residents with an opportunity to participate in this instruction.

State patients--The state patients, on the other hand, obtain less information prior to labor. They use fewer sources of information, relying primarily upon friends, relatives and other patients for what information they do obtain. Many patients in this group express a desire for more information from reliable sources.

Explanations as to why many state patients are not receiving adequate antepartal education are more speculative. An analysis of each of the major sources

of antepartal information is necessary to help bring to light some of the possible explanations.

1. Class attendance:--The availability of expectant parents' classes in the areas from which these patients come is not known. Some of the larger cities are known to have classes, but these are usually sponsored by obstetricians for their own patients, or by hospitals for patients who expect to deliver there. In any case, none of the state patients knew of the existence of such classes. Other studies(3, 5, 7, 22, 32, 37, 44) have found that, even where such classes existed, few women in the lowest social class attended them. The highest rate of attendance for this group was found where classes were held in connection with the antepartal clinic.(4, 5, 22, 32, 37) It seems reasonable to assume, therefore, that the type of classes now being offered cannot hope to reach many of this group; possibly any type of community class would appeal to few of them.

2. Books and pamphlets:--Even when books and pamphlets were available, few patients benefited from reading them. This source of information could not, at present, be relied on as an important one for this group.

3. Doctor:--Although several patients in this group expressed a desire for more information from a

doctor, few received much information from this source. 62% of the state patients received information about anesthesia from the hospital doctor at the time of their admission examination. This is in keeping with Lesser and Keane's[23] observation that a need is more likely to be met if some provision for doing so is made in the routine of the institution. This is, apparently, the one informational item included in the antepartal routine for state patients.

While all but two of the state patients went to a doctor early in pregnancy and continued to have antepartal care regularly, only three patients received information about labor and delivery from their local doctors. It is known that one of these doctors is very interested in antepartal education for his patients; another is a personal friend of the patient's husband. Several alternatives are presented as possible explanations for the lack of information received from their doctors by the other patients.

a. The New York state study[3] showed that few patients in the lowest social group were cared for by obstetricians. This may also be true for the state patients in this sample. Some of the general practitioners caring for these patients might be less concerned about antepartal education or know less about it

than would a specialist.

b. A doctor in private practice often has a limited time to devote to each patient, and can therefore devote less time to patient education.

c. Simmons[35] cites research which indicates that doctors tend to identify more with patients in the higher social classes than with those in the lower social classes, and that a lack of empathy with the latter group may affect the type of care given.

d. Many patients stated that they were afraid to ask their doctors questions or did not know what to ask.

e. Whether or not learning takes place depends not merely upon the teacher but even more on the nature of the learner; a student's failure to learn should not always be attributed to the teacher's failure to teach. Thus, it is possible that some doctors may have given their patients information which the patients did not understand. Although this possibility should not be dismissed, the findings indicate that few patients received pamphlets from their doctors. Also, none of the patients said that their doctors had given them information about labor and delivery which they did not understand, as some patients did state with respect to information from books.

In conclusion, it should be emphasized that both

the medical and nursing staffs in the setting where this study was carried out recognize the need of the state patients for more information. Although these doctors and nurses are concerned about this need, funds and personnel are at present inadequate to institute an educational program for the state patients. Since support during labor is essential, the emphasis must at present be on this aspect, with the hope that this support will in part help to compensate for the lack of antepartal education. The favorable reactions of both groups of women to their experiences during labor serve to indicate that the patients appreciate this support and consider it extremely valuable.

Differences found between the state and clinical pay groups--The findings of the study show that significant differences existed between the state and clinical pay groups for each of the four dependent variables. The making of these comparisons was justified on the basis that a definite social class difference existed between the two groups, even though no specific social class could be assigned to the clinical pay group. It must be recognized, however, that a distinct difference also exists between the two groups with respect to education and age (cf. Tables 2 and 3.) Before the hypothesis that the difference between the two groups is essentially that

of social class, can be accepted, further justification is necessary.

Both a larger sample and a more sophisticated study design would be required in order to sort out the contribution of each of the three independent variables to the total variation between the two groups. An analysis of this type was carried out in a study by Sears, Maccoby and Levin,(33) Patterns of Child Rearing, which is usually referred to in the literature as the Harvard study. This same relationship between social class and the mother's education and age at birth of the first child was found for certain social classes. The following quotation is presented both for these findings and to help explain some of the difficulties involved in isolating the influence of any one of these independent variables.

> Since SES (socio-economic status) and mother's education are rather highly correlated, (.50), there is a big overlap in the groups. Most of the mothers who were in the middle-class group were also in the upper group on education (72 per cent); most of those in the working-class group were in the lower education group (71 per cent). Whenever we compare the child-training methods of middle-class families with those of working-class families, then, we are of necessity comparing the methods of well-educated with those of less well-educated mothers at the same time. If we wish to disentangle these factors, and study the influence of class level alone upon child training, we must compare people who differed in class level but had the same education...For some

> segments of our sample, such comparisons are impossible: for example, we did not have a single instance of a mother with graduate training whose husband's occupation and income placed her in the working-class group ...Thus we cannot study social-class differences at these educational levels. In the middle part of our scales, however, there was considerable variation in class for any education level, so some evaluation of the separate contributions of education and social class will be possible at these levels.

The authors also found that

> The middle-class women had tended to marry later than the working class women, and hence the average middle-class mother was somewhat older than the average working-class mother at the time she had her children...Similarly, the better-educated mothers were older than the less well-educated mothers. This means that the class or educational differences in child-training methods that have emerged in our analysis may have been a function of the mother's age rather than of her social or educational background.

The findings of the present study seem to agree with the general findings of the Harvard study as regards education and age of mothers in the various social classes. Since the gap between the two groups in this study is so wide, and so little overlap exists, particularly with respect to education, it seems reasonable to infer that the differences between the state and clinical pay groups are attributable largely to the social class difference, and that differences between the two groups in education and age of the mothers are functions of this social class difference.

Lack of differences within the state group--
Two significant differences in any of the dependent variables on the basis of either education or age were found within the state group. Either the variation of either of these factors within the group was not large enough, or else neither of these factors influenced the dependent variables studied to a significant extent. If the women in the lowest social class, from which the sample was drawn, tend to marry and have children earlier, as was reported in the Harvard study, then these two alternative inferences lead to the same conclusion--that social class is the independent variable which influenced the dependent variables in this group, and that both education and age are functions of social class.

The recommendations made in the following section are, in part, based on some of the possible explanations offered above.

C. RECOMMENDATIONS

Recommendations within the setting where the study was carried out

The only recommendation offered with respect to the clinical pay group is that some antepartal instruction in breathing and relaxation techniques might be offered, when and if antepartal classes are instituted for state

patients.

It has been stated above that, on the whole, expectant parents' classes do not reach the lowest social class to any appreciable extent, but that the percentage of this group attending classes increases when the classes are offered through the antepartal clinic which the women are attending. The setting in which this study was carried out offers a unique opportunity for instruction of the state patients. Although the bulk of their antepartal care is not obtained in this institution, most patients in this group are at the hospital for from one to three weeks prior to delivery. During this period they constitute essentially a "captive audience." Even if classes were offered on a voluntary basis, patients would be likely to attend simply because they have little else to do. Although the type of class to be outlined is suggested for the particular setting, it is the opinion of the writer that a similar approach would be equally effective with any group of patients from this social class, such as might be found in an antepartal clinic.

When and if funds, personnel and physical facilities permit, classes for antepartal state patients should be started. The content should be chosen to include those items usually taught in expectant parents' classes

which would be of the greatest immediate interest and assistance to members of this group. The decision as to what content to include should be made with due regard for both the expressed needs of members of the group and professional workers' anticipation of what might be most helpful to them. This approach was suggested in the New York state study.(3)

> To some extent at least, traditional maternal and child health services...have grown out of needs perceived by professional workers. Obviously, the professional worker must continue to contribute to the program from his background and expert knowledge. However, people to whom his program is directed may have significant contributions to make to it and may be able to point out directions for it to take even more cogently than the professional.

The writer suggests that the following content be included in the course outline:

1. A simple explanation of the anatomy and physiology of pregnancy, primarily to familiarize the learners with certain anatomical terms such as uterus and cervix.

2. A more detailed description of the course of normal labor: the signs of labor, probable sensations, and what the patient can do as labor progresses. In conjunction with this, practice should be offered in relaxation and deep breathing to be used during the first stage.

3. This should be followed by a "rehearsal for labor," reviewing the material covered previously and explaining the procedures in the labor and delivery rooms and the analgesic and anesthetic aids available. On the basis of the findings of this study, it is felt that a tour of the labor unit is not essential. If desired, such a tour might be offered to primigravidas and to other patients on an optional basis.

4. In addition to the information on labor and delivery, other topics related to maternal and infant nutrition and care of the newborn should be presented. These topics should be worked out to supplement the individual and class instruction presently being offered on the postpartum unit.

Methods to be used--For most of the members of this group, learning must take place on a concrete rather than an abstract level. Instruction could best be conducted in small, informal groups with ample opportunity for the participants to become actively involved. Because of the nature of this group of learners, the leader must assume some responsibility for seeing that learning does occur. Individual instruction may have to be offered as needed to accomplish this objective. In order to meet the needs of the members of this group at their level of understanding, instruction should make

extensive use of audio-visual aids, demonstrations, supervised practice, and other direct learning experiences.

Recommendations for further study

1. In order to investigate more fully the influences of social class, age and education upon the dependent variables studied, a much larger sample and a more sophisticated study design would be necessary. In particular, a large number of middle-class patients would have to be included in the sample. Machine tabulation and computation should be used in order to minimize the mechanical work. Since a study of this scope would involve the expenditure of considerable time, money and effort, it would be justified only if done as part of a larger study.

2. It is suggested that an experimental study be carried out to determine effective ways of meeting the needs of lower-status patients for information about labor and delivery, as well as other aspects of pregnancy, childbirth and the care of children. A major problem in such a study would be the development of criteria for evaluating the effectiveness of the educational program. Some criterion measures for evaluating the effectiveness of nursing care have been

developed in a study not yet published which was carried out in the setting where the present study was done. Certain of these might prove to be applicable.

* * * * *

The problem of meeting the needs of patients in the lower social classes has been described by Dr. Ozzie Simmons in Social Status and Public Health. (35) The following quotation is offered in closing both to reinforce some of the ideas presented herein, and as "food for thought."

> Like the social welfare movement, the public health movement has been conceived and implemented primarily by middle-class people and directed at lower-class people. To the extent that public health may be characterized as a social movement, it has inevitably incorporated the dominant middle-class values of our society...
>
> Research is needed to clarify the points at which health workers apply middle-class norms, the degrees of difference between middle and lower-class norms at these points, and the relevance of differences for effective functioning of public health activities.
>
> Since lower-status groups are the major target of public health effort, relevant research in public health must systematically take into account the idea and action patterns and values of these groups. If research on social class

is to have any practical application for public health, the social scientist must collect adequate data on the nature of the goals sought by lower-status people, and of the reinforcements characteristically effective in their learning...

A social class can constitute a membership group, and promoting and maintaining one's acceptance by the group calls for conformity with the perceptions and behavior deemed correct and desirable by the group, whether it be in relation to health and illness or anything else.

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APPENDIX

List of questions

1. What can I do to prepare for labor?
2. How can I tell when labor begins?
3. When should I call my doctor? When should I go to the hospital?
4. What happens during each stage of labor?
5. What will be done for me when I go to the hospital?
6. What should I do during each stage of labor to make it easier and quicker?
7. Will I be given medication for pain?
8. What is natural childbirth? Is it a good idea to have a baby without any anesthetic?
9. What will happen in the delivery room? What does it look like?

List of anticipated sources of information

Prior to pregnancy

During pregnancy
- Doctors
- Books or pamphlets
- Magazines
- Friends or relatives
- Parents' class
- Other

During labor
- Nurses
- Doctors
- Own experience
- Other patients

FORM FOR RECORDING RESPONSES TO INTERVIEW

Age____ Address_____

Husband: Occupation_____ Years school____

Wife: Occupation_____ Years school____

Wife's father: Occupation_____ Years school____

Length of labor_____ Type of delivery_____

Question No.	Prior	During pregnancy						During labor				No Information	Important?
		M.D.	Book	Magazine	Friend or Relative	Class	Other	R.N.	M.D.	Experience	Other Patients		
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													
Total													

11. What did you not know before labor began that might have helped you during labor?

12. Comments:

SAMPLE OF SHEET USED FOR TABULATION OF DATA

Question	Prior	During Pregnancy	During Labor	No Information	Important
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
Totals