NURSING PAPERS
PERSPECTIVES EN NURSING

ACCREDITATION OF CANADIAN
BACCALAUREATE PROGRAMMES

EXPERIENTIAL LEARNING IN CLASSROOMS

INFANT CARE CONCERNS
OF PRIMIGRAVIDA MOTHERS

SYSTEMS ANALYSIS OF EXPANDED ROLES

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Volume 8, Number 1 — Moyra Allen, *Editor*
Spring 1976 — Vivian Geeza, *Managing Editor*

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Volume 8, Numéro 1 — Moyra Allen, *rédacteur en chef*
Printemps 1976 — Vivian Geeza, *directeur*

La revue *Nursing Papers/Perspectives en Nursing* est publiée quatre fois l'an par l'école de Nursing de l'Université McGill, 3506 rue Université, Montréal, P.Q. H3A 2A7, Canada. Le personnel enseignant des écoles universitaires de nursing et les infirmières qui ont des intérêts similaires sont invités à soumettre des manuscrits, des lettres et des idées. Nous nous intéressons plus particulièrement aux articles faisant état de problèmes, qui soulèvent des questions ou qui soumettrent des idées et des programmes d'action en recherche, éducation, administration et pratique.

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LETTER

To the editor:

As an educator, clinician, and student, I am quite comfortable with nursing models and theories. I will not have a restless, sleepless night because of them. I am, however, tempted to question their value and contribution to teaching and learning. I have come across many educators who are so fed up with having models forced on them from above that their work performance is affected. Because of job security, many do not openly challenge the use of nursing theories in their particular institution.

Myrna Lindstrom's "Holistic Nursing: A Basis for Curriculum," (Fall, 1975, volume 7, no. 3) and Levine's theory of holistic nursing puzzle me. She writes: Before and during time care is given the student must consider the sources of a person's energy and how he is using it." How absurd can one get! Any nurse should know that in health or sickness the sources of a person's energy are the consumption, digestion, and utilization of food and nourishments, especially carbohydrates, not to mention oxygen intake and elimination of waste products. If animals could talk, they might be able to give us a 'lay animal's' interpretation of the source and use of energy. Students will know that from their anatomy and physiology courses. They would also know the various routes of nourishment intake.

Learning the content of a course is no easy matter and certainly motivation of the learner is of great importance. Now, students not only have to learn the course content, but also the model under which it is taught and have to constantly think of the model before and while giving care. Can we document that better learning and understanding take place when a model is used, resulting in better retention and provision of better nursing care? Can we also show that nursing taught without a model results in inferior learning, retention, and practice?

A few years ago, the problem-solving approach was the order of the day. Then it was Bertalanffy's General System Theory — almost everyone was on the band-wagon and one was an outcast if he or she were not versatile with GST. In short, are nursing educators facilitating or complicating learning by their over-whelming belief in models?

Mohamed H. Rajabally, R.N.
St. Catharines, Ontario

ACCREDITATION OF CANADIAN BACCALAUREATE PROGRAMMES IN NURSING

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What is accreditation? Why should we be concerned with accreditation of baccalaureate programmes in nursing? Accreditation is a process by which an agency or organization evaluates and recognizes an educational institution or programme of study as meeting certain pre-determined criteria or standards (Ozimek 1974:4). The decision to award accreditation status or not involves a judgement on quality. Nursing is accountable for the quality of care delivered by its practitioners. Educational programmes, the primary means of preparing nursing practitioners, must prepare individuals who will meet society's need for highly qualified practitioners.

Baccalaureate programmes in nursing need to periodically assess their overall effectiveness. Faculty in the programme must ascertain the validity of the purposes and goals, the extent to which each part of the programme supports and builds on other parts thereby promoting or negating the accomplishment of the goals of the programme and the effect of factors influencing the programme.

An educational programme is complex; evaluation is difficult and consuming of time and resources. Accreditation through establishing standards or criteria by which the programme can be assessed facilitates and stimulates self-evaluation as well as identifying the degree to which the programme meets established standards.

C.A.U.S.N. AND ACCREDITATION

The Canadian Association of University Schools of Nursing (C.A.U.S.N.) has identified the evaluation and ultimately the accreditation of baccalaureate programmes in nursing in Canada as one of its primary functions. The development of criteria and methods for evaluation has been undertaken by various task groups between the years 1957-1971. In April, 1973 a task group presented a report which identified criteria for the assessment of educational programmes in nursing. Four criteria perceived as qualities or values

* The author is chairman of the Committee on Accreditation of the Canadian Association of University Schools of Nursing.

essential to the effectiveness of any baccalaureate programme in nursing were identified. Assessment of the degree to which the criteria were present in a programme was seen as a basis for self-evaluation (C.A.U.S.N.: 1973). The four criteria are:

1. Accountability of the faculty: the extent to which the stated goals of a nursing education programme and the abilities of its graduates are giving evidence of faculty fulfilling responsibility for preparing students to function as baccalaureate nurses.

2. Relatedness of parts of the programme: the extent to which each part of the nursing education programme supports and builds on other parts thereby promoting or negating the accomplishment of the goals of the programme.

3. Relevance of the programme: the extent to which the described goals of the programme and the nursing abilities of its graduates are relating adequately to the health needs of its community.

4. Uniqueness of the programme: the extent to which each part of a programme is manifesting fitness, or is appropriate to the goals of the programme, the faculty, and to its setting.

In March, 1974 a C.A.U.S.N. Committee on Accreditation was established to assess the criteria and to develop methods for evaluating baccalaureate programmes in nursing. The criteria and methodology may ultimately form the basis for accreditation.

A critical review of the literature on evaluation and accreditation of educational programmes in nursing led the Committee to accept the approach advocated by Allen (1975).

The Committee has examined three self-selected baccalaureate programmes in nursing in order to:

1. Identify the major components or parts of a baccalaureate programme;
2. Develop means of gathering data relevant to the four components;
3. Develop means of analyzing the data in relation to the four criteria;
4. Identify indicators of the criteria in relation to each component;
5. Evaluate the criteria as standards by which baccalaureate programmes may be evaluated and if the criteria are considered appropriate, then
6. Develop scales by which the degree of accountability, relevance, relatedness and uniqueness may be measured, thus permitting judgements regarding the quality of the programme.

STATUS REPORT

The major components or parts of a baccalaureate programme in nursing are: goals and purpose, curriculum, teaching of nursing, practice of nursing and research, and administration. The components interact to achieve the common goals and purposes. Clearly articulated goals and purposes provide the direction for the programme. The curriculum provides for an organized and sequential plan of learning experiences. Teaching of nursing, the focal activity of the programme, involves the provision of conditions which enable the students to interact with patient situations in a problem-solving way (learning to nurse might best be characterized as a problem-solving process). The practice of nursing and research are integral parts of the programme as they contribute to the teaching of nursing and to increasing knowledge in nursing. The administration of a programme needs to provide and to organize the resources in a manner that most effectively will support and facilitate the achievement of programme goals and purposes. Resources include: faculty, students, finances, facilities, communication channels, decision-making processes, etc. (Allen 1975).

The methods developed to collect data in relation to these components include: participant observation, questionnaires, interview guides, written materials, i.e. course descriptions, calendar, curriculum description, reports, etc.

The tools developed to date are being further refined but do provide a means of gathering adequate data on most of the components.

Indicators of the criteria in relation to each of the components have been developed. A series of evaluative questions based on these indicators allows a judgement to be made regarding the degree to which a criterion is or is not present.

A lengthly list of indicators has been developed, but examples of the indicators in relation to each component may suffice to illustrate the type of information required.

PURPOSES AND GOALS

Relevance — evidence that the purposes and goals are influenced and modified by the health care needs of the community i.e., systematic manner of data collection, monitoring and evaluation of factors which influence the nature of the programme.

Relatedness — the programme purposes and goals are consistent with those of the university.

Accountability — programme goals and purposes compatible with the needs of the students.

CURRICULUM

Relevance — clinical situations in which students learn to nurse are basically representative of situations graduates of the programme will encounter.

Relatedness — the clinical situations and their sequencing is consistent with the teaching of nursing; the programme goals and the teaching of nursing influence the selection of clinical situations for each segment of the programme.

Accountability — there is increasing complexity of clinical situations within the planned experiences and students have the prerequisite behaviours required to deal with complexities.

TEACHING OF NURSING

Relevance — students learn a type of problem-solving which will prepare them to respond to the health needs of the community.

Relatedness — the students learn a type of problem-solving consistent with the purposes and goals; there is a consistency of approach across teachers.

Accountability — learning to nurse proceeds with scientific knowledge; students look at health needs, at problems of individuals, families, and communities with broad understanding and insight.

PRACTICE OF NURSING AND RESEARCH

Relevance — type of faculty involvement in nursing practice and research is consistent with the type of practitioner required by the community.

Relatedness — there is a consistency between the approach to the practice of nursing and the purposes and goals.

Accountability — the faculty's involvement in practice and research contributes to meeting the health needs of the community.

ADMINISTRATION

Relevance — the administration supports and facilitates faculty in determining the relevance of the programme to the health needs of the community i.e., provision of opportunity for faculty to participate in community groups examining health needs.

Relatedness — the selection of students and faculty is consistent with the programme purposes and goals; budget allotments allow for faculty, supplies, equipment, facilities etc. required for the development, implementation and evaluation of the programme.

Accountability — the administrative structure is responsive to external influences and demands i.e., the employers demand changes

in the educational programme in order to prepare nurses for specific roles.

It is difficult to differentiate between the criteria relevance and uniqueness in relation to specific components. The criterion, *uniqueness* may be applied best to the overall programme. The major question to be raised is: do the programme goals take cognizance of the characteristics peculiar to that community, university, potential student population etc.?

CONCLUSIONS

Accountability, relevance and relatedness do provide a basis for programme evaluation. Additional work must be done in order to refine the techniques of data gathering and analysis. The component "teaching of nursing" is particularly difficult to assess and efforts are now directed toward the development of valid, reliable tools to measure this component. Baccalaureate programmes in nursing are complex systems but the components identified have proven to be appropriate sub-entities. Evaluating the criteria and developing and evaluating methods by which baccalaureate programmes in nursing may be evaluated has been a most challenging and rewarding task for the programmes involved and the members of the Committee on Accreditation.

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A SPECIAL ISSUE of Nursing Papers is planned for later this year on "Meeting Consumer Needs by Teaching Students Nursing Administration". A C.A.U.S.N. interest group report on this subject and responses to it from nurses across Canada will comprise the entire issue. If you wish to respond to this report in a brief statement (3-4 pages) in English or French please request a copy from the editors.

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EXPERIENTIAL LEARNING IN THE CLASSROOM

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The experiential approach to learning is based on teaching models in which the student is the center of the teaching-learning process. Two experiential classes were included for the past two years in McGill's second year B.Sc.(N.) course on chronic illness. One class focused on trust, the other on loss, including dying. One of the teaching models for experiential learning is the human awareness or awareness training model. This model focuses on the development of human potential through the effective aspects of learning such as emotions, feelings, and values (Brown, 1971; Shutz, 1967).

Human awareness models utilize theoretical concepts from the Gestalt approach to personality which is concerned with the synthesis of thinking, feeling and acting (Perls, 1969), all relevant to learning and nursing. Based on the assumption that being in touch with one's own feelings is a crucial aspect of the nursing process, the two experiential classes are an attempt to help the students deal with some of the powerful emotional responses aroused in nurse and patient.

The rationale for focusing on trust and loss, including dying, evolved from the students' repeated experiences in facing these and other emotionally laden issues as they progressed in nursing. The goals of the experiential approach used in the two nursing classes were (a) to allow the student to participate actively, (b) to have the student involved emotionally as well as intellectually in the learning experience, and (c) to faciliate the student's awareness of both the interrelatedness of her own emotional and intellectual experiences, and the impact these have on her nursing.

USING EXPERIENTIAL CLASSES

The experiential classes are used to supplement and to expand on other methods of teaching and learning. If the student is going to utilize any discoveries from this experience in her nursing, she also needs to be working from a sound knowledge base in the physical, behavioral and social sciences. The experiential class cannot be an isolated emotional experience in the curriculum, but must be linked to other "building blocks" where knowledge and experience are

* Since writing this article the author has joined the Department of Psychiatry and Behavioral Sciences, University of Louisville, as Assistant Professor of Psychiatry in Nursing.

gained. For example, in this course students are expected to extend their observation skills, established in the first year, to their own behavior, and in the second year develop an increased awareness of the impact of their behavior on the nursing process. Another building block is the concept of trust in the nurse-patient relationship. Trust was also introduced during the preceding year. A base had been established for logical development of the concept at a different level.

Setting the climate is a crucial factor in experiential teaching. The participants need to be comfortable, relaxed and aware that they are in a non-judgmental, non-competitive situation if they are really going to deal with their emotions and avoid prescribed responses. They cannot be rushed through an experience, but need adequate time for reflection and response. The teacher needs to lead in a slow, quiet voice. To promote individual creativity, a variety of media should be available for individual responses or statements — paper, crayons, pencils, clay, tape recorders. The experience is a private one and is to be shared with others only if one wishes. There is a time provided at the end for such disclosure. The experience is never a requirement and the options to not participate or to withdraw are offered. Of course, such a subjective experience is not graded. Some guidelines for experiential teaching have been presented by Pothier (1971):

> One needs to consider the timing and appropriateness of the experience. Are the teacher and students ready to benefit from such an experience? Is it psychologically appropriate for the teacher and students? The teacher needs adequate preparation and experience with the technique and needs to review the lesson plan with someone else experienced in the method. Alternatives to participation must be provided, e.g. observation, writing, leaving the room. Similarly, alternatives must be provided for the student who feels she is becoming too involved to withdraw from the experience, e.g. stop until ready to continue, leave the room, stop and observe others. The teacher needs to allow appropriate resentment and any negative feedback to be expressed. This will keep the student from cancelling the experience and prevent sabotaging of the teaching. The teacher also needs an additional person in the room not involved in the experience to observe the class and be available for assistance.

The technique was modified for use in a class on trust and one on loss to help the students deal with some of their own feelings about these emotionally laden issues they are required to deal with in their nursing. The teachers working with the second year students all went

through the experiences before presenting them to the students. This way, the teachers knew what the experience was like and had tried it out before asking the student to do so. They were able to use their own knowledge of the experience while observing the students during the classes.

AN EXPERIENCE OF TRUST

In the class on trust, at the beginning of the year, the students divided themselves into pairs and went on a "trust walk" (Brown, 1971, p. 37). After an introduction and instructions from the teacher, the students took their partners out for a walk where one was blindfolded and the other led the way. The students were told it was the leader's responsibility to determine how the blindfolded person would experience the world and how much of it she would experience. To utilize non-verbal communication skills, they were instructed not to speak to each other during the walk (except for safety cues from the leader). After ten minutes of walking, the partners reversed roles. After the walk the students were instructed to share what they wished in a discussion with their partners. Next there was a discussion with the whole class and teachers about the experience. Following that each person was asked to make a response to the experience that was meaningful to them. (The only medium available was pencil and paper.) This response was again private and shared only by choice.

During the discussion the group expressed a wide range of feelings: anger at the unexpectedness of the situation, frustration and helplessness at being dependent on somebody, relief as they became able to communicate, surprise at how different everything seemed, enjoyment of something familiar, delight with some sensations (e.g. smelling a flower) and relief that they were intact once the experience was over.

There were feelings expressed to the partner such as "I was glad you were so close"; "I had to feel my own way first (with foot or hand) before I was going to follow you"; or "Oh I was mad at you when I bumped into the wall." Besides discussing their own feelings, students related the experience to their nursing activities. On a concrete level, analogies were made to caring for acutely ill or severely handicapped people, including blind or eye-patched patients. On a more abstract level the discussion relevant to nursing progressed from analogies of dependence, frustration control and leadership to trust, security, vulnerability, change and motivation. These were then related to the nurse-patient relationship and the subtle and not-so-subtle factors affecting interaction and the development of trust between people.

AN EXPERIENCE OF LOSS

For the class on loss later in the year a very different format was developed. The class was presented after many of the students had worked with chronically ill patients who were experiencing different types of loss including the losses associated with dying. The timing of this class was later in the year for several reasons. The group had more experience with patients who were dying as the year progressed. The issue of loss, including death, was more difficult to approach than the issue of trust. As the year progressed, students and teachers were more comfortable *as a group* sharing emotionally-laden learning experiences (trust was developing).

The rationale for the class was reviewed at the start. The group was well aware of the need to deal with loss in their personal as well as professional lives. In order to deal with people who are dying and people who are experiencing some form of loss, first one needs to get involved with one's own feelings about loss and death and deal with them. The class was thus introduced as "an experience about yourself." It was acknowledged that some people would be able to become more involved than others and a climate was established in which the student was free to develop the experience in a way that she chose, one that was therefore meaningful to her.

The student was asked to choose four items (qualities, people, events) which she valued and felt help make her the person she is. With carefully-timed instructions and questions for consideration, the teacher asked the students to give up one item after another and to think about what life would be like after each loss. The decisions made, the feelings experienced, and responses to the experience were recorded as each individual wished. After the students had relinquished their valued items they were asked to reflect on the experienced loss and respond to it by writing or drawing. One could see a variety of expressions. Some students were looking very pensive. Some looked sad. There were some tears visible. The room was very quiet as people wrote or reflected. People left the room for a break after they completed their responses.

Following the break the class reconvened to discuss the experience. For some it had been a powerful emotional experience because of the nature of the topic and their ability to be in touch with their feelings. For some it had been difficult to get involved "because the situation was not real". Many were able to share their "gut reactions". Some described anger at the teacher for continuing the losses. Others found that without some of the objects listed, the others became meaningless whereas certain things could be given up relatively easily. Some could not continue the experience after losing a particular item or

"after losing so much". Several talked about how surprised they were to discover some of their own values through what was most meaningful and what they kept the longest. There was discussion of how a nurse can experience powerful feelings in herself when caring for a patient who evokes those feelings and the difficulties of caring for someone when you yourself are grieving. Along with their own feelings, some students also discussed patient experiences and theoretical knowledge about grieving and dying.

OUTCOMES OF THE EXPERIENTIAL CLASSES

It is difficult to measure the effectiveness of experiential learning in terms of behavioral outcomes. The classes were repeated a second year because of (a) the use students made of the classes as they referred back to the experiences during the year, (b) the favorable evaluation of the two experiences by the students and teachers at the end of the first year. Thirty-five students completed the evaluations the first year; twenty-nine the following year (total, sixty-four). In both classes of second year students the distribution of favorable to unfavorable evaluations was strikingly similar. In both groups, about three-quarters of the students found the two experiences meaningful. Some of their comments were: "made me aware of what the concept really means"; "They really get you personally involved and you discover, in a small part, what it's all about"; "learned a lot about myself and others from the class"; "these classes opened my eyes to what patient might feel like"; "good in arousing and examining one's own feelings to the situation and allowing one to empathize more with patients and understand their situations better"; "important because I could relate to other people's feelings as well as my own. . . a lot of the same emotional conflicts we are facing, some of us for the first time". Of the remaining quarter of each group, several students found it difficult to get involved in the class on loss: "I could not get into it"; "Difficult to become involved"; "Wasn't in the right frame of mind"; "I felt I already had enough insight before it"; "difficult to put oneself in a situation that logically isn't real". A few of these students did not find either class useful: "I didn't learn anything"; "Couldn't get involved"; "not covered at high enough level; leaned too much on emotional side at times." One student described the trust walk as "silly".

In the clinical areas there were indications that students were increasingly aware of their own feelings as the year progressed. It is difficult to determine how much was related to the experiential classes and how much was linked to students' maturation and to their

feeling more comfortable in a variety of clinical situations after additional learning in the cognitive as well as the emotional sphere. Behavior in the clinical area, like the comments on the student evaluations, showed that the students had developed some insight about what is required of the patient in a variety of situations. Students were more inclined to acknowledge to peers and teachers their realizations of how their feelings influenced their interpretations and sometimes their interventions in a situation. That the students have become this aware of their feelings indicates the goals of the experiential classes are being met to some extent.

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INFANT CARE CONCERNS OF PRIMIGRAVIDA MOTHERS AND NURSING PRACTICE: TWO MODELS

C. J. FILLMORE AND K. W. TAYLOR*

Pre-natal instruction programs to primigravida mothers would appear to be an excellent situation for imparting the information necessary for successful infant care practices. In Winnipeg, however, we found that only a minimum of instruction time in these courses was alloted to infant care topics, while the majority of time was devoted to pregnancy and delivery topics. What and how much infant care information could be dealt with in pre-natal instruction programs? What were the effects of pre-natal courses on the infant care concerns of those attending? These specific questions oriented our research into the more general question: what are the correlates of infant care concerns of primigravida mothers?

Prior research on the infant care concerns of first time mothers has not raised directly the question of the general correlates of concerns. Brown (1967) hypothesized that nurse visits to first-time mothers at home reduce both the number and intensity of infant care concerns, while Adams (1963) compared the infant care concerns of normal weight and premature infant primigravida mothers. Both of these studies were based on what may be referred to as the "anxiety" model of concerns — a model that assumes that concerns play a negative role in the mother-child relationship and are consequently something that should be removed. For example, Brown's (1967) measure of nurse visitation effectiveness is the reduction in the number and/or intensity of concerns.

Hypotheses. Using this "anxiety" model of concerns and the findings and speculations of the Brown and Adams research, the following hypotheses on the general correlates of infant care concerns of primigravida mothers were developed:

1. Mothers who attend pre-natal and/or child care courses will have lower concern scores than non-attenders.
2. Mothers who intend to breast feed their infants will have lower concern scores than mothers who intend to bottle feed.

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3. Mothers in the modal first-child age category will have lower concern scores than mothers below and above the modal age category.
4. Amount of reading on child and infant care will be negatively correlated with concern scores.
5. Years of education will be negatively correlated with concern scores.
6. Experience with infant and child care will be negatively correlated with concern scores.
7. The amount of in-hospital demonstration of infant care practices will be positively correlated with concern scores.
8. Amount of assistance at home with the infant will be negatively correlated with concern scores.
9. The larger the number of sources of advice on infant care problems, the lower the concern scores.

*STUDY DESIGN**

Interview schedules were completed by fifty-two primigravida mothers in the Woman's Pavillion of the Winnipeg Health Sciences Centre during February, March and April of 1973. Voluntary anonymous participation in the study was requested 3 to 5 days after delivery. There were no refusals. Data was obtained only from first-time mothers who had carried their pregnancy to full term, had experienced no complications with delivery, had given birth to apparently normal infants, were physically and mentally capable of caring for their infant, and were married and living with an employed spouse. Because of our interest in assessing the relationship of prenatal course attendance to infant care concerns, we attempted to get an equal number of attending and non-attending respondents. Thus the total sample of 52 mothers was composed of 26 attenders and 26 non-attenders.

The instrument employed to measure concerns was an adapted and pretested version of Brown's (1967) protocol. Six areas of infant care concern were measured — feeding, crying, bathing, elimination, routine care and sleeping. Respondents were requested to express their degree of concern with specific infant behaviors in each of these areas. Area concern scores were obtained by scoring and

*The description below is, in the interests of space, much truncated, particularly with regard to pretesting, scale analysis and general data analysis. Interested readers may obtain a manuscript (28 pages) with a complete methodological description as well as a critique of the methods used by Adams and Brown from the authors for the price of duplication.

TABLE 1 — Multiple Correlation Coefficients

Concern (Dependent Variables)	R^{2*}_{c}	Number of Independent Variables entered into Regression Equation
Bathing	.29	24
Crying	.53	23
Feeding	.45	23
Elimination	.35	23
Routine Care	.47	23
Sleeping	.31	24
All Concerns	.45	23

* These coefficients incorporate a correction factor for the large number of independent variables in the regression equation relative to the number (52) of cases observed. See Loether, H. J. and G. McTavish (1974: 316).

averaging their replies to each set of questions. We then scale analyzed this data and deleted non-discriminating scale items. The summary measure called "all concerns" in the following tables was computed by averaging the six area concern scores.

Our independent variables were measured with conventional questions, with three exceptions: 1) a child care experience score was constructed by summing the responses to a series of questions on the recency, nature and number of experiences with caring for children, 2) a child care reading score was constructed from respondents' reports of their reading of infant and child care books, and 3) a "home assistance" score was obtained from responses to questions dealing with the number of people who would help the mother when she returned home.

FINDINGS

Multiple Regression Analysis. Multiple regression coefficients evaluate the degree to which the variation in the concern scores can be accounted for by all of the independent variables together. The coefficients are presented in Table 1 for each of the area concern scores.* The best result is for the crying concern score — all independent variables together account for 53% of the variation in the score. Another way of saying this is that 47% of the variation in the crying concern scores is unaccounted for. The situation for the other concern scores leaves an even larger portion of concern score variation "unexplained". We may conclude from all of this that our explanatory scheme for the concern scores is not highly effective. In the analysis below, then, we must keep in mind that there is much variation in the concern scores of those primigravida mothers that we cannot account for.

*All computations reported here were done with the *Statistical Package for the Social Sciences* (SPSS) versions 5 and 6. See Nie *et al.,* (1970, 1975).

TABLE 2 — Nominal Independent Variables by Partial Mean Concern Score Differences

Independent Variables	Bathing	Crying	Feeding	Elimination	Routine Care	Sleeping	All Concerns	Number of Respondents
Pre-natal Course								
Attended	2.30	2.85	2.11	2.28	2.45	2.45	2.38	26
Did not attend	1.79	2.71	1.93	2.10	1.94	1.89	2.04	26
Child Care Course								
Attended	1.96	2.92	2.08	2.28	2.25	2.23	2.28	24
Did not attend	1.85	2.59	1.90	2.12	2.14	2.01	2.15	28
Feeding Method								
Bottle	2.02	2.77	1.83	2.15	2.22	2.03	2.16	22
Breast	1.94	2.64	1.95	2.14	2.07	2.00	2.12	27
Both	3.07	3.43	3.98	2.92	3.08	3.70	3.36	3
Age in Years								
15-19	2.12	2.71	1.72	2.07	2.18	1.85	2.10	5
20-24	2.20	2.65	2.12	2.31	2.21	2.28	2.29	27
25-38	1.82	2.86	1.96	2.07	2.16	1.95	2.13	20

TABLE 3 — Concern Scores by Ordinal Independent Variables: Partial Correlation Coefficients

Independent Variables	Bathing	Crying	Feeding	Elimination	Routine Care	Sleeping	All Concerns
Reading Score B	-.20	-.01	-.24	-.07	-.40	-.24	-.22
C	-.02	-.06	.14	.05	.09	.07	.06
Years Education	-.18	-.17	-.21	-.16	-.33	-.12	-.22
Child Care Experience	-.14	-.09	-.03	-.16	-.11	-.10	-.12
Patient Demonstration	.15	.13	.23	.21	.30	.27	.24
Home Assistance	.14	.39	.09	.09	.03	.21	.19
Sources of Advice	.03	.25	.16	.33	.25	.33	.25

Partial mean difference analysis. Table 2 shows the partial mean differences between the nominal independent variables and concern scores. Hypothesis 1 is not supported: contrary to our expectations, course attenders had higher mean concern scores than non-attenders for every area of concern. On the other hand, this finding may be artifactual (that is, as much a product of the research procedures as of mothers' actual concerns) because it is in opposition to Adams' (1963: 76) report that "Mothers who had attended classes indicated less concern with bathing . . . crying . . . and care of navel and circumcision . . . Class attendance made little or no difference with regard to feeding and other concerns." However, Adams does not specify what type of classes she is referring to, nor precisely how she arrived at her conclusion.

The data is mostly supportive of hypothesis 2, in that breast feeding mothers have lower average concern scores than bottle feeding mothers. The exception to this is the feeding concern scores where the bottle feeding mothers have a lower average score. Again, these findings may be artifactual — Adams (1963: 75) states that ". . . method of feeding did not seem to be related to the number of questions expressed" but again she does not explain exactly how she arrived at this conclusion. The differences we found are small — so small as to "seem not to be related" unless the type of detailed analysis we have used is carried out.

Table 2 presents scores for a third group of first-time mothers who reported plans to use both feeding methods. This third group was separately classified when it became apparent that their responses were quite unique, and there was no logical justification for classifying them with either of the other two groups. While the "both feeding methods" group consists of only three respondents their average concerns scores are very high relative to the other two groups. This suggests that feeding method is very strongly related to concerns, particularly when the new mothers have not made a clear decision on which feeding method to use.

Our hypothesis 3 postulated that the modal age category* first-time mothers would have lower average concern scores than first-time mothers below and above the modal age. With the exception of the average score for crying concern, our hypothesis is not supported, and in fact, modal age category mothers have not the lowest but the highest concern scores of the three age category groupings.

*Age group 20-24 years is the modal age of first-time mothers in Canada according to the figures in Table 5.36 (page 222) of the 1973 *Canada Year Book*. Since the 15-19 and the 25-29 years age categories also have large numbers of first-borns, we would suggest that future research consider alternative age categorizations as well as the one employed here.

Partial correlation analysis. Table 3 shows the partial correlations between the ordinal or interval independent variables and concern scores for hypotheses 4 through 9. Hypothesis 4 postulated that amount of reading would be negatively correlated with concern scores and the data for reading score B supports this expectation, while the data for reading score C contradicts it with the exception of the bathing and crying concern correlations. Two reading scores are reported here because an analysis of the composition of the reading scores revealed that the B score, based on reported reading of *The Canadian Mother and Child* (1967) and *Up the Years* (1971), had negative correlations with concerns; while the C reading scores, based on reported reading of Spock's *Baby and Child Care* (1968) and "other books", had mostly positive correlations with concern scores. Consequently, we used the two reading scores in the analysis to avoid submerging the difference in a single score.

Hypotheses 5, 6 and 7 are supported by the coefficients in Table 3. Hypotheses 5 and 6 postulated negative correlations between concern scores and both years of education and child care experience. The finding regarding child care experience would appear to be factual (that is, more a result of the mothers' concerns than of research procedures) in that it agrees with Adams' (1963:76) finding that ". . . mothers with experience in caring for small infants before the births of their own infants had less anticipatory concerns. . . " Thus the relation between child care experience and concerns is independent of study design, sample, measurement and data analysis techniques.

Hypothesis 7 postulated a positive relation between concern scores and patient demonstration scores and the Data in Table 3 supports this expectation. Again, this finding appears factual in that it is similar to Adams' finding that "Mothers who cared for their infants in the hospital had more questions at two days about feeding, bathing and especially crying," (1963: 76) independently of the different study design, sample, measurement and data analysis techniques used in the two studies.

The last two sets of partial correlations are non-supportive of our hypotheses: we had expected negative relations between concerns and amount of home assistance and sources of advice, whereas all of the coefficients are positive in direction.

What are the most important infant care concerns of primigravida mothers? The data in Table 4 show that the ranking of the relative importance of the concern areas depends upon how the question is

TABLE 4 — Two Measures of the Relative Importance of Areas of Concern

Area of Concern	Mean Scores	Average Rankings
Bathing	2.03	2.74
Crying	2.73	4.75
Feeding	2.00	4.84
Elimination	2.19	3.72
Routine Care	2.18	2.34
Sleeping	2.10	2.67
All Areas	2.20	—

asked. The mean scores are from the area concern scores, while the average ranking scores were obtained from a single question requesting each respondent to list the six areas of concern in order of their importance. The different measures produces quite different impression of the relative importance of the different concerns. The mean scores suggest that crying is of greatest concern, followed by elimination and routine care. The average rankings imply that feelings is of greatest concern followed by crying then elimination. Where the mean scores show routine care among the top three concerns, the average rankings show it to be of least concern. Clearly these rankings are artifactual — a function of the techniques used to arrive at the rankings — and neither agrees with Adams' (1963: 74) finding that feeding and bathing concerns were most important with crying concern a poor second, or with Brown's (1967: 49) finding that crying concern ranked first and feeding concern ranked second.

In sum, the anxiety model of infant care concerns of primigravida mothers does not give much insight into this data. Not only is much of the variation in concern scores left unexplained, and the magnitude of the partial correlations and partial mean differences very small, but only about half of the hypotheses derived from earlier work using the anxiety model correctly predict the directions of the relationships between concern scores and independent variables. For these reasons we could not use the results of the research directly for purposes of planning the inclusion of infant care content in pre-natal instruction programs. Clearly an alternative model of concerns is needed.

DISCUSSION

A Two-component Model of Concerns. An alternative model of concerns would see a greater role for concerns than merely a negative one based on the assumption that concern equals anxiety. It

would postulate first that there are at least two components in concerns — interest and anxiety. To the degree that concern indicates interest in infant care, it would play a positive role in the mother-child relationship rather than a negative one. Second, a two-component model would see concerns as the changing outcome of developmental learning process. Initially based on early learning, concerns are changed by (1) later passive learning (reading, courses, etc.); (2) later active learning (practical application of information in infant and child care activities); (3) the infant's behavior (indicating successful or unsuccessful practice); (4) perceived contradictions in the information learned; and (5) other influences (such as nursing interventions).

Third, the model would postulate that the anxiety and interest components of concern develop interdependently, each sometimes reinforcing, sometimes countering the other. Finally, the two-component model would have to allow for each area of concern to have a "career" in relation to other areas of concern, the development of the child, and the development of the mother-child relationship. Some *specific* concerns, such as concern over the adequacy of breast milk for the infant's diet, have a short career — they disappear when the infant is weaned. But the mother's *general* concern over her child's feeding and dietary behavior does not disappear as a concern. It develops in relation to the child's behavior and the mother's knowledge and insight into the many ways that sufficient or insufficient diet may be indicated in its behavior, and presumably continues over the entire length of time she has a relationship with the child.

This model would allow logical sense to be made out of almost all the findings of the present and earlier research on the infant care concerns of primigravida mothers. For example, the model would lead one to expect that the nursing visits to a group of mothers would perhaps cause anxieties to diminish, but interests to increase, and the change in the concern pattern for such a group would be different from that of a group of similar mothers without nurse visits. This is what Brown (1967) found. But her use of an anxiety model apparently led her to expect that all the concerns of the visited group would diminish. She never considered the possibility that the visitation program could have kept certain concerns alive or even increased their relative strength.

Next, consider some of the statements quoted by Adams (1963: 75) in her study. Some statements can be interpreted as expressing annoyed anxiety (e.g. "her crying drives me crazy. Nothing I do seems to help") while others can be interpreted as heightened interest

(e.g., "I'll sure be glad when I know what's bothering him. He just cries and cries" and "My most important question is if the baby is getting enough as I am breast feeding him.")

Now consider the present research findings. If we assume that the concern scales were measuring *both* anxiety and interest components in some unknown combination, we can offer logical explanations for nearly all of the findings. We would expect that child care experience, education and certain kinds of reading material would diminish the anxiety component of concerns and thus the negative correlations of these variables with concern scores. But we would also expect that patient demonstrations, child care course attendance, pre-natal course attendance and other kinds of reading material would increase the "interest" component of concerns, and thus the positive correlations of these variables with concern scores. Next, the two-component model would lead us to anticipate that mothers who have not yet decided what type of feeding method they are to use will have very high interest *and* high anxiety components to their concern scores as they go about evaluating all the pros and cons of either method, and thus the high average concern scores for this group.

Finally, the positive correlation of sources of advice with concern scores makes sense in terms of the two-component model. Those mothers with high interest and low anxiety will have expanded their sources of information on infant care while those mothers with high anxiety may find that many sources of information only serve to increase their anxiety and perhaps reduce their contact with potential sources in order to reduce it. In contrast, the positive correlation of home assistance with concern scores makes sense as a response to a high anxiety component in the concern. All of the above claims are, of course, speculative.

To go beyond such speculation we should have to design a research program that would measure each component of concern independently of the other components. This would require, at minimum, an "interest" questionnaire, an "anxiety" questionnaire, and an "infant care concerns" questionnaire, as well as a set of questions for evaluating ethnic, class, educational, child care experience, and family history background information. All of these questionnaires, with the exception perhaps of the anxiety questionnaire, could be easily used in ongoing pre-natal instruction and follow-up programs, and then cross-checked with survey and quasi-experimental studies.

Implication for nursing practice. Several implications of the present research for nursing practice are clear. The demonstrated weakness of the anxiety model means, first, that any assumption that con-

cerns play only a negative role in infant-mother relationships ought to be questioned. Second, nursing activities based on this assumption which attempt to reduce concerns may be counter-productive, even detrimental. Third, there is need for nurse practitioners in mother-infant care areas of work to participate in the development of an adequate model of mothers' concerns.

The logical and heuristic utility of the interest/anxiety model of concerns developed briefly above recommends its use as a working model, even though the present research cannot be said to have tested the model. The usefulness of the model would be greatly increased if it were further developed to include concepts of (1) patterns of concern change which indicate increasingly healthy mutual adaptations of mother and child to their conditions of life, and (2) patterns of concern change which indicate potentially unhealthy adaptations.

The patterns of change will be different for "conventional" and "special problem" concerns. The healthy development of conventional or normal concerns in the mother would ideally be along the lines of increasing knowledge about her child's health/sickness behavior and the variety of preventive and ameliorative responses. At a minimum, the healthy development of normal concerns ought not go below some minimum of health information — too much decrease in concern might indicate an unhealthy development pattern. At the same time, anxiety about normal development should diminish. In short, the interest component of concern ought to grow and develop along with the child's growth and development, but the anxiety component of concern ought to decrease.

On the other hand, for special problem concerns derived from congenital, genetic or social patterns of abnormal development, it is unlikely that the anxiety component of the concern will diminish except in relation to clear evidence in the child's behavior that the problem does not exist. The anxiety over these special problems is likely to affect the *general* levels of anxiety and interest in the pattern of changing concerns. It seems reasonable to suggest that in this situation, a low level of anxiety in the mother's concerns may be unhealthy and indicate a deteriorating mother-child relationship. The healthy pattern should show the rapid expansion of the mother's knowledge about the special problems, possible methods of monitoring their development and possible modes of coping, short of institutionalizing the child. In short, where special problems are affecting the mother's concerns, the interest component of concerns ought to grow and develop along with the child's growth and development, but the anxiety component is unlikely to diminish.

Conventional socio-medical research can contribute to the refinement and general testing of the model along these lines. But the most important test of any model lies in the ongoing records of applications and the evaluation of these applications — case reports. Thus the suitably oriented case reports of nurse practitioners will constitute an indispensable data base for both the further development and practical testing of the present theory.

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In the Summer, 1974 issue of Nursing Papers, position statements were made by many of the University Schools of Nursing concerning the expanded role of the nurse. The article which follows describes how one group studied a particular approach to this question. Perhaps your institution has been developing other approaches to the expanding of the nurse's role. What have your experiences been? Your descriptions and evaluations of innovative approaches to nursing are a sort of "natural resource" which, when shared, enables us to fashion new ideas of nursing itself, identify research problems, etc. What do you think? What are you doing? Let us know, soon. — Ed.

THE EXPANDED ROLE OF THE NURSE: A SYSTEMS ANALYSIS

BEVERLEE COX*
JOAN ANDERSON*
JOY PAGE*

Psychiatry today has moved far beyond its narrow medical domain and is in the midst of a social revolution (Laing, 1969). The traditional prerogatives of the physician-specialist (psychiatrist) of diagnosis and treatment, have been diluted and diffused by two emerging trends: one, the phenomenological and ideological changes, due to application of alternatives to the medical model; secondly, a concomitant social change in terms of the "opening up" of the field to other professionals who have assumed a colleague role in the practice of psychiatry. Whereas the medical model was, at one time, exclusively the *modus operandi* in all psychiatric settings, it is now evident that other models are being considered and implemented very often in conjunction with the interdisciplinary team approach (Bry, 1972).

The study reported here was undertaken in order to explore the implications of the interdisciplinary team approach, primarily in regard to the aspect of most relevance at the present time: the expanded role of the nurse. It was conducted at the Health Sciences Centre Hospital, Dept. of Psychiatry, U.B.C. This hospital, located on the campus of the University of British Columbia, is a sixty bed teaching and research facility. Here, selected nurses have assumed

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the role of primary screening interviewers, primary therapists, primary nurses, and day care programme co-ordinators. On one inpatient unit, nurses have also taken on additional teaching and orientation functions with medical students.

GENERAL SYSTEM THEORY: A FRAMEWORK FOR ANALYSIS

In order to study the phenomenon of role change within psychiatry today, it is important to consider the context of that change. The field can no longer be considered as a branch of medicine but rather must be analyzed as a social system that functions as a component or subsystem of the larger health care delivery system in society. It is a social system in the sense that it is composed of groups of human beings in society, interacting together in an organized fashion over time, in identified settings, and for specific purposes (Berrien, 1968).

In analyzing any system a crucial distinction must be made between abstract and concrete levels of reality. Buckley (1967) makes this distinction clear by defining an abstract system as "a continuous boundary maintaining, variously related assembly of parts." He continues by defining a concrete system as "the structure of organization its components may take on at any particular time".

General system theory assumes the existence of both open and closed systems. The essential difference between the two is that open systems receive inputs from other systems, while closed systems function without responding to such inputs (Berrien).

A system, by definition, is "a set of components interacting with each other and a boundary which possesses the property of filtering both the kind and rate of flow of inputs and outputs from the system" (Bertrand, 1972).

Feedback, both negative and positive within the system, is an equally important construct. Buckley defines feedback-controlled systems as being *goal-directed* and not merely *goal-oriented,* since it is the deviation from the goal-state itself that directs the behaviour of the system, rather than some predetermined internal mechanism that aims blindly.

A final construct of general system theory to be considered is that of the steady state of the system. At all times, there are ebbs and flows of activity within the system. This leads to the accumulation of tension, and subsequent tension-reduction within the system. If tension becomes too great, disequilibrium occurs, leading to an unsteady state. It is only through the maintenance of some degree of equilibrium that allows the system to remain in a steady state. This is a dynamic state, implying a degree of balance and movement to-

ward a goal. It does not imply a fixed, rigid, or unchanging state over time (von Bertalanffy, 1968).

General system theory is a complex organization of constructs some of which have just been defined and discussed. These constructs have particular application for the analysis of psychiatry as an open social system.

METHODOLOGY

The first step in designing a methodology for the study was to review the literature related to the topic of the expanded nursing role. The literature review explored three different models of nursing practice: primary nursing, team nursing, and the nurse as primary therapist. Each model suggested a differing degree of responsibility and accountability within the nursing profession.

In order to obtain a comprehensive picture of the expanded nursing role, it was necessary to collect data relating to the nurses, and the system of nursing, on each inpatient unit. In our opinion, it was vital to receive input from all members of the nursing staff. The following methods of data collection were utilized to obtain this input:

1. A questionnaire to all nursing staff.
2. A self-recorded diary of nursing activities for a selected period of time — requested from all nursing staff.
3. A sociogram illustrating the roles and interactions of the staff on each unit.
4. Participant observation for selected periods of time on each unit.
5. Interviews with nurses functioning as primary therapists.
6. Reviews of selected patient records.

QUESTIONNAIRE

We compiled a 30-item questionnaire based on an agree-disagree continuum. The purpose of the questionnaire was to survey the opinions of nurses regarding many different aspects of nursing practice on the inpatient units: job satisfaction; accountability; decision making; communication and consultation; utilization of time; nurses' perception of physicians' view of their professional nursing role; satisfaction with the nursing organization; work load; and competence and professionalism.

In order to establish some assurance of the validity of the placement of the thirty items into the above nine categories, five expert nurses were asked to take the questionnaire and assign each item to the appropriate category. There was 71% agreement among these nurses on the placement of the items into the nine categories.

All members of the nursing staff were asked to respond to the questionnaire. The percentage of response to this task was 89.7%.

Staff members were given the questionnaire in small groups in a conference room. They were instructed not to discuss it among themselves, and were given fifteen minutes to complete it. All staff members were informed that the results of the questionnaire would be tabulated and identified by unit, but not by individual. This identification allowed us to determine the degree of intra-unit and inter-unit agreement.

SELF-RECORDED DIARIES

All nursing staff were asked to supply a record of their nursing activities over an eight-hour period of duty. Although the actual utilization of nursing time was not a primary focus of this study, we felt it to be a significant dimension which could not be entirely ignored, since the very real demands on nurses' time have obvious implications for a study concerned with the expansion of the nursing role. We wished to ascertain the amount of time spent on direct patient care and time spent on indirect care, i.e., staff meetings, rounds, conferences and inservice activities. In addition, it seemed that a more representative and comprehensive picture of nursing activities would emerge if each nurse documented an actual eight hour duty period.

These nursing activities were grouped according to direct and indirect care activities. The data were then examined for evidence of decision making, and grouped according to type: independent, interdependent, or dependent.

SOCIOGRAMS

Initially, we requested the Unit B nursing staff to examine the job descriptions for staff on the Unit (i.e., head nurse, care coordinators and staff nurses) and revise them to make them more congruent with the primary nursing system. The staff examined the job descriptions, and thought them broad enough to include the expanding role they have been taking as primary nurses on the unit. To further exemplify their concept of the expanding role, they prepared for us a sociogram constructed to illustrate the interactions of the primary nurse and the total ward staff and patients.

We found these data useful and asked the other two units to provide us with a sociogram, illustrating the structure and interrelationships of the total ward staff and patients.

The sociograms were analyzed in relation to (1) total configuration; (2) nursing system configuration; and (3) communication patterns relating to individual nursing system positions, i.e. head nurse, team leader, staff nurse and psychiatric assistant.

OBSERVATIONS

During a three week period we attended ward rounds, staff conferences and staff-patient meetings on each Unit. We also interviewed selected members of the nursing staff. Some of the time during this period was left unstructured to facilitate additional observation.

The purpose of the observational visits was to gather first-hand information on the professional nursing practice on each unit. We were looking for evidence of independent decision-making and accountability by nurses. We also attempted to document interactions between nurses and other health professionals on the unit.

While on the inpatient units we attempted to keep our focus on observation, rather than participation, in the situation. We engaged in minimal interaction with staff while in meetings, and avoided assuming an active role in any discussions involving patient care. However, staff did interact with us and often tried to solicit our participation.

A content analysis was done on all observational data, looking at the dimensions of accountability and decision-making. The data were examined for correlations between the type of decision and the nature of the decision (i.e. independent, dependent and interdependent). Other possible correlates were also looked for as the data were analyzed.

THE PRIMARY THERAPIST

At the time this study was undertaken, there was only one nurse functioning in this capacity on an inpatient unit. Therefore, in order to collect data about this type of expanded role, it was necessary to utilize (1) interviews with those nursing staff members who had previously been primary therapists; and (2) record reviews of those patients whose primary therapist was a nurse.

During the period of data collection, the inpatient unit that had been experimenting with the nurse as primary therapist had a staff meeting to evaluate their experiences. We attended this meeting and recorded our impressions of it.

Further data were gathered through observations on two occasions of the nurse-therapist in ward rounds, discussing her patients. These data were analyzed for content relating to decision-making and accountability.

RECORD REVIEWS

To supplement our observations we selected a sample of patient records from each inpatient unit. Three such records were taken from each unit. We were interested in ascertaining the scope of

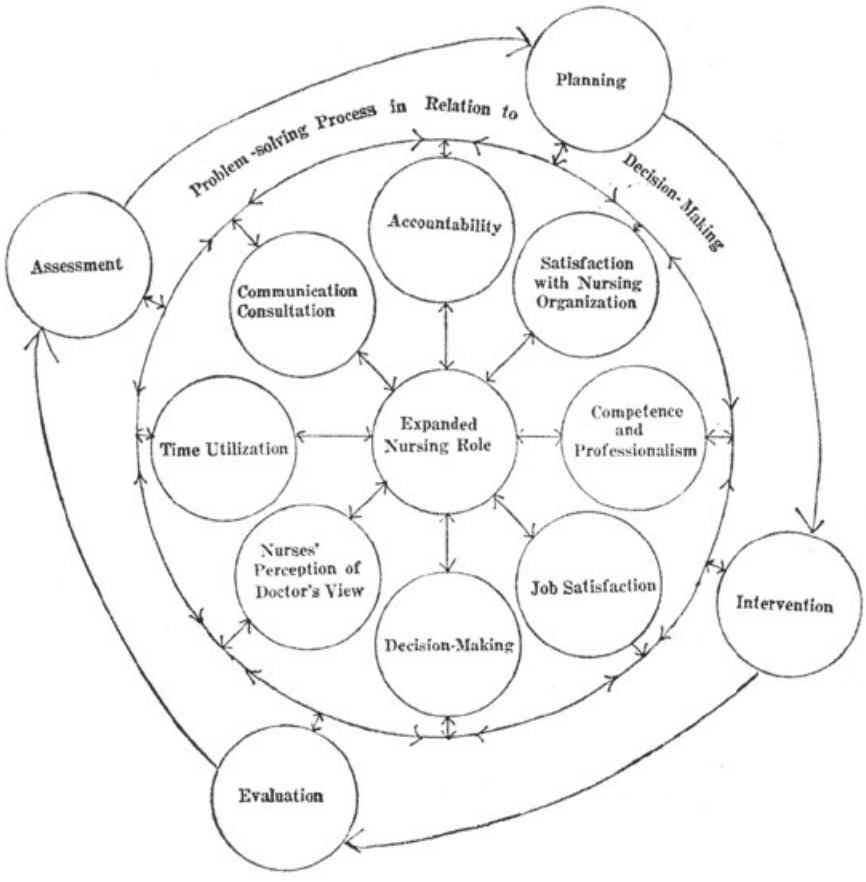

Fig. 1.: Schema of Interrelationships Among Concepts Under Examination

nursing practice as documented in the patients' records. The record review also was done with a view toward comparing similarities and differences between this aspect of nursing on the units.

Patient records were reviewed in relation to:

1. Decision making: kind of decision, how it was arrived at (dependent, independent, interdependent), clarity of rationale, and other health care personnel involved.

2. Accountability: which members of the health care team recorded in the various component areas of the record.

The methodology for this study was designed with a view toward examining what we considered to be many interrelated components of nursing practice. Figure 1 illustrates the interrelationships between the concepts under examination and the expanded nursing role. It is to be interpreted only as an attempted conceptualization of nursing practice, but it is not in any way intended to represent all the factors in operation in any given situation.

Decision-making and the elements of the problem-solving process were conceived as the basis of professional nursing practice, and therefore are integral concepts on which this schema is based. The other seven identified concepts are also closely related with each other and the problem-solving process, forming a matrix in which nursing practice may be analyzed.

FINDINGS

The findings of this study were delineated by means of a qualitative data analysis of material gathered from a variety of sources. As nursing researchers, our challenge was to use the integrative framework of systems theory in order to arrive at a valid interpretation. Our approach was to consider the various groupings of data as separate categories of analysis. These units are reported by category in the following section, with data from each nursing unit separately considered.

ANALYSIS OF QUESTIONNAIRE RESPONSES

Questionnaire responses focused on nine areas:

1. accountability
2. decision-making
3. communication and consultation
4. satisfaction with nursing organization
5. perception of workload
6. competence and professionalism
7. nurses' perceptions of doctors' views
8. time utilization in direct patient care
9. job satisfaction

Unit A had the lowest percentage ratings of the three units for agreement regarding the cateories of "job satisfaction," "communication/consultation," and "satisfaction with nursing organization." These categories had significantly lower ratings than those of the other units.

The agreement ratings for the categories of "accountability" and "decision-making" were in close approximation to those of Unit C. The category of "reasonability of work-load" had the highest mean agreement rating. "Nurses perceptions of doctors' view of professional nursing role" had a rating similar to that of Unit B with 52.96% agreement that doctors were cognizant of, and fully utilize the skills of the nurse. "Utilization of most of time in direct care" received only 50% agreement.

The questionnaire responses indicated considerable dissatisfaction with the unit nursing organization, and job satisfaction was lower than on the other units. Communication problems existed and nurses'

perceptions of doctors' view of the professional nursing role was incongruent with nurses' perception of themselves. While the nurses agreed staffing was adequate, there was only 50% agreement that most of the nurses' time was spent in direct care. While both accountability and decision-making received high ratings, the lower ratings in the other specified areas indicated dysfunction within the total unit organization.

Unit B. The agreement percentage ratings for most of the categories fall between those ratings for the other units with the exceptions of the categories of "accountability" (62.75%), and "decision-making" (47.07%), both of these categories have the lowest percentage ratings for agreement.

The lower ratings for "accountability" and "decision-making" along with the relatively high rating for "communication/consultation" reflect that these first two are shared phenomena with other health care personnel.

Unit C had the highest percentage ratings for agreement in "job satisfaction", "accountability", "decision-making", "communication/consultation" and "satisfaction with nursing organization". It had the highest percentage of disagreement (20.83%) for "workload reasonability'. "Nurses' perceptions of doctors' view of professional nursing role" had a significantly lower agreement rating than those of the other units. There was 52.64% agreement that most of nurses' time was spent in direct care. The higher ratings in the first five categories indicated an overall higher degree of satisfaction, responsibility and communication on this unit. Although the rating of 61.12% for "satisfaction with nursing organization" was higher than the other units, still the percentage of disagreement indicated considerable dissatisfaction with the present nursing system.

SELF-RECORDED DIARIES

Nurses were requested to keep diaries of their activities on the units over an eight-hour period of duty.

Analysis of the diaries by unit revealed an overall similarity in the kinds of activities engaged in by nurses throughout the inpatient units. It was not possible from the data to compute any frequency regarding various activities nor to determine the degree of importance of one activity in relation to another.

The only significant differences in diary content was in Unit B diaries under the Indirect Care components. These activities were related to time spent with medical students in teaching and orientation functions. Specific entries under this were:

"remind medical students to write medication orders"

"show medical students how to chart in POMR"

"taught medical students re: management of psychotic patient"

"met with medical students to plan care, suggest lowering medication dosage for one patient, order EEG, EKG..."

From the diaries it could be seen that nurses were spending roughly one half of their on-duty time in direct patient care on all three of the inpatient units and that the range of their functions was very wide. Many of these functions involved independent decision-making in all phases of the problem-solving process. Interdependent decision-making was involved with overall assessment of individual patients and planning for their total care, and also with planning of daily patient care (interpersonal, chemotherapeutic and milieu components of management) for both individuals and groups.

It could also be seen that nurses on Unit B had taken on much responsibility for the orientation and teaching of medical students in that area.

SOCIOGRAMS

Unit A. From the analysis of information received from the sociogram, the nursing system was portrayed as two separate sub-groups within the multidisciplinary health care team. It was decentralized, with the two team leaders most involved in clinical and organizational concerns. The head nurse functioned in a non-clinical capacity and was concerned mainly with the nursing system. As indicated by the subgroupings of nursing personnel, there were two teams that were concerned with the nursing management of patient care. In this subgrouping, registered nurses were given little overall patient responsibility, for their interaction patterns were placed mainly within the nursing system.

Unit B. The total configuration of the sociogram was that of a wheel with the head nurse at the centre, the other health care personnel relating directly to her and to the patients who were placed on the circular periphery.

The nursing system was shown as a unified group with the team leader as the pivotal person. All members of the nursing group had direct two-way contact with patients, though placement of nursing group members in proximity to patients was varied; the head nurse was placed farthest away from patients and the registered nurses and psychiatric assistants were placed closest. Communication within the nursing system was via the team leader. There was no direct communication shown between the head nurse, registered nurses and psychiatric assistants.

The head nurse was in a central position, providing nursing direction and coordination of the health care team while the team leader

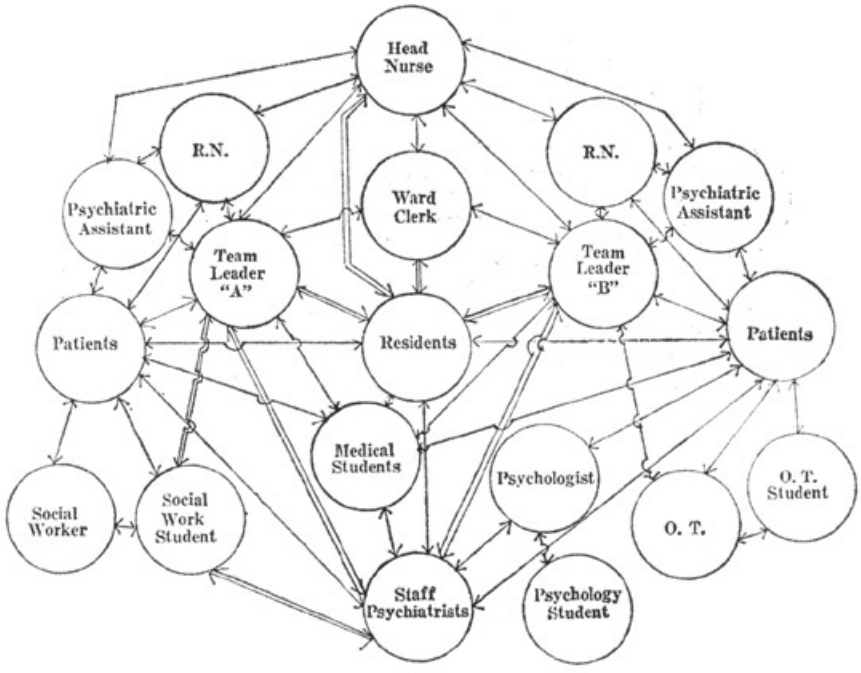

Fig. 2: Sociogram — Unit A

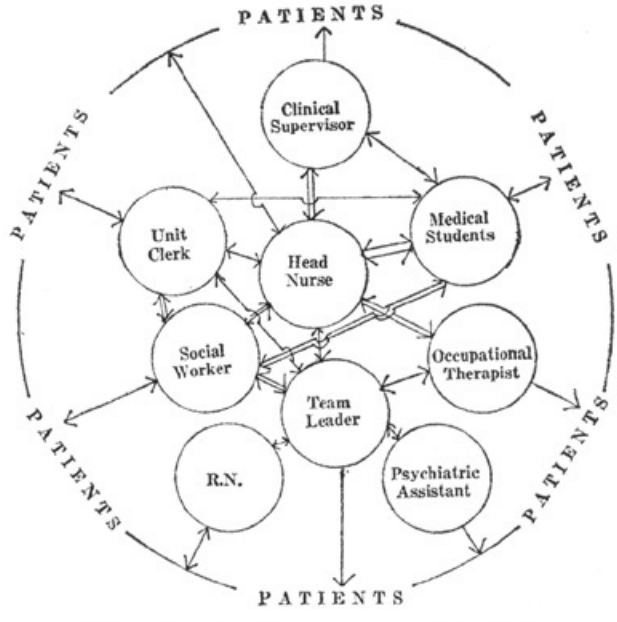

Fig. 3: Sociogram — Unit B

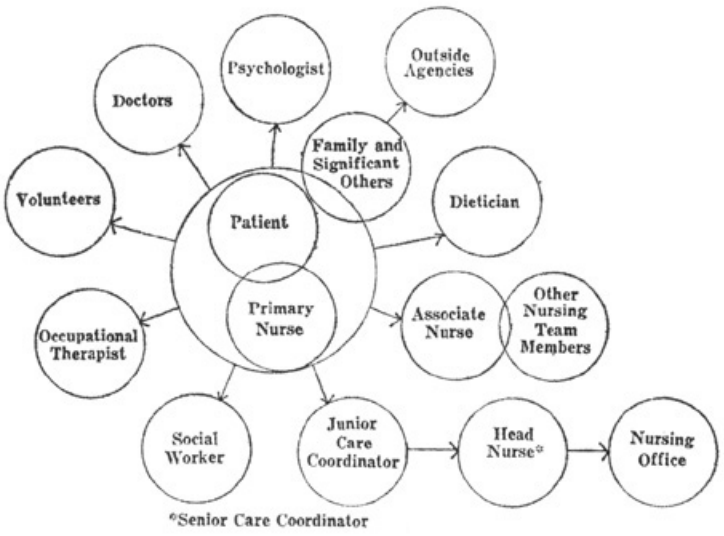

Fig. 4: Sociogram — Unit C

was involved with coordination of the nursing team. Registered nurses and psychiatric assistants relied on the team leader for information relay and exchange.

The nursing system interfaced with the health care team at the head nurse and team leader levels with minor participation in total team functioning engaged in by the registered nurses and psychiatric assistants.

Unit C. This sociogram differed from those of the other two units in that it depicted communication channels from the viewpoint of the primary nurse, while the others represented total team interaction patterns.

The patient was placed at the centre of the complex, very closely aligned with his/her family and the primary nurse. The patient and the primary nurse together formed the major interacting unit with the other health care workers, who were placed in a circular fashion around them. Lines of communication with extra-unit systems were shown (i.e. nursing office, outside agencies).

The nursing organization appeared as a decentralized structure with much of the communication about patient care taking place at the primary nurse level. The head nurse was shown as a liaison between the nursing office and the unit nursing organization, with no direct contact with the primary nurse- patient unit. Similarly, the care coordinator served as an information relay person with no other "conrdinating" functions. Associate nurses and other team members received communication regarding patient care directly from the pri-

mary nurses. The primary nurse was the main personnel focus of the sociogram directly involved with the patient and his family and relating to other health care personnel.

Primary nurses served as coordinators of the patients' total care. They interfaced directly with other personnel, using the care coordinator as consultant on clinical matters and giving direction about care of their patients to associate nurses.

OBSERVATIONS IN RELATION TO DECISION-MAKING

The observations related to decision-making were categorized according to the nature of the decision: independent, interdependent, or dependent. This section discusses the pattern of decision-making among nurses in the presence of other health care professionals at interdisciplinary conferences.

Unit A. The nurse therapist consulted with other members of the health team, but made independent decisions regarding the patient's overall treatment plan. The nurse therapist observed was prepared at the master's level. In situations where the nurse was not a primary therapist, interdependent decisions were reached regarding overall treatment plan. On two occasions, one nurse was found to make independent decisions concerning family therapy, and initiated this topic in meetings with other health professionals. Nurses also acted independently in areas relating to ongoing daily management, e.g. structuring activities on the ward. Nursing participation in ward rounds was active. Some nurses interviewed patients. They also contributed information about patient behaviour on the unit.

Unit B. On this unit, the pattern of decision-making varied. In ward rounds decisions were made interdependently, or deferred to other health professionals. On these occasions nurses made one out of twelve decisions which related to weekly goals of patients. Planning for daily management was cited as an area of independent decision-making. The overall picture presented was that regardless of the level of decision-making, decisions were made either interdependently with other health care personnel, or else decisions were initiated by nursing personnel and deferred to medical personnel.

Unit C. The impressions of the data collectors were that nurses, in the absence of other health professionals, made independent decisions regarding ongoing daily management, e.g. patient privileges; therapy modality, in particular family therapy; and ward management. However, in the presence of other health professionals independent decision-making decreased, e.g. in ward rounds, only one out of twelve decisions was made independently by nurses. One pattern observed was that nurses deferred decision-making to other

health personnel, particularly the physician. On other occasions, nursing input was minimal in the plan of action presented by other health personnel. In community meetings decisions were made either interdependently, or independently, and then deferred to other health personnel.

It was obvious that decision-making by nurses was influenced by the presence or absence of other health professionals. On their own, nurses tended to act interdependently. However, in group situations, they were less assertive and deferred decision-making to others.

NURSES AS PRIMARY THERAPISTS

From the interviews and meetings with the four nurses who had functioned as primary therapists in the hospital, a number of impressions were recorded. Interested nurses had assumed the primary therapist role as a consequence of the decreased number of medical staff. The nurses indicated that there were both pros and cons to being a primary therapist. On the positive side, they felt pleased with accepting total responsibility for patient care and felt they learned more about the patient as a whole. Also, the responsibility for presenting cases in a clear succinct manner necessitated that they conceptualized and formulated their rationale for decision-making. Some nurses expressed that they had difficulty finding sufficient time in which to effectively fulfill their expanded role responsibilities. Some nurses perceived a problem related to the staff's acceptance of the expanded role. When a nurse-therapist was assigned to a patient with complex problems, she observed the staff's uncertainty in regard to her ability to handle the situation. Some nurses were not given 24-hour responsibility for patients, as staff members were reticent to call the nurse-therapist during the evenings. Two of the nurses were team leaders and experienced administrative conflicts when becoming over-concerned with one patient, instead of taking into account the total needs of the unit. There was also a status conflict in that the role of team leader was formally recognized, whereas the nurse-therapist role was not.

The nurses identified the need for extra training for the role, particularly in regard to increasing their knowledge of psychodynamics and psychopathology. They further indicated a need for more intensive supervision.

RECORD REVIEW

The records were reviewed using methods of content analysis to identify the decision-making patterns and examples of accountability of nurses.

Unit A — Decision-Making. All decisions recorded related to the assessment-planning phase of the problem-solving process. Decisions made independently related to daily interpersonal management on some occasions and once to discharge planning. Rationale for these decisions was mainly unclear. (Whenever the SOAP* approach of recording was used in the records, rationale for decision-making was clear). Interdependent decisions made in rounds and recorded by a nurse related to overall treatment plans and in one instance to ongoing daily interpersonal management. Rationale for these rounds decisions was unclear.

Accountability. No consistent member of the nursing staff recorded on any of the patient's records. Nurses did, however, make entries in the progress notes and recorded family interviews.

Unit B — Decision-Making. The records were generally more complete than those on the other units and the SOAP approach to record-keeping was used throughout. Records were used often as a means of communication between health team members (e.g. questions and suggestions relating to the treatment plan were recorded there and then responded to by the primary therapist.) Most of the decisions recorded were interdependent decisions or were decisions reached independently by the nursing staff and then deferred to other health care personnel for ratification and/or action. Types of decisions made ranged from overall treatment plans through ongoing daily interpersonal management.

—*Accountability.* Nursing personnel recorded on the histories, progress notes and documented information from family interviews. No consistent recording by any one nurse was observed in these records. It was noted as well that entries in the records were often jointly signed by nursing staff and other health team members.

Unit C — Decision-Making. The records reviewed reflected little documentation of decision-making. In instances where decision-making was documented by the primary nurse, it was related to ongoing daily management, and discharge planning. Nursing orders were written in these instances.

— *Accountability.* Primary nurses and other nursing staff recorded assessments, patient's progress and family interviews. The three records did show that one consistant nursing staff member (primary nurse) recorded on them and contributed to the problem list in each case.

* SOAP: Problem-oriented terminology denoting subjective data, objective data, assessment and planning.

SUMMARY OF FINDINGS

The overall findings revealed a complicated communication network on all units, but this was particularly evident on the two units with the team nursing system (Unit B, Unit A). On the unit with the primary nursing system (Unit C), communication patterns were more direct among those health professionals providing individual patient care.

The questionnaire responses revealed wide variability of agreement among staff on all three units in the area of communication. On Unit C there was the highest degree of agreement on the effectiveness of communication between the primary nurse and health professionals on the unit.

On all units, there was a high degree of agreement among nursing staff that the workload was reasonable; however, the findings indicated that only 50% of nursing time was spent in direct patient care. Therefore, there was a high indirect care component in this hospital. Observations documented that most of this time was spent in staff meetings, and this, more than any other fact, determined the amount of time available for direct care.

Regarding job satisfaction, and satisfaction with the nursing organization, ratings were highest on Unit C. The ratings on the other two units showed less agreement. The findings documented high overall agreement that nurses viewed themselves as competent professionals; however, the majority of nurses perceived that this view was not shared by physicians.

The findings further indicated that patterns of decision-making and accountability differed among the three units. Observations and written records demonstrated a high occurrence of independent decision-making by nursing staff in the area of ongoing daily management. It was also demonstrated that independent decision-making decreased when other health professionals were present. In fact, on two of the units decision-making was repeatedly deferred to others by the nursing staff.

The degree of accountability varied among the three units as described by nurses' perceptions, and such indicators as written records and observations made on the units. On Unit C, individual accountability was demonstrated on the records where primary nurses consistently charted on their patients throughout hospitalization. These statements included care plans and orders. Joint accountability was evident in the Unit B records by co-signed progress notes. Accountability was less clearly documented in the Unit A records. According to the questionnaire responses, primary nurses (Unit C)

perceived themselves as more accountable than did nurses on the other units. However, there was little variability among the scores on Unit A and Unit C, with greater variability from the Unit B responses.

The primary therapist role reflected a greater degree of accountability and decision-making. In keeping with this increased responsibility was an identified need for specific preparation and ongoing development of personnel engaged in this role.

In addition to the findings relating to the areas under investigation, the study revealed that no one unit consistently engaged in evaluation of patient care. This became obvious from the record reviews and observations.

The primary nursing role on Unit C deviated in some significant ways from the model outlined in the literature, specifically in the following areas:

a. Individual nurses' preferences, workload and availability were the factors that determined patient assignment, rather than the skills needed by the patient.

b. Direct communication between the primary nurse and other health team members was impeded by staff rotation patterns. Primary nurses were frequently on shift when other members of the team were not available.

c. According to the model outlined in the literature the head nurse was in a crucial role as leader, clinician, validator and communication facilitator. As practiced on the unit this role was shared between the junior and senior care coordinators.

These factors indicated that primary nursing practice in this hospital had some inconsistencies with the model outlined in the literature.

There were similar deviations between the practice of team nursing in the hospital and that outlined in the literature. Team nursing was originally designed for those settings in which there are multiple levels of nursing personnel. However, in this hospital, where there are only two levels of nursing personnel (registered nurses and psychiatric assistants), this type of organization is less suitable to the needs of the staff.

DISCUSSION

The findings of this study are both diverse and intriguing. They clearly indicate the communication problems that are encountered by professional nurses who are part of a complex, interrelated system of communication. Nurses in our study commonly experienced the

effects of "communication overload" due to their location at the center of the patient-ward level of the organization.

The phenomenon of "communication overload" undoubtedly accounts for decreased feelings of job satisfaction, ability to utilize time efficiently, and to maintain satisfactory standards of patient care. It is clear that nurses in this setting experienced frustration due to the relatively limited amount of time spent in direct care. It is clear that nurses in this setting experienced frustration due to the relatively limited amount of time spent in direct care with patients (50%). And yet, this may be a reflection of an unrealistic expectation on the part of nursing personnel. To maintain a complex organizational structure, it is necessary that a great deal of time be spent in communication among staff members, and between various units and levels in the organization. Communication between and among professionals in a psychiatric setting is intrinsic to the therapeutic endeavour. Our data, however, reveal that there is less value placed on this communication function than on direct nurse-patient interaction.

The data from the study also clearly document the trend toward more responsibility and accountability on the part of nursing personnel. This trend is most significiantly reflected in the data drawn from Unit C, where nurses were functioning as primary nurses. Their job satisfaction is high, which is probably a reflection of the increased challenges and involvement of their role; however, they are lowest of the three units in perceiving doctors as accepting and supportive of their new role.

Within a systems analysis, this apparent contradiction can be understood by applying the concept of equilibrium. By expanding one role, (and, by implication, the structure and function of the subsystem) other roles are necessarily redefined as well: what is added to one is subtracted from another. In an hierarchical system, this redistribution of roles and role relationships, is most disturbing to those higher up in the structure, since they are, in a sense, "losing" a portion of their role (Buckley). This results in disequilibrium within the nurse-physician subsystem, and is clearly manifested in the perceptions one group holds of the other.

We discovered, in the course of data collection, that both the primary and team nursing systems of organization had been modified within the hospital, and thus did not totally conform to the models described in the literature. Of the two, primary nursing, according to the nurses' perceptions, offered many advantages. One major

advantage is that it provides for a less centralized system of communication for all nurses, and accountability for those nurses functioning as primary nurses.

IMPLICATIONS FOR THE NURSING PROFESSION

Having undertaken this study in one selected psychiatric setting, we were naturally concerned with the broader implications that might be drawn from the data. Clearly the expanded role is a phenomenon that is becoming well-established, and it can be predicted with some assurance that this trend will continue. The problem for nursing will be to administratively develop an efficient system for the implementation of the role, a system that maximizes the potential contribution of the nursing personnel. The primary nursing systems meet these criteria if they are implemented as described in the literature. Our data reveal problems inevitably result if modifications in the system are introduced.

A further implication, of equal importance for the nursing profession, has to do with nurses assuming the role of primary therapists. Because of the great degree of responsibility and accountability that this entails (as documented in our study), it is clear that most nurses require some kind of formalized instruction before assuming the role. This preparation might vary in nature from an inservice training program to an academically-based course. In either case, the educational input must include training in dealing with the pragmatic problems inherent in clinical practice. These are the needs reflected by the primary therapists in our study.

Nurses, who proportionally represent the largest body of mental health professionals, have much to offer the field by virtue of increasing their competencies and assuming an expanded role. Obviously some clarification is needed of the nature of that role and its future direction. This study has attempted to take a step in that direction by documenting the development of the expanded role in one psychiatric setting.

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