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FACULTY OF GRADUATE STUDIES AND RESEARCH

McGILL UNIVERSITY

AN INVESTIGATION INTO THE EXPECTATIONS AND EVALUATIONS OF PRENATAL CLASSES BY GROUPS OF EXPECTANT MOTHERS ATTENDING THE CLASSES

A Research Thesis Submitted in Partial Fulfillment

of the Requirements for the

MASTER OF SCIENCE APPLIED DEGREE

by

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THE ABSTRACT

This research is an attempt to find out, through the expectations and evaluations of prenatal classes by groups of expectant parents attending the classes, why particular groups of pregnant women appear to attend prenatal classes more than other groups.

The subjects included primigravidas and multigravidas. The data was collected through participant observation and tape recording of the prenatal classes, discussions with the class instructor, the subjects' hospital records and unstructured interviewing of the subjects.

The major findings show that more primigravidas, English Canadians, higher educated and higher class mothers attend the classes. The mothers expect to obtain more exercises than information on pregnancy, labour, baby care and group support from other mothers. These expectations seem to be met by the classes.

More than half of the subjects (60 percent) are completely satisfied while the remaining 40 percent are only partially satisfied. The partial satisfaction is attributable mainly to the organization of the classes rather than the content. The level of satisfaction has some relationship with age, education and occupational class. Nevertheless, it appears to have no association with expectations and subsequent attendance of the classes. On the other hand, age, parity, educational level, occupational class and expectations of the mothers seem to account for some expectant mothers attending prenatal classes more than others. Further research on these findings is suggested.

ACKNOWLEDGEMENTS

The preparation of this work into its present form has been achieved through the devoted advice and guidance of Miss Helen E. Moogk, Assistant Professor of the School for Graduate Nurses. It is with deep gratitude that her direction is acknowledged.

I wish to extend my indebtedness to Dr. Moyra Allen, Associate Professor of the School for Graduate Nurses, Professor Elizabeth Logan, the Director of the school and other staff members, colleagues and friends for their invaluable support and encouragment in one form or another through the course of this research.

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CHAPTER I

INTRODUCTION

In the past few decades, medical science has realized the important role that psychological and emotional factors play in the outcome of pregnancy and childbirth. It has been found specifically that some fears, anxieties and attitudes of the pregnant woman could influence the course of her pregnancy and labour.

Attempts to overcome these factors gave rise to the notion of "natural childbirth"[1] and consequently to prenatal education programmes (prenatal classes)[2]. Prenatal classes differ in terms of classification, aim, form and techniques. Some classes are conducted specifically for unwed mothers, others for married mothers and still others for both wed and unwed mothers. Some include husbands; others do not. These classes, no matter what type, may take the form of lectures or discussions, depending on the policy of the instructor(s). Different exercise techniques are adopted by different institutions. For instance, some classes advocate rapid shallow panting for the first stage of labour while others prefer

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[1] "Natural Childbirth" is defined by H. Thomas as a broad concept that describes prenatal education processes and techniques, in Nicholson J. Eastman and L. M. Hellman, William's Obstetrics, (19th ed., New York: Appleton-Century-Crofts, Inc., 1966), p. 410.

[2] Ibid, pp. 410-411.

prolonged deep diaphragmatic breathing.[3]

With reference to personnel, some programmes have obstetricians, nurses or midwives and physiotherapists sharing the responsibilities of the classes.[4] In other programmes only one nurse organizes and conducts the classes. In this case, the nurse is responsible for both the obstetrical and physiotherapeutic aspects. Some programmes have only a physiotherapist in charge of the classes; she gives almost all the classes. This kind of programme is illustrated by the classes of this study. In other programmes a nurse and a physiotherapist equally share the organization and conducting of the classes.

The contents of prenatal classes are similar in most cases but they differ in details and emphasis.[5] Instructions are given on the anatomy and physiology of pregnancy and labour, weight control, baby-care, hospital environment and hospital routine.

The aims of different prenatal class programmes may differ with the theoretical orientations of the personnel. Some programmes aim at natural childbirth that would foster freedom from childbirth pains. Others aim at natural childbirth with controlled labour, that is, reduction in childbirth pain. Most of the programmes, however, have some objectives in common. They attempt to enlighten expectant parents on the anatomy and

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[3]C. L. Buxton, "Psycholphysical Training in Preparation for Childbirth". Clinical Obstetrics and Gynecology. Vol. VI, No. 3, (Septmenber, 1963), p. 680.

[4]Ibid., p. 677.

[5]Ibid., p. 670.

and physiology of pregnancy and labour to help alleviate the parents' fears and anxieties, and to correct their misinformation and misconceptions regarding pregnancy and labour. Secondly, conditioning, relaxation and breathing exercises are given to help the expectant mother cope with pregnancy and labour.[6]

Studies on prenatal education programmes produced conflicting findings which call for more research into the problem of prenatal education. The present research is an exploratory-descriptive study of groups of expectant parents attending prenatal classes in a hospital setting. The aim is to find out why particular groups of expectant parents seem to attend prenatal classes more than other groups. It is anticipated that this objective will be achieved through an exploratory study of the expectations and evaluations of such classes by selected groups of expectant mothers.

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[6] Ibid., pp. 676-680.

Identification of the Problem

Since in starting a research project one has to decide on a research problem, initial exploratory field work was undertaken to survey the maternal and child health field for any prevailing nursing problems. The field work took place in a hospital and at the Victorian Order of Nurses (V.O.N.) Services.

The field situation was entered with no hunches or preconceived hypotheses. The only guide was the investigator's interest in health education and maternal and child health. This freedom from preconceived assumptions allowed a wide scope for exploration.

While in the field, the investigator was accorded ample freedom to make any explorations she deemed necessary. In the hospital, the maternity ward, the labour and delivery unit, the prenatal clinic and the prenatal classes were surveyed through participant observation and through talking with nurses and patients. The V.O.N. classes held in the community outside the hospital were likewise explored. Patients' records also formed part of the sources of information.

It was found that patients vary a great deal on the amount of information on, and preparation for parenthood. Some primiparas have no clue as to how to hold their babies during feeding. Others (a few) are confident in holding and feeding their babies. Some of this latter group claim they have helped raise their younger siblings; others say they have baby-sat and still others profess they have attended prenatal classes where they learnt about baby care. Some of the primiparas, however, give the impression that they do not get much information on pregnancy, labour

and baby care from prenatal classes or prenatal clinics or the doctors' offices. Some express their wish to breast-feed their babies but get no encouragement prenatally and therefore, have to abandon the idea. Such mothers express guilty feelings about their failure to breast-feed their babies.

The following examples, which are quite representative, are some primiparas' accounts:

> My doctor does not teach about pregnancy or child care in his office. He recommended the V.O.N. classes on Bishop Street....The V.O.N. taught prenatal exercises, baby bath and talked about baby clothing, baby feeding and what happens in pregnancy and labour. They talked about breast-feeding but not enough. I got most of my information on breast feeding from seeing mother breast-feed my younger brother and from reading books. I feel the classes should give more information about breast-feeding.

Another primigravida says:

> I received my prenatal care from my doctor. He did not teach in his office but he would answer any questions you had. I learned more about pregnancy from a friend who had had a baby...One of my neighbours told me I needed to eat more because I had to eat for two. I was not allowed to have fluids with my meals and I was afraid my baby would not have enough fluid but I could not ask my doctor about this. He would think I was stupid or something.

The main concern of the multiparas is how to fit the new baby into the family structure and housekeeping. One mother of two asserts:

> The first baby is the one you practice on. You get help from your mother or from a neighbour or from your pediatrician. By the time you have the second one you know how to care for a baby and what to expect. I felt worried before about not knowing what to do with a baby but now I feel secure. What you are concerned about is how to have the baby liked by the older child and how you could do your housework with a baby and a toddler around. I don't know how to manage this.

Another mother with a third baby remarks:

> Having had children before, you don't worry about how to handle, feed or give general baby care. My problem is how to deal with sibling rivalry. I didn't prepare Jackie well before Peter was born. She was jealous and I had a difficult time with her...This time I

> read Dr. Spock about sibling rivalry and how to prevent it in the older child. I told him about the coming baby. We saw a movie on childbirth on the T.V. together. He wasn't scared; he was rather excited about it. He asked about when my baby would come and he left his crib ready for the new baby. He seems well prepared but I don't know how he is going to react when he sees the baby.

In the labour ward and delivery room it is observed that mothers who attend prenatal classes tend to have better self-control over pain and can relax better than those who do not attend classes.

The literature on preparation for parenthood, which was consulted concurrently with the field work, shows that prenatal classes are important instruments for providing expectant parents with knowledge and understanding that will prepare them for coping with the experiences of childbirth, child care and family life.[7] Thus their aim is to help meet the educational, psychological, physical and emotional needs of parents that arise in the crisis situation of childbearing.[8]

In view of the foregoing observations, the investigator's interest was tuned to the sources of information on childbirth and parenthood available to expectant parents. The prenatal classes and the prenatal clinics in the hospital were therefore explored.

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[7] Ernestine Wiedenbach, Family-Centered Maternity Nursing (New York: G. P. Putnam's Sons, 1967), p. 18; E. M. Davis and R. Rubin, De Lee's Obstetrics for Nurses (18th ed. rev.; Philadelphia: W. B. Saunders Co., 1966) p. 272; Information Services Division for Child and Maternal Health Division of the Department of National Health and Welfare, Education for Expectant Parents: A Manual for Nurses (Ottawa: Queen's Printer and Controller of Stationery, 1956), pp. 3, 6; Cnristine Spahn Smith, Maternal-Child Nursing (Philadelphia and London: W. B. Saunders Co., 1963), pp. 113-114.

[8] Ibid.; Information Services Division, op. cit. p. 6; E. Findlay and M. Capes, Today You Are Pregnant: A Common Sense Guide for Expectant Mothers (Toronto and Montreal: McClelland & Stewart Ltd., 1967), p. 5; Elizabeth King, "The Expectant Father", Bulletin of the American College of Nurse-Midwife, Vol. XIII, No. 1, (February, 1968), p. 19.

In the prenatal clinic, it was found that little instruction is given by either nurses or doctors. Teaching is centered around weight control through dieting, the development and birth of the foetus, signs and symptoms of labour and when to seek medical advice. This is done by student nurses at one sitting. Each pregnant woman undergoes this briefing during her first clinic visit. The main emphasis, vis-a-vis prenatal care is on the physical aspect.

Most mothers with whom the investigator talked in the prenatal clinic were ignorant of the existence of prenatal classes even in their own hospital.

In the prenatal classes, jointly run by a nurse and the physiotherapist, it was observed that the only enterprise is parent education which comprises a series of classes over a period of approximately four months. Instructions are on:

1. A brief outline of the anatomy and physiology of the reproductive system in conjunction with the development and the birth of the baby.
2. Nutrition: Dieting and weight control
3. Baby Care: Baby feeding, baby bathing and general care.
4. What to bring to hospital and when to come to hospital.
5. Exercises: Physical, relaxation and breathing.
6. Tour of the hospital before hospitalization.
7. Home routine after return from hospital, reception of limited number of visitors, rest, control on housework.

It appears, on the basis of the observations, that in the prenatal classes expectant parents are better prepared.

Under the direction of the investigator's research advisor, the V.O.N. prenatal classes were also observed for further insight into the problem of prenatal preparation. They were found to be similar to those held in the hospital except that they are conducted by only nurses.

To sum up, the general observations that resulted from the initial field work are:

1. In the doctor's office little or no teaching is done.
2. Many clinic patients lack the knowledge of existing prenatal classes.
3. In the prenatal clinics little or no teaching is done.
4. More preparation for pregnancy and childbirth is done in the prenatal classes.
5. Expectant mothers tend to get their information on pregnancy, childbirth and child care in varying degrees from sources such as the doctor's office, prenatal clinics, prenatal classes, relatives, neighbours and friends. Due to the varied sources of information, pregnant women are exposed to misinformation from relatives, friends and neighbours who are not scientifically oriented. Some expectant mothers unfortunately fall victims to such misinformation generally known in the layman's terminology as "Old Wives Tales".
6. Primigravidas tend to attend the prenatal classes more than multigravidas.

7. Public patients[9] tend to be under-represented at the prenatal classes while private patients[10] form a larger number of the classes.

The last two findings give the impression that the prenatal classes tend to appeal to particular groups of expectant parents more than others.

The findings present problems that call for a systematic study but they cannot possibly be studied in just one research project within a limited time. The investigator was therefore forced to focus on one problem. The findings were discussed in the seminars comprising the investigator's colleagues and the staff of the Master's Degree programme. Individual conferences were also held with the investiagotr's research advisor and with friends. Discussions at these meetings helped to focus the investigator's interest on the finding that the prenatal classes tend to appeal to particular groups of expectant parents. This phenomenon exemplifies W. I. B. Beveridge's belief tht discussions with others in research work tend to be helpful in directing the researcher's thoughts.[11]

The investigator's reflections, however, gave rise to the following questions:

1. Who are the people who attend prenatal classes?
2. What are their motives for attending the classes?

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[9]Patients who do not have their own doctors and therefore attend outpatient department clinics.

[10]Patients who have their own doctors. They attend the doctor's office.

[11]W. I. B. Beveridge, The Art of Scientific Investigation (New York: Random House, 1950), pp. 84-85.

3. How do they get to the classes?

4. What factors in the classes appeal to them?

5. How do their expectations relate to the goals of the classes?

In order to formulate a research problem out of these questions, the literature on preparation for parenthood was further explored.

Review of Relevant Literature

Childbirth is a maturational fulfillment in the life of a woman. It leads to the attainment of the feminine role of a mother.[12] Scientifically, this phenomenon is as natural and "normal" as human growth and development. One naively expects that, in general, pregnancy is taken for granted and is consequently free from fears and anxieties for the individuals concerned. On the contrary, childbirth is loaded with biological and psychological crisis[13] producing attitudes, fears and anxieties that can sometimes lead to detrimental outcomes of pregnancy and childbirth. Dr. Grantly Dick Read states that a pregnant woman is subjected to fear-producing factors peculiar to pregnancy and childbirth. He continues that from a very early age, girls generally become indoctrinated with the teaching that childbirth is painful and dangerous. He claims that mothers,

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[12] King, op.cit., p. 19.

[13] Ibid; G. Caplan, "Psychological Aspect of Maternity Care", American Journal of Public Health, Vol. XLVII, (January, 1957), p. 25; G. Caplan, Concept of Mental Health Consultation (U.S. Department of Health Education and Welfare, 1959), p. 472; Margaret Mead and Niles Newton, "Cultural Patterning of Prenatal Behavior" in Stephen A. Richardson and Alan F. Guttmacher (eds.), Childbearing -- Its Social and Psychological Aspects (Baltimore, Maryland: The Williams & Wilkins Co., 1967) p. 168.

husbands and friends also tend to be sources of fears concerning childbirth.[14]

In an article written by Mead and Newton, Newton asserts that in most cultures, pregnancy is considered as a time when special rules are observed by the pregnant woman, and often by her relatives. It is a time when special emotional and physical support is given.[15] This consideration probably underlies the phenomenon of well-meaning people with all kinds of qualifications, backgrounds and orientations, offering information and advice to the pregnant woman.

The pregnant woman is thus subjected to both scientific information and "Old Wives Tales"[16] that still linger around in this scientific era. Allan F. Guttmacher holds that pregnant women have a low resistance to advice from anybody at any time.[17] Selma B. Ortof has observed, vis-a-vis parents' expectations, that "...many parents continually seek the advice of experts..."[18] This notion is implicit in William F. Kenkel's statement that, "husbands and wives seem to appreciate the opportunity for learning more about the processes of pregnancy and childbirth, for having

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[14] G. D. Read, Childbirth without Fear: The Principles and Practice of Natural Childbirth (New York: Harper and Brothers Publishers, 1953), pp. 61-62.

[15] Mead and Newton, op.cit., p. 186.

[16] Read, op.cit., p. 67; Sheila Kitzinger, The Experience of Childbirth (rev. ed. Baltimore: Pelican Books, Inc., 1967), p. 1.

[17] A. F. Guttmacher, Pregnancy and Birth: A Book for Expectant Parents (New York: The Viking Press, 1957), p. 79.

[18] S. B. Ortof, "Non-Didactic Family Life Education", Canada's Mental Health, Vol. XVII, No. 1, (Jan.-Feb., 1969), p. 12.

specific troublesome questions answered and for sharing with other couples common problems and ways of meeting them."[19]

Commenting on how similar psychological situations seem to cause different psychological conditions, Dr. Elaine R. Grimm, on the basis of data from various studies, speculates that different emotional and psychological states give rise to different kinds of symptoms in pregnancy and labour. Specifically, she states that "...gastro-intestinal symptoms may be associated with fear and circulatory symptoms with hostility." From data she reviewed, she reports that a really fearful, dependent immature woman tends to suffer from pernicious vomiting. Immaturity or resentment of the feminine role as shown by the data, are associated with sterility, habitual abortion and prematurity. Patients with toxaemia have been found to have negative attitudes towards pregnancy, conflicts about motherhood, and difficulties and stresses in relation to their husbands.[20]

On the basis of the foregoing narration, it may be argued that if psychological and emotional factors ensuing from all kinds of sources through some sort of mechanisms are associated with physiological stresses of pregnancy and childbirth, and if pregnant women who tend to have low resistance to advice of any kind from any source are exposed to advice of well-meaning people in society, then it is essentially rational to employ

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[19] W. F. Kenkel, The Family in Perspective: A Fourfold Analysis (New York: Appleton-Century-Crofts, Inc., 1960) p. 355.

[20] Maternity Centre Association, "Psychological and Social Factors in Childbearing" Briefs: Footnotes on Maternity Care. Vol. XXXI, No. 9; (Nov. 1967), p. 132; E. R. Grimm, "Psychological and Social Factors in Pregnancy, Delivery and Outcome" in Stephen A. Richardson and Alan F. Guttmacher (eds.), Childbearing - Its Social and Psychological Aspects (Baltimore, Maryland: The Williams and Wilkins Co., 1967), p. 19.

efforts to at least reduce the incidence of these stresses. Granted that the emotional and psychological states of the parents concerned fall outside the limits of psychiatrically pathological conditions, the fears and anxieties that produce these stresses need to be allayed through rational prenatal education.

As cited by Dr. C. Lee Buxton, L. S. Kubie holds that:

> ...anxiety can be diminished through vivid and frank education as to the nature of the body, its normal function, its resilience and also its vulnerability. In other words, by diminishing the mystery of the body, one can usually diminish its terror...there is a specific limit to the extent to which anxiety can be diminished through such education alone. This limit is set at the boundary of neurosis...where unconscious and distorted sources of anxiety enter the picture, educational processes alone must always fail.[21]

This view supports the importance of prenatal education under "normal" circumstantces. Dr. G. D. Read, too, in support of prenatal education, declares,

> We do not fear facts but doubts and uncertainties. Our most tremendous apprehensions arise from anxieties lest the worst may happen. Rumour is more terrifying than assault, ignorance more nerve-racking than knowledge, however bad reality may be.[22]

At this point, it may be suggested that discussions in the previous pages call for a larger scale dissemination of scientific information on pregnancy and childbirth which aims at reaching all expectant parents where possible; this would take care of some psychological and emotional aspects of pregnancy and childbirth. Prenatal classes seem to be the appropriate

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[21] C. L. Buxton, A Study of Psychophysical Methods for Relief of Childbirth Pain (Philadelphia: W. B. Saunders Co., 1962), p. 65.

[22] Read, op.cit., p. 227.

instrument for this end since their main function in the maternal and child health field is to educate and prepare expectant parents to cope with pregnancy, childbirth and family life.

This suggestion is perhaps legitimized by what Dr. C. Lee Buxton has to say about American population: "The abysmal ignorance on the part of an extraordinary large percentage of our population concerning pregnancy and reproduction is truly amazing."[23]

The value of prenatal classes to pregnant women, however, has given rise to much controversy, particularly among obstetricians. The bone of contention among the obstetricians has been the effect of prenatal parent education on childbirth pain, the length of labour and its complications. The controversy was triggered by the fact that most prenatal parent education programmes were coloured by Dr. C. D. Read's premise that "Pain is the enemy of childbirth, not its natural accompaniment",[24] and that if the Fear-Tension-Syndrome[25] is understood, and fear is eliminated and tension relieved, "pain becomes almost negligible in over 95% of all normal deliveries."[26]

Some studies have been conducted on prenatal education programmes

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[23]Buxton, "Psychophysical Training...", p. 677.

[24]Read, op. cit., p. 236.

[25]Dr. Read's Fear-Tension-Syndrome is his theory that fear in anticipation of pain produces natural protective mental and muscular tension in the body which in turn inhibits the dilatation of the cervix in labour. The resistance thus produced gives rise to pain. (Read, op.cit., p. 12).

[26]Buxton, "Psychophysical Training...", p. 670; Grimm, op.cit., p. 27; Clarence D. Davis and Frank A. Morrone, "An Objective Evaluation of a Prepared Childbirth Program", American Journal of Obstetrics and Gynecology, Vol. LXXXIV, No. 9, (Nov. 1, 1962), p. 1196.

to determine their value to expectant parents. The findings of those accessible to the investigator are given below.

In a study conducted by the Royal College of Midwives (R.C.M.) in Britain in 1964 to 1965, it was revealed that baby care classes, especially those on baby bath and routine care, are valuable to mothers who have never handled a baby before. Classes on pregnancy and labour have dispelled ignorance and played an important part in relieving anxieties but have no effect on fears about having abnormal babies, and most mothers do not receive help for their worries.[27]

Elizabeth A. Freeman for her M.A. Degree thesis in Yale University School of Nursing in 1961 analyzed questions mothers asked in prenatal classes and the content of the classes offered. She found that the course content emphasizes the baby more while the mothers' questions stress labour and delivery.[28] This suggests a discrepancy between the mothers' expectations of the classes and the goal of the class organization.

Concerning the relationship between parental classes and labour, the R.C.M. study shows that relaxation classes help many women in labour to concentrate on breathing and thus help to distract their attention from the pain.[29]

From his observations of over forty prenatal education programmes in Western Europe, C.L. Buxton claims that "...there seems to be ample

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[27]Audrey Wood, "Education for Parenthood through the Maternity Services", International Journal of Nursing Studies. Vol. III (1966), p. 201.

[28]E. A. Freeman "A Study of Mothers' Questions during Prenatal Classes", Nursing Research. Vol. XII, No. 3, (Summer, 1963), p. 195.

[29]Wood, op.cit., p. 201.

evidence of very appreciable psychologic benefit for parents who engage in childbirth-preparation programmes....There is conflicting evidence concerning the actual physical obstetrical advantage..."[30] He further states that in the majority of instances, the programmes can appreciably reduce the amount of analgesia and anesthesia[31] necessary for satisfactory obstetric care.[32]

C. D. Davis and F. A. Morrone, however, state in the preliminary report on their study of primigravidas, from pregnancy to postpartum, that whether the patients attend prenatal classes or not, their fears remain unchanged.[33] The prepared mothers, however, have fewer fears concerning pregnancy than the unprepared mothers. Preparation does not significantly increase the number of mothers who nurse their babies but increases the number that choose rooming-in. It has no effect on the amount of sedation or anesthesia or on the length of labour.[34]

In relation to the type of person that voluntarily selects and attends prenatal classes, the researchers speculate that the type of person is as important as the classes themselves. They claim that attendance of prenatal classes increases with the mother's age, education, and occupation, but none of these factors influences the mother's desire for support in labour.[35]

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[30] Buxton, "Psychological Training...", p. 683.

[31] The use of analgesia and anesthesia has evidently been found to have adverse effects on the baby (Eastman and Hellman, op.cit., p. 441).

[32] Buxton, "Psychological Training...", p. 683.

[33] The researchers failed to specify the unchanged fears.

[34] Davis and Morrone, op.cit., p. 120.

[35] Ibid.

The researchers suggest that the relationship betwen overt fears and the desire for support needs further study.[36]

Finally, Davis and Morrone found that most mothers attend prenatal classes for help in delivery. Some attend to learn more about themselves and/or the hospital. Others attend for instructions and still others to learn exercises. No reasons were reported for those who do not attend.[37]

The R.C.M. study reported on reasons for not attending prenatal classes and these are lack of time, lack of need, lack of knowledge of existing classes and too great a distance from home. This study, however, failed to account for reasons for attending classes.[38]

Dr. Grimm contends that the effect of prenatal education on labour and its complications cannot be conclusively established until more research is done with a control group of mothers who wish to attend prenatal classes but are denied the opportunity.[39]

In the same vein it may be said that findings about reasons for attending or not attending prenatal classes cannot be conclusive since many socio-cultural variables are not taken into consideration. Variables such as parity, ethnicity, size of family or origin and others may also play an important role in the forces related to attendance or non-attendance of prenatal classes.

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[36] Ibid., p. 1199.

[37] Ibid., p. 1198.

[38] Wood, op.cit., pp. 201, 204.

[39] Grimm, op.cit., p. 29.

Purpose of the Research

The discrepancies and inadequacies in the studies and their findings reviewed in the previous pages demand further research into the problem of prenatal education programmes. The investigator, specifically, realizes a need for more studies on the problem of prenatal class attendance as a contributory move toward convincing and conclusive statements about the problem.

This research is conducted in the hope that more factors involved in the attendance of prenatal classes may be highlighted for further investigations on both attendance and non-attendance of prenatal classes by particular groups of expectant parents.

Statement of the Research Problem

A formulation of a research problem that emerged from observations during the initial survey and review of the literature is as follows:

What are the expectations and evaluations of prenatal classes by groups of expectant parents attending these classes?

Attention is focused on the following questions:

1. What are the attendants of the classes like?
2. What do they expect and receive from the classes?
3. What are the classes like?

Operational Definitions

For the purpose of this research:

Groups of expectant parents means pregnant women who can be categorized by some kind of common distinguishing characteristics.

Expectations refer to what the pregnant women desire to find

and get from the prenatal classes before they start attending them.

Evaluation means the expressed desires and opinions of the pregnant women about the prenatal classes after they have started attending the classes.

It is assumed that expectant parents' expectations and evaluations, as defined above, may quantitatively as well as qualitatively unearth factors that are involved in the seeming tendency of prenatal classes appealing to particular groups of expectant parents.

The basis for this assumption lies in the general notion that role expectations organize behaviour,[40] that evaluation has a value overtone,[41] and that value is distinctive of the desirables that influence the choice of modes, means and ends of actions.[42]

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[40] Ephraim H. Mizruchi, "Introduction" in E. H. Mizruchi (ed.) The Substance of Sociology (New York: Appleton-Century-Crofts, 1967), p. 3.

[41] Hilda Taba, Curriculum Development: Theory and Practice (New York: Harcourt, Brace and World, Inc., 1962), p. 310.

[42] E. H. Mizruchi, "Success, Education, Values and the American Dream" in E. H. Mizruchi (ed.), The Substance of Sociology (New York: Appleton-Century-Crofts, 1967), p. 103.

CHAPTER II

THE RESEARCH DESIGN

The Type of Research

Nursing is increasingly being developed as an applied science. Hence there is need for a greater degree of systematization in order to arrive at theories that would promote such a development.[1]

Generally, the development of research in nursing is viewed as being in the initial stages. The exploratory-descriptive type of approach is therefore most suitable for the stage of development reached. It facilitates the formulation of concepts and hypotheses that would be of value in future research and in the accumulation of knowledge in the field. Selltiz et al and Holliday claim that this approach is necessary where theories are either general or too specific.[2] One may contend that the same approach is applicable where theories are non-existent.

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[1] Rozella M. Schlotfelt "Research - How Will Nursing Define It", Nursing Research, Vol. XVI, No. 2 (Spring, 1967); Faye G. Abdellah and Eugene Levine, Better Patient Care Through Nursing Research (New York: The Macmillan Co., 1965), pp. 3-8, 11; Doris S. Bryan and Margaret S. Taylor, "Public Health Nursing in the Basic Curriculum" Aspects of Public Health Nursing. World Health Organization Public Health Papers, No. 4 (Geneva: World Health Organization, 1961), p. 83.

[2] C. Selltiz et al, Research Methods in Social Relations (rev. ed.; New York: Holt Rinehart & Winston, 1967), p. 52; Jane Holliday, "The Exploratory Study: An Aid to Research Design", Nursing Research, Vol. XIII, No. 1 (Winter, 1964), p. 38.

The Setting[3]

The research was conducted at a hospital[4] in a metropolitan area. The hospital is a small one with about eighty beds. It provides medical and other health services mainly for female patients. One of these services is prenatal classes. The classes are given in the morning, afternoon and evening of every Tuesday and Thursday. The evening classes are specifically for working expectant mothers.[5] For two of the classes, the mothers are accompanied by their husbands. It is in association with these classes that the research data were collected.

The prenatal classes are under the jurisdiction of the physiotherapy department of the hospital. The department is directly administered by one doctor and one physiotherapist. The prenatal classes are, however, organized and run by the physiotherapist; the doctor has nothing to do with them. A nurse appears on the scene only once a fortnight to give a baby care class.

An average of about 150 pregnant women attend the prenatal classes every month. As a result, the classes are overcrowded to the extent that some mothers are placed on a waiting list, and the physiotherapist refreains from advertising the classes. The women are admitted to the classes during the fifth month of gestation. Admission is by appointment with the added

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[3] Information about the setting was secured from the physiotherapist.

[4] This particular hospital was chosen for the research because among the known prenatal classes in the city, the classes held in this hospital were found to have the largest population from which a representative sample could be obtained.

[5] Expectant mothers are henceforth referred to as mothers.

provision that permission is obtained from their doctors. Priority is given to mothers who have booked in for confinement in this hospital.

The classes are free of charge because they come under physiotherapeutic services. Hence the provincial government bears the cost. For every class that a mother attends, the government pays $1.50. Every mother is legally allowed the attendance of 12 classes. In accordance with the class regulations, she is expected to finish the course about a week prior to her date of delivery. This is to ensure that the breathing and relaxation exercises are still fresh in her memory during labour.

The physiotherapist was contacted for permission to conduct the present research. Initial contact was made by telephone to arrange for a face-to-face discussion in order to secure permission and co-operation for the research. The investigator expressed a wish to know what goes on in prenatal classes by observing the classes in session. It was agreed that a meeting take place for the specific statement of the investigator's intentions.

When the meeting took place, the investigator's intentions were specifically stated as finding out by observing prenatal classes and talking with some mothers, what activities are involved in prenatal classes and what problems confront expectant mothers attending the classes. It was made clear that it was the kind of study that would culminate in a report that would fulfill a university course requirement. Precautions were taken to conceal the real purpose of the research lest knowledge of it might influence the physiotherapist to change the way she normally ran the classes. This was done in an attempt to guard against biases.

Population

The population of the research comprised pregnant women who were still attending prenatal classes. They were assigned to a number of groups the size of which ranged from 7 to 24 with an average of approximately 18. There were seven groups with a total number of 126. The groups were at different levels of the course at the time the sample was taken. Other groups which developed later were not included in the research.

The formation of the groups was determined by the number of pregnancies the women had had, their previous experiences with prental classes and the time most convenient for them to attend. There were only 10 multigravidas, seven of whom formed one group; the other three who had never attended prenatal classes were in primigravida groups. Since the multigravida population of the classes was small, all of them were included in the research except one who refused to participate.

Sampling

Initially, 70 subjects were proposed for the research but owing to the limited time[6] available, the number was reduced to 20[7] with the consent of the investigator's advisor. A random sample of 11 primigravidas was therefore taken. Hence the number of subjects comprised 11 primigravidas and 9 multigravidas.

Data Collection Techniques

The techniques of enquiry used for the collection of data were:

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[6] One month for data collection.

[7] It was maintained that 20 subjects should be sufficiently large for an exploratory research conducted under time pressure.

1. Participant-observations of the prenatal classes in progress.
2. Tape recording of the prenatal classes in progress.
3. Use of the expectant mothers' written records in the physiotherapist's office.
4. Unstructured interviewing of the subjects, and the jotting down of points at interviews.
5. General discussions with the physiotherapist about the classes.

The rationale for the different techniques was to ensure optimum reliability.

Method of Data Collection

The hospital documents of the groups of expectant mothers from whom the subjects were selected, were examined for information on relational variables such as age, parity, mother's occupation, husband's occupation, and ethnicity.

The subjects were interviewed in their homes because it was impossible to interview them at the classes. The interval between the time they arrived in the hospital and the time the classes started was too short for any reliable interviewing. Similarly, after the classes, no interviews could be done because the mothers were in a hurry to go home.

Mothers who had attended all the classes or nearly all the classes were the first to be interviewed. Those who had attended only a few classes at the time the interviewing was started, were interviewed at the end of the field work. This was done to allow the latter group to attend many of the classes before they were interviewed. Thus it was ensured that all the subjects were in a capable position - by virtue of their class experiences - to evaluate the classes.

The investigator enlisted the subjects' cooperation by introducing herself in the same way as she had done in the case of the physiotherapist. This was aided by the fact that the subjects saw the investigator at the prenatal classes during her observations.

The interviewing took the form of conversation about the prenatal classes with the investigator playing the roles of a listener and a prompter. The unstructured interviews were guided by a few open questions[8] whenever the subjects failed to give relevant or adequate responses. Jottings were taken during the interviews but this did not seem to disturb any of the subjects. After each interview, the notes were fully written up while the details were still fresh in the investigator's memory.

In conjunction with the interviews, the investigator attended each of the classes that constituted a course and observed the general running of the classes as well as the content. The expectant parents' reactions and the questions they asked were noted. The classes were tape-recorded at the same time. As a check on the reliability of the observations, the investigator had general discussions about the classes with the physiotherapist.

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[8] The questions were developed from other questions which were tested on other expectant mothers in another hospital. See appendix for questions.

CHAPTER III

PRESENTATION AND ANALYSIS OF DATA

This chapter deals with the presentation and analysis of data obtained by observing the prenatal classes and by interviewing the subjects of the research. The rationale for collecting data on the classes as well as from the subjects was to facilitate a comparison between what the classes offer mothers and what mothers expect and think of the classes. In order to organize the research material so that it would be amenable to such a comparison and could be utilized in answering the research question, it was necessary to do a content analysis of the research material to determine where relative emphases are placed in the course content and in the subjects' expectations and evaluations of the classes. Content analysis, as compared with a critique or review, is a systematic, objective and quantitative way of measuring variables and determining relative emphases and frequency of incidents in the content of communication.[1] Hence the investigator finds this method suitable for the analysis of the present research data. The descriptive data of the prenatal classes are presented in the next section.

[1]Selltiz et al, op.cit., p. 336; B. Berelson "Content Analysis" in G. Lindzey (ed.), Handbook of Social Psychology, Vol. 1, (Cambridge, Mass.: Addison-Wesley, 1954), p. 489; Kerlinger, Fred N., Foundations of Behavioral Research (New York; Holt, Rinehart and Winston, Inc., 1964), pp. 544-545.

Observations of the Prenatal Classes

The prenatal classes take the form of lectures, questions and answers, and demonstrations. In addition, visual aids -- a birth atlas, a film on natural childbirth -- are used. The sitting arrangements reflect the form of the classes. For example, during lectures, the parents sit in rows with the instructor on a raised platform facing them. For exercise classes, the mothers are arranged in a row on mats on the floor. The instructor, on the other hand, sits on a chair in front of the mothers with her mat beside her. During classes for husbands and wives, each couple sits together on a mat.

In general, the prenatal education course consists of ten classes. Each takes one hour except the movie class for husbands and wives and the seventh class, each of which lasts for two hours. The 10 classes are described to some extent below.

Class 1

This class constitutes an introductory lecture. Hence the instructor outlines the objectives and the general content of the course. Pregnancy, nevertheless, is dealt with in detail. According to the instructor, the principal objective of the course is to assist mothers to go through childbirth with fortitude. Attempts to achieve this aim involve providing adequate information on pregnancy and labour, and teaching exercises to promote "controlled labour" as well as teaching exercises that expedite a return to the prepregnant figure after delivery.

Furthermore, the instructor explains that natural childbirth does not mean childbirth without anaesthetic; it means "controlled labour" or preparation of the mother in such a way that she is able to cope with labour. Further, she makes the mothers aware that labour involves some amount of pain but that it is not as unbearable as some people think. She then informs them that most women are given anaesthetic -- gas or local -- when necessary.

Concerning "Old Wives Tales", the instructor reminds the mothers that they may be exposed to many. She recommends that the mothers ignore these tales and pay more attention to what is said in the classes and what their doctors have to say. In addition, she encourages the mothers to ask questions and not to feel "stupid" in doing so.

The instructor moves on to outline the basic anatomy and physiology of pregnancy. With the aid of the birth atlas, she demonstrates to the mothers the bladder, the ovaries, the fallopian tubes, the rectum and their interrelationships in terms of position and function with reference to reproduction. The processes involved in menstruation, ovulation, fertilization and the embedding of the fertilized ovum are also described.

The stages of the development of the foetus are described by the instructor with the aid of the birth atlas as follows:

> At four weeks the baby is attached to the back wall of the uterus, its heart begins to beat, its back bone begins to form and its limbs are like tiny buds. At 2 to 3 months, the baby grows so rapidly that at three months he is completely filling the uterus and he is recognizable as a human being. After three months, the uterus starts to expand and you notice that you start getting bigger... At 7 months the baby is what we call viable; it means it can be born and it has a very good chance. He is regarded as a premature baby because he usually is underweight; he is usually a small baby and quite often his feeding mechanism isn't as well developed and this is because from

seven to nine months while the baby is in the uterus he sucks his thumb so that as soon as he is born he can take to the breast or bottle quickly. So quite often seven months' old baby does have feeding problems. Also his resistance to disease isn't as good as a nine months' baby's and quite often his lungs aren't as well developed as a nine months' baby's...

About 2 to 3 weeks before labour starts, we have what we call lightening occurring and this is when the baby moves down in the abdomen and his head engaged into the inside diameter of the pelvic basin and when this happens some women feel quite a release of pressure from up high round the rib cage and if you been out of breath in the middle months of pregnancy, you probably find that you start to breath more easily... You also find that your carriage is down lower when this happens.....

Nine months' baby is usually head down and facing the mother's right side. The average baby in the womb weighs about 7 lbs; that is good average weight. He is attached to the placenta on the back wall of the uterus, usually by the umbilical cord; you have got the two membranes holding the amniotic fluid -- about two pints of fluid; you have got the muscular wall of the utuerus and you have got the neck of the cervix of the usterus; the tiny opening to the uterus and this is plugged off by a small mucous plug (it is like a cork in a bottle) and it prevents infection from getting into the uterus.

You probably wonder where the blood comes from in child-birth. Usually it is just the mucous plug coming away; it is not very much blood at all and the mucous plug has to come away before the baby is born."

The nourishment of the foetus "in utero" is likened to hydroponics by the instructor.

You have in the bottle water the roots, the stem and the plant. You have the baby in the fluid of the uterus, the placenta or the roots and the umbilical cord or the stem and the baby or the plant. The roots of the plant select the nourishment which the plant needs. This is sent to the plant along the stem...the placenta selects the nourishment. This floated along the umbilical cord to the baby and the baby grows in this way. In the same way, the waste products pass out down the cord, across the placenta and out of the uterus for circulation. Your blood and that of the baby never meet at any stage but substances in your blood supply can be transferred to the baby.... A study has shown that if a pregnant woman smokes heavily, there is a chance of having a small baby, a premature baby.

Continuing further, the instructor maintains that the side effects of pregnancy are normal. She explains fatique in terms of bodily chemical changes and obesity, and depression in terms of hormonal action. Frequency of micturition, according to her, occurs at three months because the capacity of the bladder is reduced by the pressure of the expanding uterus. This condition disappears after three months when the uterus rises above the bladder and recurs with the pressure of the baby's head on the bladder towards the end of pregnancy. After the fourth month, the pressure of the uterus on the stomach produces nausea, indigestion and heart burn; secondly, pressure on the diaphragm causes breathlessness; thirdly, pressure on the ribs produces a "crampy feeling" around the chest. Similarly, uterine pressure on the sciatic nerve may cause numbness or pain in the leg. Finally, pressure in the pelvis may cause backache. Cramps in the back, on the other hand, may be due to calcium deficiency.

Other side effects of pregnancy discussed by the instructor are varicose veins, oedema of the ankles, chloasma, striae, craving for exotic foods, constipation, and itchy skin. The discussion takes the following fashion. Varicose veins and swollen ankles may be caused by impaired circulation from uterine pressure on the blood vessels; dizziness and headaches may be due to raised blood pressure. These conditions warrant medical attention and therefore must be reported. Craving for exotic foods, chloasma ("mask of pregnancy") and itchy skin are normal; they disappear after delivery. Johnson's baby skin oil or calamine lotion, applied to the skin, relieves the itch. Constipation is usually relieved by drinking a glass of warm water before bedtime, a glass of fruit juice early in the morning and by doing some exercises. Striae ("stretch marks") may result from maternal overweight.

Maternal weight gain, however, is discussed in association with diet. The instructor cautions the mothers as to what to eat and what to avoid in order to keep within the normal range of weight increase -- 15 to 18 pounds. She maintains that poor posture, fatique, striae, backache, and failure to regain the prepregnant figure soon after delivery, are the consequences of excess weight gain. After this assertion, the instructor gives instructions and demonstrations on correct postures for standing, sitting, sleeping, lifting and walking.

Throughout the lecture, the instructor occasionally invites questions from the mothers, but the mothers seldom respond. The few questions the mothers ask centre around physical conditions such as back-ache, striae, shoulder pains, weight gain and constipation. Another question asked in this class is why husbancds are not allowed in the delivery room.

Class 2

The second class, being an exercise class, does not involve as much lecturing as the first class. The instructor demonstrates to the class exercises for healthy pregnancy, a quick return to the prepregnant figure and relief of backache. Following this, she gives instructions on these exercises while the mothers practise them. She also exhorts the mothers to practise assiduously each exercise five times daily at home because constant practice is the essence of success.

The questions asked by the mothers in this class too involve physical conditions of pregnancy. For instance, a mother asks, "I get aches on one side of my back when I lie flat on my back, why?" Another

example of a typical question asked is, "Why do I get pains around my shoulder blades?" Such questions are answered with explanations. Moreover, exercises that relieve such conditions are taught by the instructor. She, however, cautions them to consult their doctors if they fail to get relief.

Class 3

This is relaxation and breathing exercises class. Simulating the first stage of labour, the class does exercises believed to relieve labour pains. The instructor advises complete relaxation while the mothers concentrate on deep diaphragmatic breathing. Working in pairs and taking turns, one mother does the exercises while the other lifts and drops her partner's limb to test how much she is relaxed. The "testing mother" then pinches her partner in simulation of labour pains to determine the extent to which her concentration on the breathing distracts her attention from the pain.

In this class, as in the preceding one, the instructor emphasizes the importance of practising the exercises at home; she believes that the fortnightly exercises in class for one hour is not enough to benefit the mothers.

As in the previous classes, most mothers in this class ask questions about physical conditions such as pains at the back of the leg, pain in the groin and pain at the sides of the trunk. Other questions they ask mostly concern when a particular class is due. Besides the questions, the mothers talk, with one another, about their problems and how they solve them.

Class 4

This class is a review of classes 1, 2 and 3; the contents of the three classes are repeated almost verbatim in an abridged form. For this reason Class 4 is not described here.

Class 5

The fifth class is a lecture on the topic of labour. At the beginning of the class, the instructor invites the mothers to ask questions and express any problems they have any time during the lecture. She then discusses labour in the following manner. Labour is a process, the cause of which is not definitely known, but it is attributable to hormonal action. It has three stages. The first stage lasts from 8 to 10 hours. Here, the mothers express their amazement by exclaiming "Oh!" The instructor tells them, "Don't be amazed". The class laughs over it; the instructor resumes lecturing as before. The second stage is the birth of the baby; it takes about half an hour and demands hard work on the part of the mother. The third stage is the birth of the placenta which lasts for about 10 to 15 minutes. At this point the instructor shows the mothers the picture of a nine months' old foetus in the birth atlas and describes it as she has done in the first class. The birth canal is also described again.

She further describes the signs and symptoms of labour thus: The show is a sign of the onset of labour within the next 24 hours. The membranes usually remain intact until the mother gets to hospital. Rupture of the membranes at home must be immediately reported to the doctor by telephone. At this point, the mothers, looking interested, start asking questions. The following example is a dialogue between the

instructor and two mothers.

First mother: How much water comes out?

Instructor: About two pints but the whole two pints doesn't come out when the membranes break. Sometimes it may just start as a little bit of a trickle.

Second mother: Do you really know it?

Instructor: Oh yes, it is different from a discharge. A discharge is a little bit milky but this is clear -- just like water.

Second mother: You don't get any sensation -- just wet pants?

Instructor: You get the sensation from the wet pants.

After the dialogue, the instructor continues the lecture as follows: Backaches, another symptom of labour, radiate from the lower part of the back to the front of the lower abdomen. Abdominal contractions also indicate labour. They, nevertheless, cannot be precisely distinquished from false labour contractions except that the former are regular, last longer and are accompanied by discomfort. These signs and symptoms must be reported to the doctor as soon as they are noticed.

The hospital environment and hospital routines from the time of admission to the postpartum period are other topics discussed in the fifth class. Upon a mother's query about whether the mother is left alone in the labour room, the instructor explains with reassurance that husbands are allowed to give moral support to their wives in the labour room, and that the obstetricians and nurses are always around to help.

The instructor then enquires about how many mothers have been apprehensive of labour prior to starting the prenatal course. Only three out of fifteen mothers confess they have feared. A mother who prior to

the class has confessed to the investigator that she is scared of labour, fails to own up in the class.

After this episode, the instructor continues the lecture with an explanation of the relationship between fear and pain during labour. In terms of Dr. Read's Fear-Tension-Pain Syndrome,[2] she asserts that fear usually produces muscular tension which inhibits dilatation of the cervix and results in pain. She reminds the mothers that the breathing and relaxation exercises help to reduce the pain. She, however, cautions them that every labour is unique; hence they should not be disappointed if they later find theirs different from what is described in class.

Next, the instructor describes the signs and symptoms of the transitional stage of labour -- hiccups, vomiting, shivering, the urge to bear down, difficulty in concentrating on relaxation and breathing -- and what the parturient mother should do. The mothers are advised to swallow frequently at this stage to prevent vomiting. Secondly, they should carry out the relaxation and breathing exercise to prevent bearing down and to help relieve the pain. They are reassured that they may be given analgesics or anaesthetic to relieve the pain. Here a mother asks, "Does the doctor decide or are you given the option at the time?" The instructor replies, "A lot of doctors will decide which to use. If you are interested in it, you may discuss it with your doctor." The instructor continues to lecture but the mother interrupts with another question. "You are not put out completely, are you?" The instructor replies in the negative and the mother affirmatively says, "This is what I guess." The instructor

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[2] Read, op.cit., p. 12.

then goes on to mention the possibility of giving the mother induction and episiotomy.

The lecture then turns on to the description of the newborn baby and the instructor explains to the mothers that any "unpleasant appearances" of the baby soon disappear.

Breast-feeding is discussed to some depth with special attention paid to its advantages, lactation, bottle-feeding, supplementary-feeding, feeding schedule, and care of the breasts. At this stage the mothers ask questions concerning how to stop lactation, what food to eat and how much, the use of breast pump, what cholestruim is, what kind of brassiere to wear and where to obtain it, and if they would be given a mothercraft class. One mother who decides to bottle-feed her baby asks if it is the mother or the nurses who bottle-feed the baby in the hospital. This topic is of much interest to the mothers and they discuss it among themselves while the instructor tries to attract their attention to proceed with the lecture.

The instructor then goes on to mention and explain postpartum blues, prevention of depression by the avoidance of fatigue from vigorous housework and the receiving of many visitors. Restraint from panic during the process of the development of motherhood through experiences with the baby as well as baby layettes are discussed.

Class 6

In the sixth class the mothers are taught the "panting and blowing" exercise for the transitional stage of labour. The instructor demonstrates the position and technique for pushing out the baby and

and these are practised by the class. The mothers ask very few questions in this class and these are mainly on the panting and the pushing position.

Class 7

The seventh class comprises a review of labour and exercises which form the content of classes 2 and 3; it is for both husbands and wives. The instructor teaches the husbands the techniques of back-rubbing to relieve backache during pregnancy and the first stage of labour.

The questions asked by the mothers in this class include how one can push out the baby under the influence of epidural anaesthetic, a request for the demonstration of the pushing technique is also made. One mother comments that her foetus is lazy because it does not change its position frequently. The husbands, however, do not ask any questions.

After the review, the class goes on a tour of the maternity unit of the hospital; they are shown round the labour and the delivery rooms. During this tour the mothers observe the babies in the nursery through the glass wall.

Class 8

This is the last class and it comprises a review of all the other classes in addition to the description of postnatal exercises and postnatal procedures on the ward. Since this is mostly a review class, it is not described in detail here.

The remaining two classes -- "movie" class for husbands and wives and baby care class -- fall outside the sequence of the classes. They are described below.

"Movie" Class for Husbands and Wives

This class takes place once in a month and can be attended by any couple any time before the seventh class. It is a night class which lasts for two hours. The first hour is devoted to a lecture. After about ten minutes' break, the lecture is followed by a film on natural childbirth in the second hour.

The lecture mostly consists of the contents of the first and fifth classes. The only new addition is the husband's role during labour. The instructor points out to the husbands the importance of their recognizing the signs and symptoms of labour, remaining calm when labour starts, and knowing the hospital environment and what happens at admission beforehand. The importance of the husband's moral support in labour is also stressed. This class consists of thirty-eight couples and six mothers (not accompanied by their husbands). There are no questions from the members of the class.

Baby Care Class

In the baby care class, the instructor gives a demonstration of a baby-bath on a baby from the nursery of the hospital. She also gives instructions on the bath technique; what soap to use; and care of the skin, umbilical wound, circumcision wound in the case of a boy, and the vulva of a girl.

The instructor then proceeds to inform the mothers of when to cut the baby's nails, how to put on a diaper, how to hold a baby to feed, how much clothing to put on the baby at home, a suitable baby mattress, and the hospital routine in relation to the baby.

The mothers ask a lot of questions in this class. These questions are mainly about how warm a baby should be kept, how much the

baby in the demonstration weighs and why he is jaundiced. Others include whether babies should sleep on their abdomen or their back; the average duration of breast-feeding; what to do in case of excessive lactation, the right temperature of the baby's environment, the average amount of milk babies take, what foods a nursing mother should eat, and whether a baby can hear.

The mothers are allowed to handle and feed the "demonstration" baby in turns. From the pleasant looks and smiles on their faces, one could infer that they appreciate their new experience.

The next section deals with an analysis of the observational data of the prenatal classes.

Analysis of the Data Obtained Through Observation of Prenatal Classes

A content analysis of the observational data on the prenatal course was made. Its purpose was to identify different elements contained in the subject matter of the course, as well as pertinent episodes that occurred in the prenatal classes during the investigator's observations. It also sought to determine relative emphases given to these elements. "Emphases" here was used as a measure of importance attached to the various elements.

The units of analysis employed were the theme and the item. Analytic elements were derived from themes that ran through the topics and related activities dealt with in the 10 classes as well as questions asked by the mothers during the classes. Since the class observations were not reported verbatim due to limited time and space, the counting of the elements was done on the basis of their occurrence in the 10 classes, instead of the number of times they occurred in each class. Thus, it is assumed that the more frequently a particular element or episode occurs in the 10 classes, the greater is the weight that is to be attached to it. In defining this weight, no distinction is made as to how much time is allocated to a particular event. Rather, the investigator's concern is with what is indicated above, that is, the frequency of occurrence of a particular analytic element in all the 10 classes. The gross nature of this measure, however, is well recognized as a limitation.

From the topics and their related activities, the analytic elements obtained are as follows:

1. Exercises to help in labour.
2. Exercises to help recover prepregnant figure.
3. Exercises to keep fit.
4. Exercises for good posture.
5. Home practising of exercises.
6. Information on pregnancy and labour.
7. Information on baby care.
8. Information on hospital environment and hospital routines.

Elements (1), (2), (3), (4) and (5) were grouped into a main element, Theory and Practice of Exercises. On the other hand, elements (6), (7) and (8) were grouped under the element, Other Information, as indicated in Table 1.

TABLE 1

THE FREQUENCY OF ANALYTIC ELEMENTS
IN THE COURSE CONTENT OF
10 PRENATAL CLASSES, N=35

Elements in Course Content	Number of Elements	
	Total Classes	Percent
A. Theory and Practice of Exercises	25	71
To Help in Labour	7	
To Help Recover Pre-pregnant Figure	6	
To Keep Fit	5	
For Good Posture	3	
Home Practising of Exercises	4	
B. Other Information	10	29
On Pregnancy and Labour	4	
On Baby Care	3	
On Hospital Environment and Hospital Routines	3	
Total	35	100

It should be clear that, of the total of 35 occurrences of elements, Theory and Practice of Exercises covers 25 (71 percent) while the element, Other Information, takes 10 (29 percent).

As shown in Figure 1, the elements[2] were graphed to display vividly the relative emphases placed on the various elements of the pre-natal course content. It can be seen that the major emphasis in the course is exercises to help in labour and the least emphasis information on baby care, hospital environment and hospital routines.

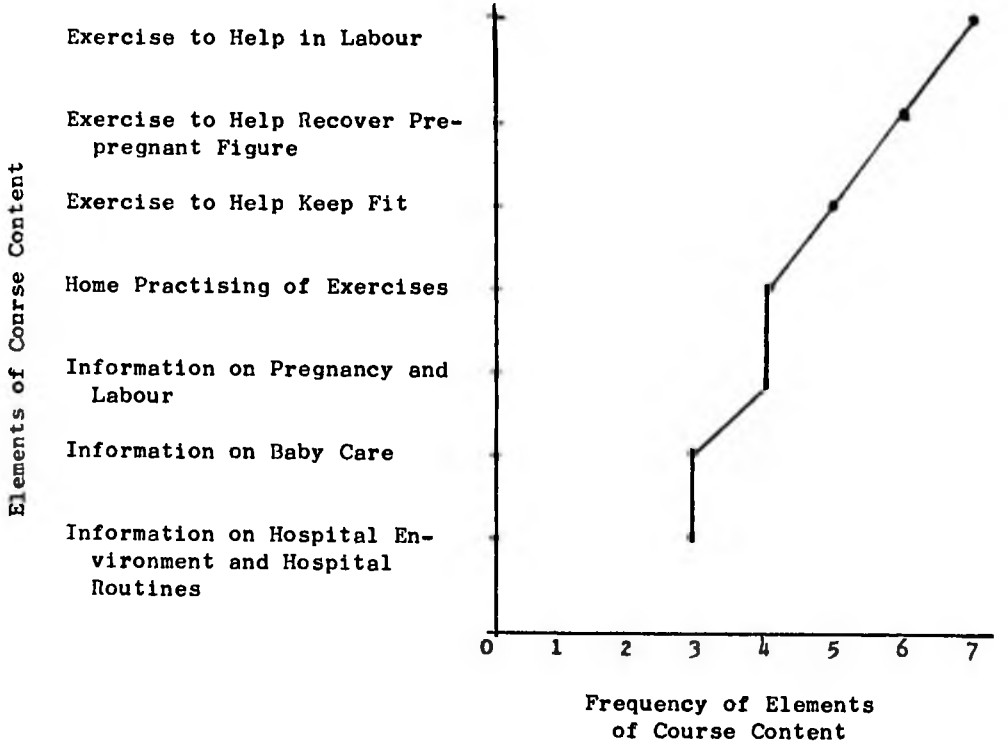

Figure 1. Graph Showing Frequency of Elements of Course Content by the Number of Classes in which each Occurs.

[2]The element, Exercises for Good Posture, is collapsed under the element, Exercises to Keep Fit.

In the final analysis, therefore, it could be inferred from Table 1 and Figure 1 that the basic content of the prenatal course is related more to theory and practice of exercises than information on other phenomena related to childbirth in general.

With regard to episodes[4] which occurred in the prenatal classes during the observations, analytic episodes were deduced from the themes which ran through the mothers' questions and from the items of specific events. The resulting episodes are the following:

1. Evidence of mothers' wish for group discussion.
2. Questions about physical conditions.
3. Questions about pregnancy and labour.
4. Questions about baby care.
5. Questions about when a particular class is due.

Episodes (2), (3), (4) and (5) come under the main episode, Mothers' Questions. The frequency of occurrence of these episodes was reckoned. From the resulting figures shown in Table 2, it may be suggested that physical conditions -- suggestive of concern about physical health -- and information on exercises and labour seem to be central to the questions asked by the mothers. This is an obvious indication of the importance attached to the need to maintain physical as well as psychological health in relation to reproduction. The episode, Evidence of Mothers' Wish for Group Discussion, assumes a second place of importance while Questions about Baby Care and Questions about When a Particular Class is Due receive

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[4] "Episodes" here include specific events and questions asked by the mothers during the classes.

the least importance. Figure 2 graphically highlights these findings.

TABLE 2

THE FREQUENCY OF EPISODES OBSERVED IN 10 PRENATAL CLASSES, N=15

Episodes	Number of Episodes
Evidence of Mothers' Wish for Group Discussion	3
Mothers' Questions	
Questions about Physical Conditions	4
Questions about Pregnancy and Labour	4
Questions about Baby Care	2
Questions about When a Particular Class Is Due	2
Total	15

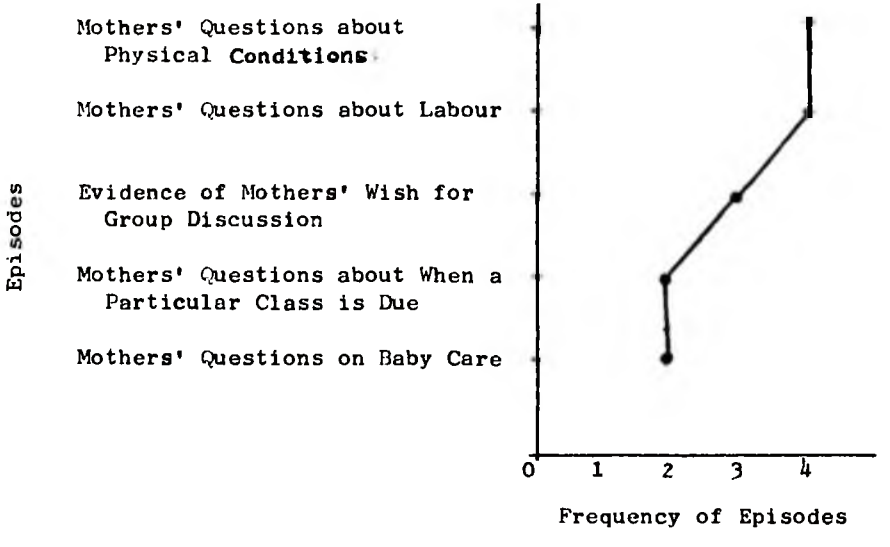

Figure 2. Graph Showing the Frequency of Episodes Occurring in 10 Prenatal Classes

On the whole, analysis of the observational data of the prenatal classes appears to reveal some degree of conformity between the important areas in the course content and the important concerns of the mothers. This inference is based on the finding that the course content emphasizes exercises for labour, figure and fitness in varying degrees, suggesting a concern about assisting the mothers to attain a sound physical health in pregnancy and the postpartum period and to experience successful labour. Such a concern appears to reconcile with the mothers concern about physical health, and labour. It may be suggested, therefore, that the course content seems to meet the expressed needs of the mothers.

The findings in this section seem to be confirmed by similar results from the analysis of the interview data which is reported in the next section.

Presentation and Analysis of the Interview Data

In this section, representative responses of the interview data are presented and analyzed. The theme and the item are again used as units of analysis. Analytic elements were derived from the items of the relational variables -- age, parity, educational level, ethnicity and occupational class. Themes contained in the responses formed the basis for the other analytic elements developed from the data. The number of occurrence of each analytic element reported here pertain to the responses obtained from the 20 mothers interviewed.

The subjects' age levels range from 21 to 35. They were grouped, with 5 years class intervals, viz. 21-25, 26-30 and 31-35. The age groups were represented by 9, 6 and 5 subjects respectively.

The educational levels reached by the subjects were categorized into high, moderate and low.[5] As Table 3 shows, eight of the 20 subjects had a high level of education. Eight had moderate and four had low education.

TABLE 3

REPRESENTATIONS OF RELATIONAL VARIABLES -- AGE, EDUCATIONAL LEVEL, OCCUPATIONAL CLASS AND ETHNICITY -- OF 20 MOTHERS

Relational Variables	Number of Mothers
Age	
21-25	9
26-30	6
31-35	5
Educational Level	
High	8
Moderate	8
Low	4
Occupational Class	
1	9
2	5
3	1
4	1
5	4
Ethnicity	
English Canadian	14
American	2
British	1
Swiss	1
West Indian	1
German	1

The Blishen's occupational class scale[6] was adapted to determine

[5]High level of education constitutes university education, moderate level refers to college education and low level includes high school and elementary school.

[6]Bernard R. Blishen, "The Construction and Use of an Occupational Class Scale" in B. R. Blishen et al (eds.), Canadian Society: Sociological Perspectives (1st ed; Toronto: Macmillan Co. of Canada ltd., 1961), pp. 481-484.

the occupational class of the subjects based on their husband's occupations. Table 3 shows the five classes represented. Of the twenty subjects, nine came from Class 1, five from Class 2, one from Class 3, one from Class 4 and four from Class 5.

The ethnic groups and their representations that were found among the subjects were: 14 English Canadians, 2 Americans, 1 British, 1 Swiss, 1 West Indian and 1 German.

In the following pages, the above relational variables are considered in relation to the analysis of the subjects' responses to the guiding questions mentioned in the last chapter.

In relation to the question "What did you know about prenatal classes before you started attending?" the following representative responses were obtained:

1. I have known about prenatal classes from my mother who is a nurse ...She told me the exercises are good. They keep you fit especially when you are not working. I asked my doctor if I could go the classes and he said O.K. He does not tell you about things until you ask him. He described the classes as exercise classes.

2. I knew the classes give exercises that keep you in shape. A friend of mine who attended the classes for her first baby said the exercises are good.

3. I knew they take relaxation and breathing exercises which help in labour...I learned about the classes through my doctor. He thinks the relaxation classes (that's what he calls them) are very good for labour and he recommends them to all his patients.

4. I read about natural childbirth in newspapers and in women's magazines. I was interested in natural childbirth so my friend who attended prenatal classes in England told me the exercises were good for labour.

5. I am a nurse and I knew the classes give instructions on pregnancy, labour, baby care and exercises...In short, they teach the woman what to expect.

6. My girl friend attended the classes for her first baby. She said the exercises were good but she did not say exactly what goes on in the classes. I assumed the exercises were like what you see on the T.V. Those keep you fit.

7. I knew there are discussions about pregnancy and labour and exercises. My friend told me about them. My doctor just asked me if I wanted to attend classes for exercises which would keep me in shape.

8. I was attending a prenatal clinic at the hospital when the prenatal class instructor came and gave a talk. She told us about the classes and said we could attend if we wanted.

9. My friends attended the classes and they claimed it helped them to know what to expect in pregnancy and labour.

10. I'm a physiotherapist and I had conducted prenatal classes. I knew everything about the classes.

11. My doctor recommended the classes. He explained that the exercises help to maintain a good figure and that the relaxation and breathing exercises help in natural childbirth. He said they also teach about pregnancy and labour.

12. Everybody seems to know about natural childbirth. Exercises seem to come up quite often. I can't recall when and where I first heard about the exercises.

When a content analysis of the responses was made, the following findings emerged, as indicated in Table 4. Twenty-two (63 percent) of the 35 responses pertain to exercises while 13 (37 percent) relate to information on pregnancy, labour and baby care. This seems to suggest that the initial information obtained by the mothers before they start attending the prenatal classes indicates that the latter (prenatal classes) emphasize exercises more than information on pregnancy, labour and baby care. Specifically, the element, Exercises for Figure is more emphasized than Exercises for Labour while Exercises for Fitness is given a relatively negligible attention. Of the 13 responses concerning information on pregnancy, labour and baby care, it was found that the distribution of the responses in the various

TABLE 4

THE FREQUENCY OF ANALYTIC ELEMENTS IN THE INITIAL INFORMATION ON PRENATAL CLASSES OBTAINED BY MOTHERS BEFORE THEY ATTEND THE CLASSES

Elements	Number	Percent
Exercises:	22	63
For Figure	11	
For Fitness	2	
For Labour	9	
Information:	13	37
On Pregnancy	4	
On Labour	4	
On Baby Care	5	
Total	35	100

analytic elements is 4, 4 and 5 respectively. This appears to suggest that these variables practically receive equal attention in the description of the classes to mothers who have never attended or known about them.

It was also found that the subjects got their initial information about the classes from varying sources, namely, mother, friend, doctor, nursing and physiotherapy professions, prenatal class instructor and the literature on natural childbirth. As indicated in Table 5, friend is the leading source of information.

TABLE 5

SOURCES OF SUBJECTS' INITIAL INFORMATION ON PRENATAL CLASSES AS INDICATED BY SUBJECTS' RESPONSES

Sources of Information	Number
Mother	2
Friend	8
Doctor	4
Profession[a]	2
Prenatal Class Instructor	1
Literature	1
Forgotten	2
Total	20

[a] Nursing and Physiotherapy Professions

When the source of information was matched with ethnic groups as could be seen in Table 6, it was found that immigrant groups seem to get their initial information about prenatal classes from sources other than friends. Of the 6 immigrants, only one, an American, got her initial information from a friend. The rest got theirs from either a doctor or the prenatal class instructor or her mother or by virtue of being a nurse.

Of the 14 indigenous English Canadians, 7 got their initial information from friends, 5 got theirs from the other sources while the remaining 2 had forgotten the sources from which they received their initial information.

TABLE 6

SOURCES OF INITIAL INFORMATION ON PRENATAL CLASSES COMPARED WITH ETHNICITY OF SUBJECTS

Sources of Information	Ethnic Groups						Total
	English Canadian	American	British	Swiss	West Indian	German	
Mother	1			1			2
Friend	7	1					8
Doctor	2		1		1		4
Nursing						1	1
Physiotherapy	1						1
Prenatal Class Instructor		1					1
Literature	1						1
Forgotten	2						2
Total	14	2	1	1	1	1	20

To obtain the subjects' expectations of the classes, the question, "What did you think you would gain by attending the classes before you started?", was asked. The following representative responses were obtained:

1. I went for the exercises to keep fit and to learn about care of the baby especially in the first two days after returning from the hospital. I have no way of knowing what will happen. Having a baby is so fundamental that people tend to regress. People who talk to you regress and you regress. When crises come people go to sources that are questionable -- friends, neighbors. Such people who offer information are themselves misinformed.

2. For my first pregnancy, I attended the classes for the exercises and to brush up my theoretical knowledge on anatomy and physiology but mainly for the exercises. For my second pregnancy, I went for the exercises. The exercises were very good because I was able to control myself in labour. I knew how to relax and when to push. I had a short and easy delivery.

3. I was interested in anything that would help my pregnancy. I thought, at the classes, they would talk about baby care but it was mainly mother care. I knew childbirth is normal but it is helpful to know what to expect in childbirth.

4. I knew I was going to take exercises which would make me fit and that was it.

5. I went for the exercises to help me get natural childbirth and for the lectures to help me know what to expect in labour. The better educated you are, the more curious you become.

6. I was concerned about my figure. I did not look attractive. My tummy stuck out. My husband thought I was extra attractive but I didn't feel that way and this sort of worried me.
   I saw a child of $1\frac{1}{2}$ years old with forceps' marks on his temples. People said the marks would disappear; even the doctor said that but up to that age the marks had not disappeared. It is pathetic and it scares me. I realize that if I could work by myself during labour there would be no need for a forceps delivery. I wanted classes in which husbands could be allowed to go to the delivery room with their wives like it's done in England.

7. I went to learn the breathing and relaxation exercises that are supposed to help in labour.

8. I only went to refresh the exercises because I knew what to expect in pregnancy and labour and in baby care.

9. When you hear other women have the same symptoms, you feel you are not alone and you feel better. It's easier to do the exercises when you are with other mothers.

10. I wanted to find out and learn whatever is discussed in the classes....I wanted to know about baby care.

A content analysis of the responses represented above resulted in six analytic elements of the subjects expectations of the classes as shown in Table 7.

TABLE 7

SUBJECTS' EXPECTATIONS OF PRENATAL CLASSES AS SHOWN BY THEIR RESPONSES

Subjects' Expectations of Prenatal Classes	Responses	
	Number	Percent
Exercises	28	60
To Help in Labour	14	
To Help Keep Fit	8	
To Help Recover Pre-pregnant Figure	6	
Information	12	25
On Pregnancy and Labour	8	
On Baby Care	4	
Group Support	7	15
Total	47	100

It was revealed that 28 (60 percent) of the 47 responses reflecting the subjects' expectations pertain to exercises; 12 (25 percent) relate to information on baby care, pregnancy and labour and 7 (15 percent) pertain to group support from other mothers attending the classes.

Fourteen of the 28 responses on exercises are about exercises to help in labour, 8 are about exercises that would help maintenance of physical fitness in pregnancy while 6 relate to exercises that would help recovery of the pre-pregnant figure after delivery. Of the 12 responses relating to information about baby care, pregnancy and labour, 8 are about pregnancy and labour while 4 concern baby care. In other words, the subjects appear to highly expect the prenatal classes to provide them with exercise techniques that would help them in labour. Moreover, they expect to a lesser degree to get exercises that would keep them physically fit during the period of pregnancy and to obtain information on pregnancy and labour while they expect, to a similar degree, to receive group support from colleagues in the classes. To still a lesser degree, they expect the classes to supply them with exercise techniques for recovery of their pre-pregnant figure and with information on baby care.

The expectations mentioned above were compared with the relational variables of parity, educational level of mother, occupational class of husband and mother's age. The results are tabulated in Table 8. In the case of parity compared with expectations only primigravidas expect to obtain information on pregnancy, labour and baby care. All the eight responses concerning information on baby care came from primigravidas. The responses, pertaining to the element, exercises, are almost equally distributed among both primigravidas and multigravidas. Of the seven responses about group support, three are from primigravidas and four from multigravidas. When the mothers' expectations were compared with their ages, it was shown that all members in the different age groups represented (see Table 8) seem to expect the classes to provide them with exercises to help them in labour

TABLE 8

SUBJECTS' EXPECTATIONS OF PRENATAL CLASSES BY PARITY, AGE, EDUCATIONAL LEVEL AND OCCUPATIONAL CLASS, N=20

Mothers' Expectations of Classes	Number of Expectations	Parity		Age Groups			Educational Level			Occupational Level				
		Primi-gravida	Multi gravida	21-25	26-30	31-35	High	Mod-erate	Low	1	2	3	4	5
Exercises														
To Help Recover Pre-pregnant Figure	6	3	3	3	2	1	2	2	2	3	2			1
To Help in Labour	14	7	7	6	5	3	6	4	4	8	3	1		2
To Help Keep Fit	8	3	5	4	2	2	3	3	2	3	3			2
Information														
On Pregnancy and Labour	8	8		6		2	3	4	1	3	2		1	2
On Baby Care	4	4		3		1	1	2	1	1	2			1
Group Support	7	3	4	2		2	2	2	3	4	2			1
Total	47	28	19	24		11	17	17	13	22	14	1	1	9

more than with exercises, to keep them physically fit in pregnancy or to help them recover their pre-pregnant figure after delivery. They equally expect to obtain group support from other mothers in the classes.

Where information is concerned, mothers belonging to the age groups 21-25 and 31-35 appear to expect information on pregnancy and labour more than they expect information about baby care while members of the 26-30 age group do not seem to expect any information on these variables (see Table 8). It should be noticed that the comparison of parity with expectations indicate that responses relating to information on pregnancy, labour, and baby care are solely produced by primigravidas. As could be noticed in Table 8, only one primigravida comes from the 26-30 age group. It may therefore be suggested that members of the age group 26-30 do not expect to get information on pregnancy, labour and baby care because they are mainly multigravidas.

A comparison of the subjects' expectations with their educational levels in Table 8 does not reveal any important difference in the expectations of subjects with the varying levels of education.

The expectations of the mothers matched with their occupational classes (Table 8) shows that subjects from occupational Class 1 appear to expect to receive exercises that would help them in labour more than they expect to get the other specified variables. They produced 8 of the 14 responses about exercises for labour while their contribution to the responses on the other variables range from 1 to 4. Classes 2 and 5 subjects seem to equally expect to obtain all the categories of expectations. There is only one Class 3 member among the subjects and she expects to get exercises to help her in labour. Similarly, only one mother represents Class 4

and she expects to receive information on pregnancy and labour.

The various elements of the mothers' expectations were compared with corresponding elements of the prenatal course content. The results are shown in Figure 3. It appears that with all the elements, except the elements, Information on Baby Care and Exercises to Help Recover Prepregnant Figure, the subjects expect more than is emphasized in the course content. The course, however, seems to relatively offer more exercises for Recovery of Prepregnant Figure and slightly more Information on Baby Care than the mothers expect.

The following presentation and analysis pertain to the subjects' evaluation of the classes. To the question, "How do you find the classes so far?", the following responses were provided:

1. The physiotherapist is reassuring and this is good because some of the younger girls in the class look frightened and tense...A lot of women would like to have a sense of direction. I go to these classes and I enjoy them...My husband enjoys going to husbands and wives' classes.

2. The parents' nights are good. It is a good thing for husbands to know how the baby grows and how it is born...The explanation classes prepare you to have your baby without fear; they give you confidence.

3. Going to classes helps to relieve your mind from any worries. The classes get you out of the house when you get blue. You know you are going to get exercises that will help you.

4. The classes are good. They cover everything -- baby care, pregnancy, tour of the ward, how to breathe and relax to relieve the pain, development of the baby and other things. I always recommend the classes to friends.

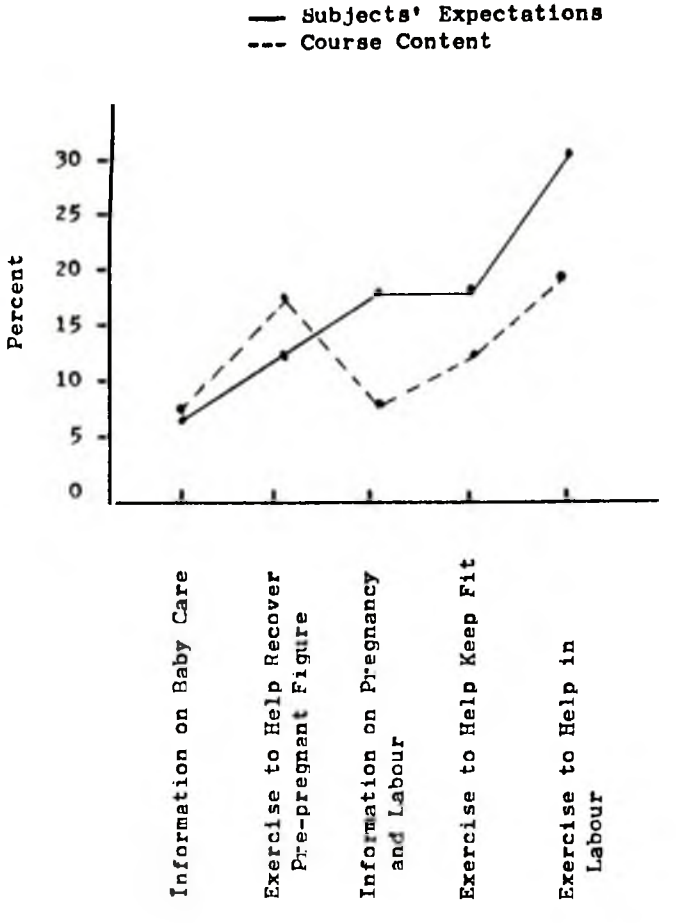

Figure 3. A Comparison of Elements of Subjects' Expectations with Corresponding Elements of Course Content

The question "What have you learned from the classes?" elicited the following responses:

1. I've learned exercises that keep one fit. The lectures consist of a brief description of the development of the baby and of labour. It's interesting to know these.

2. You are taught how to bend down; you never thought of this. My friends told me Old Wives Tales. When I started the classes, I realized these things are not true. I learned about breast-feeding, the kind of bra' to wear, how to put pillows on your lap to breast-feed your baby comfortably. It is helpful if you are told these things beforehand.

3. The classes don't give stuff like the hypnotic effect of the classes in relation to pain as some articles say. They give the impression that labour is acutely uncomfortable and this is why relaxation is important. In the long run if it becomes painful you may need light anesthetic or sedation.

4. I've learned exercises to help me in labour. The other things I already knew.

5. I've learned the advantages and disadvantages of breast-feeding and bottle-feeding which will be helpful...The exercises, I'm sure, will help me in labour and to regain my figure.

6. I've learned the psychological aspects of labour -- how to handle it easily. Ignorance is fearful. I've learned breathing and relaxation exercises for labour. You are told labour is not as painful as some people think and you are made aware of the experiences to expect as well as the uniqueness of every labour. I've also learned how to bathe a baby.

7. The baby care class is mainly changing, bathing, feeding and burping but it's helpful.

8. I know everything already but I took all the classes. It's not bad to go through these things again. I find them interesting.

Pertaining to the question "What would you have liked to learn about in the classes that you have not been taught?", the responses obtained are as follows:

1. The classes would be more useful if they included the behaviour of a baby in the first six months of life, for example, what is normal and what is not normal....Some mothers should have more chance to talk in the class and say what's on their mind. Another inadequacy

of the classes is that written material on childbirth and child care is not given at the classes.

2. The classes need more emphasis on the theory of the first and second stages of labour. I wish the classes could be longer and more often than once every two weeks. You can't learn much within limited time.

3. The classes are very satisfactory. They give all the information I think I need.

4. The instructor is good but it is important to let people with experience of childbirth take the classes; they inspire feelings they know...You tend to be skeptical about instructors who have never had children.

5. The classes are well conducted for someone who doesn't know much about childbirth. They help her to know what to expect. I didn't miss anything.

6. The classes should include what will happen if you have an abnormal baby. They don't want to frighten you but it's interesting to me, so I read about it.

7. I'd like to learn a little bit more about baby feeding. In relation to other things very little time is spent on breast-feeding.

8. For exercises to be beneficial physically, they must be regularly practised....Every two weeks is not enough for gaining physical strength.

The response to the three question stated above were analyzed together. On the basis of the analysis, in which the subjects were grouped under "satisfied" and "partially satisfied",[6] 12 of the 20 subjects (60 percent) were satisfied while eight (40 percent) were partially satisfied.

In Table 9, satisfaction level is compared with parity, occupational class, age and educational level. The findings show that more primigravidas seem to be satisfied with the classes than multigravidas. Eight

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[7] Subjects who gave responses that indicate some lack related to the classes are regarded as partially satisfied. Those whose responses show satisfaction without complaints are considered satisfied.

TABLE 9

SUBJECTS' LEVELS OF SATISFACTION WITH PRENATAL CLASSES BY PARITY, AGE, EDUCATIONAL LEVEL AND OCCUPATIONAL CLASS[b]

Relational Variables of Mothers	Satisfaction Level		Total Number
	Number of Satisfied Responses	Number of Partially Satisfied Responses	
Subjects	12	8	20
Parity			
Primigravida	8	3	11
Multigravida	4	5	9
Educational Level			
High	2	6	8
Moderate	6	2	8
Low	4		4
Age Groups			
21-25	6	3	9
26-30	4	2	6
31-35	2	3	5
Occupational Class			
1	4	5	9
2	3	2	5
3		1	1
4	1		1
5	4		4

[b]Parity: $\chi^2=0.68$; df=1; critical value of χ^2 at .05 level=3.84
$\chi^2=0.68<3.84$
Therefore there is no relationship between the level of satisfaction and parity.

Educational Level: $\chi^2=7.50$; df=2; critical value of χ^2 at .05 level=5.99
$\chi^2=7.50>5.99$
Therefore there is a relationship between the level of satisfaction and the level of education.

of the 12 satisfied subjects are primigravidas. Of the 8 that are partially satisfied, three are primigravidas. Apparently, there is no statistically significant relationship between parity and level of satisfaction.

Table 9, on the other hand, seems to show that subjects with moderate education or low education tend to be satisfied more than those with high education. All the 4 subjects with low education are satisfied. Of the 8 subjects with moderate education, 6 are satisfied while only 2 of the 8 subjects with high education are satisfied. A Chi square test of indepence shows a relationship between the level of education and the level of satisfaction, that is, the higher the educational level, the lower the satisfaction level, (see Table 9).

Occupational class, however, does not seem to influence the level of satisfaction. All the representatives of classes 4 and 5 are satisfied with the prenatal classes. On the whole, 3 of the 5 class 2 members and 4 of the 9 class 1 representatives are satisfied. The only representative of Class 3 is partially satisfied. In Table 9 it is statistically shown that there appears to be no relationship between occupational class and level of satisfaction. Age too does not seem to produce any important difference in the level of satisfaction; satisfaction and partial satisfaction appear to be practically equally found among the members of the three age groups (see Table 9).

Age: $\chi^2 = 1.71$; df-2; critical value of χ^2 at .05 level=5.99
$\chi^2 = 1.71 < 5.99$
Therefore there is no relationship between the level of satisfaction and age.

Occupational Class: $\chi^2 = 5.20$; df=4;critical value of χ^2 at .05 level=9.49
$\chi^2 = 5.20 < 9.49$
Therefore there is no relationship between occupational class and level of satisfaction.

The subjects who are partially satisfied with the classes gave various reasons; some of them gave more than one. The reasons are, lack of opportunity for group discussion, need for more emphasis on the first and second stages of labour, need for more information on the behaviour of the baby -- normal and abnormal -- and more information on baby feeding, need for distribution of written material on the content of the classes, need for an instructor who has personally experienced childbirth and need for longer class periods and a more frequent attendance than once a fortnight. These reasonsfall under the elements of content and organization of the classes. Table 10 shows that 4 (27 percent) of the 15 complaints are related to content of the classes, while 11 (73 percent) pertain to the organization of the classes. This seems to show that the partially satisfied respondents are more dissatisfied with the organization than with the content of the classes.

In Table 10, the above reasons are compared with parity, age, educational level and occupational class. Only one Class 1 primigravida, who has high education and belongs to the age group 31-35, thinks there is lack of opportunity for group discussion. The only subject who feels there is a need for more emphasis on the first and second stages of labour is a class 1 multigravida with high education. She is of the age group 21-25.

Three subjects indicate the need for more information on baby behaviour and baby feeding; all of them are primigravidas; 2 belong to the age group 21-25, 2 of them come from classes 1 and 2, and 1 from class 5; none of them comes from the low education group. Here it may be suggested that only primigravidas seem to be partially satisfied with the type and and amount of information on the baby.

TABLE 10

A COMPARISON OF REASONS GIVEN BY PARTIALLY SATISFIED SUBJECTS WITH PARITY, AGE, EDUCATIONAL LEVEL AND OCCUPATIONAL CLASS

Reasons	Reasons		Parity		Age Groups			Educational Level			Occupational Level				
	Number	%	Primi-gravida	Multi gravida	21-25	26-30	31-35	High	Mod-erate	Low	1	2	3	4	5
Organization of Classes	11	73													
Lack of Opportunity for Group Discussion	1		1				1	1				1			
Need for Distribution of Written Material on Content of Classes	4		2	2	1		3	3	1		3	1			
Need for Instructor Who Has Personal Childbirth Experience	3			3		2	1	3			1	1	1		
Need for More Time for, and Frequent Attendance of Classes	3			3	1		2	3			1	1	1		
Content of Classes	4	27													
Need for More Emphasis on 1st and and 2nd Stages of Labour	1			1	1			1			1				
Need for Information on Baby Behaviour and More Information on Baby Feeding	3		3		2		1	2	1		1	1		1	

Concerning distribution of written material on the content of the classes, it seems that primigravidas and multigravidas equally think there is a need for it. Of the 4 subjects who identify this need, 3 have high education and come from class 1 and the age group 31-35. This seems to suggest that the higher the partially satisfied subjects' education, age and occupational class, the more they think written material on the class content should be provided by the class.

All the 3 partially satisfied subjects who think the instructor should have personally experienced childbirth are multigravidas who have high education and are above 25 years of age. They represent occupational classes 1, 2 and 3. It appears that they want a model with whom they can identify because they have the experience of childbirth in common.

Similarly, the three subjects who feel that the classes should be longer and more frequent are all multigravidas with high education and represent classes 1, 2 and 3. One of them comes from age group 21-25 while the other two belong to the 31-35 group. This also seems to suggest that the higher the partially satisfied subjects' parity, age, education and occupational class, the more they think more time should be allotted to the classes.

The subjects' expectations were compared with their levels of satisfaction. It was noticed that 3 of the respondents who expect to obtain information on baby care are partially satisfied with the classes. The remaining subjects' expectations seem to be met by the classes.[8]

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[8] Attention may be drawn to the fact that, with the exception of information on the baby, the reasons the partially satisfied respondents gave for being partially satisfied (Table 10) fall outside their initial expectations.

In conjunction with the subjects' evaluation of the classes, the question, "Would you go again with another pregnancy?", was asked. The following are representative responses to the question:

1. I would go again for all the exercises.

2. I would go again for the breathing and relaxation exercises.

3. I don't know if I would have time with a baby at home, to go. Otherwise I would attend for the exercises.

4. I wouldn't go again because I now know what is taught at the classes.

5. I would go again so that I could be in contact with other mothers in the same situation. Moreover, it is easier to practice the exercises in a group.

6. I would go again to be sure I hadn't forgotten anything -- exercises and lecture. There may be changes and I may have to learn new things.

7. If I had pamphlets on the classes, it would not be necessary for me to go again.

The responses were grouped under the headings, positive, doubtful and negative. Fourteen of the responses fell under positive, 4 under doubtful and 2 under negative.[9] From these responses, analytic elements were derived and matched with age, parity, educational level and occupational class. (See Tables 11, 12 and 13).

The positive responses produced the following analytic elements:

1. Would attend for exercises.

2. Would attend for exercises and information.

3. Would attend for group support.

4. Would attend for group support and breathing and relaxation exercises.

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[9] Any response that indicates that the respondent would attend the classes with a subsequent pregnancy is considered positive. A response that is conditional is regarded doubtful. A negative response is one that shows that the respondent would not attend the classes with a future pregnancy.

As shown in Table 11, of the 7 subjects who would attend the classes again, for exercise only, 5 are multigravidas. This appears to indicate that more multigravidas than primigravidas would attend again for just exercises. Age does not seem to make much difference. Six of the seven that would go again for exercises equally come from classes 1 and 2. Five of the seven have high education. It appears that more of those from classes 1 and 2 or those with high education would attend again for exercises. Only primigravidas in the age group 21-25 would attend again for both exercises and information or for mainly group support. The two subjects who would attend again for group support and breathing and relaxation exercises are multigravidas above 25 years of age.

With regard to the negative responses, the analytic element is this: Would not attend again to avoid repetition. It could be noticed in Table 12 that the subjects who would not attend the prenatal classes again to avoid repetition are primigravidas with moderate education. Class and age do not seem to play any significant roles.

TABLE 11

POSITIVE ANALYTIC ELEMENTS RELATING TO FUTURE ATTENDANCE OF PRENATAL CLASSES COMPARED WITH AGE, PARITY, EDUCATIONAL LEVEL AND OCCUPATIONAL CLASS

Positive Elements	Parity		Age Groups			Educational Level			Occupational Level					Total Elements
	Primi-gravida	Multi-gravida	21-25	26-30	31-35	High	Mod-erate	Low	1	2	3	4	5	
Would Attend:														
For Exercises	2	5	2	3	2	5	2		3	3	1			7
For Exercises and Information	2		1		1	1		1	1				1	2
For Group Support	3		3			1	1	1	1	1			1	3
For Group Support and Breathing and Relaxation Exercises		2		1	1	1	1		1				1	2
Total Number of Subjects	14		14			14			14					14

TABLE 12

NEGATIVE ANALYTIC ELEMENTS RELATING TO FUTURE ATTENDANCE OF PRENATAL CLASSES BY AGE, PARITY, EDUCATIONAL LEVEL AND OCCUPATIONAL CLASS

Negative Element	Number of Responses	Parity		Age Groups			Educational Level			Occupational Class				
		Primigravida	Multigravida	21-25	26-30	31-35	High	Moderate	Low	1	2	3	4	5
Would Not Attend Again to Avoid Repetition	2	2		1	1			2		1				1

The analytic elements deduced from the negative responses are as follows:

1. Would attend classes again for exercises if time is available.
2. Would attend classes again for exercises if written material on the course content is not available.

Table 13, in relation to these elements, shows that the 2 subjects who anticipate attending the prenatal classes in the future provided time is available, are primigravidas of the age group 21-25. Those who may attend the classes again if they get no access to written material on the course content are multigravidas above 25 years of age. They have low education but belong to classes 1 and 2.

TABLE 13

DOUBTFUL ANALYTIC ELEMENTS RELATING TO FUTURE ATTENDANCE OF PRENATAL CLASSES COMPARED WITH AGE, PARITY, EDUCATIONAL LEVEL AND OCCUPATIONAL CLASS

Doubtful Elements	Total Responses for each Element	Parity		Age Groups			Educational Level			Occupational Class				
		Primigravida	Multigravida	21-25	26-30	31-35	High	Moderate	Low	1	2	3	4	5
Would Attend Classes Again for Exercises if Time is Available	2	2		2			1	1		1			1	
Would Attend Classes Again for Exercises if Written Material on the Course Content is not Available	2		2		1	1			2	1	1			
Total Number of Subjects	4	4			4			4				4		

Finally, Table 14 shows a comparison of future attendance with satisfaction levels.

TABLE 14

A COMPARISON OF RESPONSES RELATING TO FUTURE ATTENDANCE OF PRENATAL CLASSES WITH SATISFACTION LEVELS[c]

Future Attendance Responses	Level of Satisfaction		
	Satisfied Responses	Partially Satisfied Responses	Total Number of Responses
	Number	Number	
Would Attend Again	10	4	14
Might Attend Again	1	3	4
Would Not Attend Again	1	1	2
Total Number of Subjects	12	8	20

[c] χ^2=2.88; df=2; critical value of χ^2 at .05 level=5.99
χ^2=2.88<5.99
Therefore there is no relation between the level of satisfaction with the prenatal classes and the future attendance of prenatal classes.

Of the 14 subjects who would attend again 10 are satisfied. One of the 4 who might attend again is satisfied while 1 of the 2 who would not go again is satisfied. A Chi square test of independence (Table 14) reveals no relationship between the level of satisfaction and a future attendance of the classes.

CHAPTER IV

CONCLUSIONS

The main problem which this research has sought to review relates to finding a means to evaluate prenatal classes, their influence on, and their relationship with pregnant mothers. Hence some of the basic questions which this research sought to answer were: What are the expectations and evaluation of prenatal classes by groups of expectant mothers attending these classes? What are the basic characteristics of such mothers, their reactions to prenatal instruction, and the benefits that they can receive from such instructions?

The problem was tackled by the use of content analysis of data collected in a study conducted with 20 expectant mothers as subjects. These mothers were attending prenatal classes organized and conducted by a physiotherapist at a hospital.

The prenatal class programme adapts the lecture form of teaching and includes husbands in a couple of the classes. Unlike programmes which aim at eliminating labour pains, its aim is to provide "controlled childbirth". It seems to guard against the commonly raised issue that women "who have deep ingrown emotional problems" may be adversely affected by psychophysical training techniques.[1] Such a precaution appears to form part of the general precaution of ensuring that a doctor considers a mother fit for the classes before she is admitted. The content analysis of the

[1] Buxton, A Study of Psychophysical Methods..., p. 63

research data produced diverse findings. These are highlighted below.

In the realm of course content, the analysis has shown that the programme is exercise-oriented in that it is concerned more with exercises than with dissemination of information on childbirth and childcare in general.

There is an apparent lack of opportunity for group discussion in the classes. This seems to inhibit some mothers' urge to discuss issues that are of interest to them. The mothers are encouraged to ask questions and state their problems but it seems that they take relatively little advantage of this opportunity. One may speculate that a group discussion may help them to be more communicative. The basis for this speculation is Beebe and her colleagues' finding that group discussions at prenatal classes provide opportunities for the free expression of common problems.[2]

In terms of the particular groups of pregnant women who tend to attend prenatal classes more than others, it has been found that English Canadians are relatively more represented in the classes than immigrant ethnic groups. They seem to get their initial information about prenatal classes mainly from friends while the immigrant groups get theirs mostly from other sources such as mother, the doctor, the nursing profession and the prenatal class instructor. Friends as compared to the other sources seem to be the main source of information on prenatal classes. Breton claims that as far as social relations are concerned, formal organizations in ethnic communities create forces that tend to keep the social relations of

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[2] Joyce Beebe, E. M. Pendleton and E. King, "Bench Conferences in a Large Obstetric Clinic". American Journal of Nursing. Vol. LXVIII, No. 1, (Jan. 1968), p. 86.

immigrants within their own groups and minimize out-group contacts.[3] This may lead one to raise the question as to whether the immigrant ethnic groups fail to gain access to the main source of information on prenatal classes due to forces within their ethnic groups. Another question is whether they are under-represented in the classes because the sources available to them are not informing them about the classes on a large scale or whether their under-representation is a function of population disproportion. These are questions which need to be answered by further studies.

The consideration of age appears to reveal that above the age of 20, prenatal class attendance increases with increase in age until the age of 26 when it starts to decline with increase in age. Davis and Morrone, in their study found that when the mother's age is below 20 years, there is a significant decrease in the proportion of mothers who attend prenatal classes.[4] The present research seems to uphold this finding since none of the subjects is below the age of 21. Davis and Morrone again claim that above the age of 24 there is an upward trend in the attendance of prenatal classes.[5] The present research, however, appears to show that the upward trend is reversed to a downward trend about the age of 26. This phenomenon may be attributable to the finding in the present research that the age groups above 25 years comprise more multigravidas than primigravidas. It may be remembered that the groups of 126 pregnant women, from which the

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[3]Raymond Breton, "Institutional Completeness of Ethnic Communities and the Personal Relations of Immigrants" in B. R. Blishen et al. Canadian Society: Sociological Perspectives (3rd ed., rev.; Toronto: The Macmillan Company of Canada Ltd., 1968), p. 82.

[4]Davis and Morrone, op.cit., p. 1201.

[5]Ibid.

subjects for the present research were selected, contained only 10 mutli-gravidas. It suggests that fewer multigravidas, who form the bulk of the older age groups, attend prenatal classes and hence contribute to the downward trend of prenatal class attendance with increase in age.

Where education is concerned, Davis and Morrone's finding that prenatal class attendance increases with the increase in education seems to be substantiated by the apparent finding in the present research that the university and college educated mothers seem to attend prenatal classes more than mothers with lower education.

It appears also that the higher the occupational class of the mothers' husbands, the more likely it is for them to attend prenatal classes. Davis and Morrone have found this relationship to be positively significant.[6] On the basis that education, occupation and income have high positive correlation in the determination of social class,[7] it may be argued that the higher social classes seem to attend prenatal classes more than the lower classes. What could contribute to this phenomenon? Are the prenatal classes social class-biased by way of reflecting the values of some social classes more than others? Or could the under-representation of the lower social classes be attributed to population distribution of society? These are sociological questions which need to be investigated.

The present research has also revealed that the mothers' previous knowledge and expectations of the prenatal classes emphasize exercises more

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[6] Ibid., p. 1197.

[7] A. B. Hollingshead and F. C. Redlich, Social Class and Mental Illnes: A Community Study (New York: John Wilkins and Sons, Inc., 1958) p. 66.

than information. This finding is, of course, in conformity with the finding that the prenatal course content stresses exercises more than information. From the above, it could be safely stated that the prenatal classes seem to meet the expectations of the mothers.

Expectations compared with parity has indicated that only primigravidas expect to get information on pregnancy, labour and care of the baby. Both primigravidas and multigravidas expect group support from other mothers alike. This suggests that multigravidas attend the classes solely for exercises and group support. It has been found also that members of the age group 26-30 that comprises mainly mutligravidas do not expect any information on pregnancy, labour and baby care.

Education and occupational class do not seem to produce any clear picture in their relationship with the mother's expectations. The small number of subjects used for the study may have contributed to this failure.

On the subjects' evaluation of the classes, it has been found that despite the finding that the subjects seem to generally expect more than the course emphasizes, more than of them (60 percent) are completely satisfied. The remaining 40 percent are only partially satisfied. The main source of lack of entire satisfaction seems to lie with the organization of the classes. Complaints leveled against the content of the classes emphasize inadequacy of information on baby care and behaviour of the baby. Such compainants are all primigravidas. Here it may be suggested that if steps are taken to amend this inadequacy, the prenatal classes may prove more beneficial to primigravidas.

It appears that the higher the age, education and occupational

class of the subject the more likely it is that she is partially satisfied. Reasons given for partial satisfaction, however, are on the whole not associated with those subjects' initial expectations. Information on the baby seems to be the only exception.

More multigravidas and those with higher education or from the higher classes would like to attend the classes again with subsequent pregnancies for only exercises. It may be stated that the higher educated or the higher class persons would attend the classes again for exercises no matter what their level of satisfaction. This appears to explain why they tend to attend prenatal classes more than their counterparts. Satisfaction level compared with future attendance of the classes, however, fails to show any relationship.

The following questions may be raised for possible future research. Are the higher educated or higher class mothers more exercise-conscious than the other groups represented? Do the classes seem to appeal to them more because they (the classes) are exercise-inclined? It is difficult to relate the multigravidas' seeming concern about exercises with their class attendance since despite the emphasis the classes lay on exercises, they do not seem to be generally enticed. This needs more investigation.

Those mothers who are not sure whether they would attend again attribute their doubt to availability of time or written material on the content of the classes. Those who would not attend again want to avoid repetition. Could these expressed ambiguous and negative responses be the actual contributory forces in the non-attendance of prenatal classes? The answers could only be found through further studies.

Obviously, this research is not without its limitations. One such limitation is the small number of subjects utilized for the research; another is the fact that it was impossible to employ the comparative approach that could provide substantial grounds for generalization. A third one is the gross nature of the measure applied in the content analysis of the research data. Nevertheless it is hoped that this research would pave the way for further research in this important area of study.

Despite the above limitations, the present research, in the final analysis, has shown that certain factors such as age, parity, educational level, occupational class and expectations of the mothers seem to account for some expectant mothers attending prenatal classes more than others.

APPENDIX

GUIDING INTERVIEW QUESTIONS

Questions on Expectations

1. What did you know about prenatal classes before you started attending?
2. What did you think you would gain by attending the classes before you started?

Questions on Evaluations

1. How do you find the classes so far?
2. What have you learnt from the classes?
3. What would you have liked to learn about in the classes that you have not been taught?
4. Would you go again with another pregnancy?

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