CONTINUING EDUCATION NEEDS OF NURSES EMPLOYED IN SMALL HOSPITALS IN BRITISH COLUMBIA

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CONTINUING EDUCATION NEEDS OF NURSES EMPLOYED IN SMALL HOSPITALS IN BRITISH COLUMBIA

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ABSTRACT

This descriptive and inferential study was contracted for by the British Columbia Institute of Technology to develop an educational program to meet the post-diploma learning needs of registered nurses employed in 53 small hospitals throughout British Columbia.

The main purpose of the study was to describe selected characteristics of the nurses, and to determine their learning needs in the areas of mental health nursing, emergency nursing, obstetrical nursing, and nursing process, professional, and supervisory skills. Other objectives were to identify factors which influence nurses' participation in post-diploma programs; to describe preferences for program format and delivery system; to determine the potential pool of candidates to take such a program; to determine what differences exist among respondents on selected variables such as acute bed capacity, geographic location, and interest in taking the course; and, to determine how specific objectives could be organized to facilitate the development of program content.

A cross-sectional survey was undertaken using a structured questionnaire developed and pilot tested by the investigator. The study questionnaire was mailed to a stratified random sample of 722 nurses employed in 45 of 53 small hospitals in British Columbia. Follow-up procedures for non-respondents included the coding of envelopes, a follow-up letter, and a second questionnaire packet.

347 questionnaires (49.9%) were received of which 323 (46.4%) were valid and used for data analysis. The results were computer analyzed using

summary statistics, contingency table analysis, chi-square statistics, factor analysis techniques, and one-way analysis of variance for repeated measures.

The major results included:

1. Profiles of the nurses working in small hospitals and of those nurses interested in taking a post-diploma program.
2. No significant differences related to acute bed capacity or geographic region on program format and delivery system except on the variable pre-testing nursing skills.
3. The reduction of 170 skill statements to 17 factors.
4. No significant differences on the factors based on interest/non-interest.
5. Significant differences on four factors related to acute bed capacity, and on three factors related to geographic region.
6. Significant differences between level of importance and level of theory, and between level of importance and level of practice on all skill items.

ACKNOWLEDGEMENTS

There are a number of individuals without whose help this study would never have been possible. First, I wish to thank Tom O'Shea for sharing his knowledge and expertise in educational research, for his critical appraisal during each phase of the study, for his editorial comments, and for his continuing support and ability to motivate.

I wish to acknowledge the contribution of the British Columbia Institute of Technology and in particular to Brian Gillespie, Margaret Neylan, Carole Orchard, and to each member of the Small Hospital Nursing Advisory Committee, for their cooperation, input, feedback, and resources to carry out this study.

A special thanks go to the directors of nursing of the small hospitals who cooperated by sharing their staff lists and to the nurses who volunteered to participate and thus ensure the successful outcome of the study.

To my children--Shona, Jennifer, and Jonathan--know you were needed. Finally, my thanks to a very special colleague and friend, Beverly Miller.

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CHAPTER ONE

THE PROBLEM

Public demands for better health services during the last decade have resulted in changes in services provided by small hospitals. For nursing, there has been an expansion in the foundations of nursing theory and principles and in related technology associated with nursing skills and techniques. In attempting to deal with the need for highly specialized skills, clinicians and educators have developed a number of speciality areas in nursing. Health care facilities have also been divided into highly specialized care units in addition to the traditional departments of hospitals.

British Columbia has 53 hospitals which may be designated small. These hospitals are basically non-departmentalized, have 75 beds or fewer, and are often geographically isolated. As such they lack the resources, both physical and human, usually available in the larger regional and urban hospitals.

Most small hospitals are, and will continue to be, staffed by nurses without specialized training. Most nurses employed in small hospitals have graduated from basic nursing programs which have prepared them to work in general hospital settings with departmentalized units, under the general supervision of a charge nurse, and in collaboration with a multi-disciplinary health care team. They possess the knowledge, skills, and attitudes necessary for providing care to relatively stable patients in general medical-surgical units. In the small hospital setting, however, they are required to intervene with patients of all ages with a variety of health problems, to provide primary care in crisis situations in which patients are critically unstable and who require rapid assessment and

immediate judgement for action, to stabilize their patients in preparation for transport to a regional centre or specialized units, and to set priorities in the management of care.

In order to improve the quality of nursing care provided in small hospitals, there is a need for accurate and current information about the preparation and learning needs of nurses employed in B.C.'s small hospitals. Many nurses are participating in few, if any, continuing education programs. Factors which inhibit participation may be the failure of programs to meet the nurses' specific learning needs and lack of access due to geographic isolation. Courses have been available in larger centres and, traditionally, require full-time or part-time attendance. Other factors which may be seen by nurses as prohibitive are: distance, under-staffing, dislocation from family, and costs.

Need for the Study

The need for a program to provide post-diploma skills to nurses working in small hospitals was originally identified during an informal discussion between a director of nursing from a small hospital and the department heads of the two nursing programs at the British Columbia Institute of Technology (BCIT). The two programs offered by BCIT were a two-year diploma program in general nursing and a two-year diploma program in psychiatric nursing. The idea was enlarged upon using feedback from eighteen directors of nursing of small hospitals throughout the province. Based on this information, BCIT undertook to develop a post-diploma program with a specialization in Small Hospital Nursing. A program advisory committee, which included eight directors of nursing from small hospitals, was established to provide input, feedback, and approval of the program.

In addition, three faculty members, with appropriate knowledge and clinical expertise in emergency nursing, obstetrical nursing, and psychiatric nursing, were seconded to develop the program. I became one of the program developers, and entered into a contract with BCIT to conduct this study (See Appendix A).

The Small Hospital Nursing Advisory Committee identified two major steps in relation to the planning of the program:

1. conduct a needs assessment with nurses employed in small hospitals, and

2. develop the program based on analysis of the data obtained from the needs assessment in consultation with the advisory committee.

This thesis is centred on the first step in the planning of the program.

Purpose

Individual nurses differ in the knowledge, skills, attitudes and clinical experiences that they bring to a teaching/learning situation. Thus, the identification of these similarities and/or differences in background knowledge and experience is an important and logical step in program development and planning. The same holds true for the identification of what post-diploma skills they require in their job, their present level of clinical skill, and for the identification of their preferences in program format and program delivery system.

Since the directors of nursing of small hospitals had already identified a need for such a program, the major purpose of this study was to conduct a needs assessment to describe selected characteristics of the nurses, to determine the nurses' learning needs in four areas of nursing

practice, and to determine their preferences for program content, format, and delivery system. The areas of nursing practice included were initially identified by directors of nursing in small hospitals in British Columbia.

Research Questions

The major research questions were:

1. What are the characteristics of the nurses as they relate to selected personal, work-related, and educational variables?

2. What are the characteristics of the nurses who express an interest in taking a post-diploma program?

3. How important are selected nursing skills in relation to the nurses' overall professional responsibilities in the small hospital setting?

4. What is their present level of knowledge in relation to selected nursing skills?

5. What is their present level of clinical competence in relation to selected nursing skills?

6. How can the specific skill statements be organized to facilitate the development of program content?

7. What factors influence their participation in post-diploma programs?

8. What type of program format and delivery system is preferred?

9. What is the potential pool of candidates for such a program?

10. What difference, if any, does acute bed capacity, geographic location, and interest in the course have on selected demographic and program variables, and the learning objectives?

Definition of Terms

For the purposes of this study a number of terms have been defined as follows:

Characteristics. Distinguishing features associated with an individual, including age, employment status, education, work experience.

Competence. The ability to demonstrate mastery of a specific skill.

Diploma nursing program. An educational program of two or three years length which leads to eligibility to write registration examinations as the entry level to practice.

Graduate nurse. An individual who has successfully completed an approved educational program in nursing at the diploma level.

Needs assessment. A systematic means for documenting what individuals believe to be their continuing education needs taking into consideration three information bases: content, design of learning activities, and learner's background.

Post-diploma nursing program. An educational program beyond the diploma level, including a degree.

Post-diploma program in small hospital nursing. A post-diploma education program which will focus on the preparation of individuals who presently work, and of individuals who may seek employment, in the small hospital setting and which denotes advanced specialization.

Registered nurse. A graduate nurse who is registered by the Registered Nurses' Association of British Columbia.

Small hospital. A hospital of 75 beds or less that is basically non-departmentalized, i.e., beds or areas within the hospital may be allocated for specific types of health problems instead of having separate units.

Specialization. Competence in designated skills at a higher level than that expected of a diploma program graduate nurse.

Procedure

This cross-sectional study was conducted using a structured questionnaire developed and pilot tested by the investigator. The study questionnaire was mailed to a stratified random sample of 722 registered nurses employed in 45 of 53 small hospitals in British Columbia. The nurses were asked to participate by completing and returning the questionnaire which consisted of three sections: characteristics of the learner, program content in the form of 176 learning objectives, and program design. Follow-up procedures included the coding of envelopes, a follow-up letter, and a second questionnaire packet. The study reports results related to characteristics of potential learners, their preferences for program format and delivery system, on the importance of specific skill statements and respondents' present level of theory and present level of clinical competence related to specific skill statements, and on how the skill statements could be organized to facilitate program development. The results of this study formed the basis for development of specific courses by BCIT designed to address the identified learning needs of registered nurses employed in small hospitals in British Columbia in relation to program content and preferred delivery system.

Significance of the Study

When the study was undertaken there were no other published studies in nursing which used the methodology as applied in this study. Most of the studies on continuing nursing education reported in the literature

identified content areas by broad topics as opposed to specific learning objectives within specific content areas. In addition, most studies asked respondents to rate the level of importance of the objectives but not to rate their own level of knowledge or their own level of clinical competence associated with each of the objectives. Kermacks (1981) asked respondents to rate the level of importance of 513 post-basic clinical nursing skills. These skills were reduced to form 51 skill clusters or competencies. In turn, the skill clusters were reduced to form five specialities and four sub-specialities.

In the present study, learning objectives in four areas of clinical responsibility were compiled, and the objectives were consolidated into factors using factor analytic techniques in order to facilitate organization of program content. Thus, the design and analysis of the questionnaire is a positive contribution to curriculum development in the health sciences.

Based, in part, on the results of this study BCIT has developed an Advanced Diploma in Health Sciences Program in which one of the seven nursing specialities identified is Non-Departmentalized Hospitals. To date, seven courses are being offered and six courses are under development.

Assumptions and Limitations

Several assumptions were made in conducting this study.

1. A cross-section and stratified sample was used on the assumption that respondents would constitute a representative sample of the total population of nurses employed in small hospitals in British Columbia. The number of questionnaires sent out was proportional to the total population

of nurses in each category of acute bed capacity.

2. It was assumed that the nurses were experienced in working in small hospitals, would be able to identify the importance of selected skill statements, and would be able to assess their own level of knowledge and clinical competence associated with specific skill statements.

The study was subject to the following limitations.

1. Limitations associated with the questionnaire include its length. Participants were asked to respond to 176 learning objectives on three different scales and this could have a possible effect on their responses. Because of length, it was necessary to restrict the number of items and therefore the level of specificity of the objectives vary and focus on the cognitive and psychomotor domains of learning. In addition, the objectives were arbitrarily assigned to a category when they may have been common across categories.

2. Limitations associated with the sample include the fact that the participants are volunteer subjects who may differ from nonvolunteers. Because it cannot be assumed that respondents were representative of non-respondents, this factor may complicate the interpretation of the study results and generalizability to the total population of nurses employed in small hospitals may be compromised.

3. Limitations associated with methodology include, as with any questionnaire, the fact that the researcher could not verify that responses corresponded to the way respondents actually behaved. Furthermore, the survey approach did not provide an opportunity to elicit information from the non-respondents. Finally, factor analysis was done using four separate categories. Simultaneous analysis may have resulted in some objectives correlating on different factors.

4. Limitations associated with the results include a time-bound association, and the caveat that generalizations of conclusions can only be made to a population of nurses similar to the one used in the study.

Description of the Study

This report of the study is organized into five chapters. In the first chapter, the problem and its background and significance is described. Chapter two describes a review of the literature in relation to post-diploma nursing education and use of needs assessments. The procedures and methodology used in the research study are described in chapter three and includes development of the questionnaire, the pilot study, sample selection, and procedures for data collection and data analysis. The results of the research are presented in chapter four and include the description of the sample, results of data analysis, and discussion of the findings. In chapter five, the findings are summarized, and conclusions and recommendations based on the study are presented.

CHAPTER TWO

LITERATURE REVIEW

According to Kubat (1975) and Dubin (1972), the nursing profession contains a significant body of knowledge that is becoming more obsolete daily. Historically, those affected by nursing practice standards have moved closer to the value and the reality of life-long education. Both the Registered Nurses' Association and the Canadian Nurses' Association support continuing education as a mode for increasing nursing knowledge and competency and for the prevention of obsolescence.

The recent proliferation of nursing specialities and expanded roles for nurses developing throughout nursing, and being widely accepted, and are evidence of the need for continuing education programs to prepare professional practitioners to be clinical specialists. These individuals, with new knowledge and skills, are able to provide direct care at a more sophisticated level.

It has only been with the development of nursing specialities and the expanded roles for nurses, and the focus of professional nursing associations to identify competencies of practitioners in these areas that specific objectives are now being researched. Historically, most assessment techniques limited need identification to topical areas only and did not attempt to identify specific objectives, methodology, and evaluation measures, including program format and delivery system (Bell, 1978).

Nurses working in small hospitals have continuing education needs but a thorough review of the literature revealed only two studies which directly addressed the learning needs of nurses working in small hospitals (Blankenheim & Fillicky-Peneski, 1981; Kermacks, 1981). Most of the

literature identified continuing education needs in relation to specific nursing specialities such as emergency, obstetrics, and psychiatry. Studies associated with these content areas were reviewed because these were the areas of need initially identified by the directors of nursing in small hospitals in British Columbia.

This chapter of the study, then, is directed specifically to a review of the literature in relation to needs, needs assessment, continuing education in nursing, and provides an overview of relevant studies on continuing education in nursing.

Needs Assessment

It is generally accepted that one of the primary goals of continuing education in nursing is to improve care through change in the work performance of those providing care (Dixon, 1978). Achieving this goal is often a formidable task both from the program planning and evaluation aspects. Resources for providing continuing education are limited and therefore efforts to design continuing education programs must be directed towards methods that are both effective and efficient. Matthews and Schumacher (1979) indicate an efficient continuing education program should begin with an assessment of the perceived needs of those persons who will ultimately be the recipients, at least for the adult professional.

The literature indicates that needs assessment can affect program planning efforts in continuing education and that needs assessments have become an integral part of program planning in continuing education. First, use of needs assessment data should result in more relevant programs. Houle (1972) states, "since men and women know what they need to learn, the task of the educator of adults is to discover what it is and

provide it for them" (p. 7). According to McElreath (1976), program planners should be aware that adults demand information that they perceive as relevant. Further, Gessner (1982) indicates that adult learners typically know what they want to learn; and the experienced nurses know what type of information is needed to enhance provision of nursing care. Second, needs assessments facilitate effective use of limited resources such as time, money, and personnel. According to Smith, Ross, and Smith (1980), documentation obtained from needs assessment surveys, in conjunction with other sources of information, can be used to establish a list of content areas arranged by priority. In this way, the most pressing content areas can be addressed before funds are depleted. Perhaps most importantly, a needs assessment can document existing needs and support requests for funding. Once funds are received, needs assessment information helps to decrease waste of resources by closing the gap between the needs of practicing nurses. Therefore, needs assessment data can be used to obtain the resources and assure that those resources are expended wisely.

Definition of Needs

Numerous definitions of needs can be found in the literature on continuing education. Houle (1973) states that a need is:

> a condition or situation in which something necessary or desirable is required or wanted . . . often used to express the deficiencies of an individual or some category of people, either generally or in some set of circumstances. A need may be perceived by the person or persons possessing it (when it may be called a felt need) or by some observer (when it may be called an ascribed need) (p. 233).

Atwood and Ellis (1971) provide a practical definition of "need" by placing it in an educational framework. They point out that an educational

need "is a need that can be satisfied by means of a learning experience. It is considered to be a lack, deprivation, or deficiency that tells one what to do from an educational standpoint. By implication, then, there are other needs that cannot be met through education experiences" (p. 212).

According to Kramer (1960):

> The real need is a desirable element or condition that is lacking in, and would improve, a situation. Felt needs are what people with problems recognize as the elements necessary to improve their situations. It should be emphasized that felt needs may also be real needs, but that often they are not. Felt needs may be derived from symptoms alone rather than true problems (p. 11).

Popiel (1973) cautions against being overly concerned about felt needs and real needs during the initial attempts at determining needs. She advocates considering "the expressed interests of the group or individual as: 1) a place to start, 2) indicators of real needs, or 3) symptoms that may lead to the discovery of real needs" (p. 53). She points out that "often symptoms must be relieved before the real needs can be met" (p. 54).

Price et al. (1977) also make a distinction between a "concern" and a "validated need":

> People have many concerns which are not supported by facts and, hence are not "needs". The "assessment" part of needs assessment is the process of collecting the data to change ~~an~~ expressed concern into a validated need. These are then rated or ranked according to pre-determined criteria (p. 5).

Price et al. view a "concern" as a hypothesis or belief that there is a difference between existing and desired conditions. To them, it is through the needs assessment process that this hypothesis is validated or refuted.

According to Popiel (1973) "needs are not fixed; they are constantly changing. Thus, assessing needs is an ever-present concern for the persons

who plan continuing education offerings and the learner" (p. 53). As well, how need is defined and what needs (individual, organizational, or societal) are assessed and which needs are paramount are important variables to be considered before doing a needs assessment (Beach, 1982).

Models of Needs Assessment

Numerous definitions of needs assessment can be found in the literature (Harless, 1975; Kaufman, 1975; Lee, 1973). Harless (1975) refers to needs assessment as a systematic method for determining solution alternatives for problems. Kaufman (1975) indicates that it is a formal process for determining gaps between present outcomes and desired outcomes, and for getting all perspectives put into the setting of goals and objectives. Lee (1973) views it as a process by which the unfulfilled educational requirements of a population of students are identified. However, in general the term is used to designate a process for identifying and measuring gaps between what is and what ought to be, prioritizing the gaps, and determining which of the gaps to work on to obtain closure. In the educational setting, this process yields information which can be used in the educational planning, in problem-solving, for making educational decisions, for accountability and for supporting applications for funding. In educational systems development, the information and data obtained from a needs assessment are used to design, implement, and evaluate instructional products or programs. Needs assessment in continuing education can also be used as a marketing strategy (Yoder-Wise, 1981).

A review of the literature indicates that needs assessment and evaluation are very similar terms. Some people use them synonymously. Others use evaluation as an integral part of the needs assessment process. Although the two concepts are very alike because they use some of the same

theories and techniques, one of the biggest differences relates to time. Needs assessment looks at "what is" and compares it with "what should be" while evaluation looks at "what has been the impact" of a given program or product on student learning (Witkin, 1975). According to Gessner (1982), some experts in evaluation argue that the curriculum process, although circular in nature, ought to start with evaluation which will serve as a guide to help determine how the needs assessment is conducted.

Sources of Data

Knowles (1973) indicates there are three sources of data for determining needs: the individual, the organization, and the society. The literature indicates that "felt" individual needs do not necessarily correlate with organizational or societal needs (Beach, 1982).

The organizations and/or society are sources of data for needs assessment in that they have expectations of the professionals with whom they deal and believe these professionals must have certain kinds of knowledge and skills to fulfill these expectations. The educational needs identified by organizations are perceived by administrators and often reflect gaps in employee skills, need for orientation, or training requirements for specific jobs. Changes in the population in the health care system and in agency priorities create new learning needs.

In determining the preparatory and/or post-basic educational needs of nurses, both nursing and non-nursing areas of society provide data. For example, the Canadian Nurses' Association (CNA) provides input through its' testing service which are available to provincial associations to use for registration examination purposes, and the Registered Nurses' Association of British Columbia (RNABC) provides input through the approval of diploma nursing programs and continuing education programs. Nursing practice,

nursing literature, and nursing research also provide input regarding the need for various types of educational programs. For example, the nursing literature provides opportunities by conveying new approaches and ideas to existing problems and by reflecting topics in vogue. Examples of non-nursing areas that can identify learning needs for nurses relate to social problems such as family violence and abuse. New changes in medical practices provide new directions for nursing practice with resultant implications for continuing education. More recently, the discovery of AIDS, and through research its causes and mode of transmission, will influence the present and future education of nurses.

Gessner (1982) cautions that direct input from potential learners is sought at times, in order to identify individual learning needs, when it is not the method of choice because it is more appropriate to look at organizational or societal needs. As well, that a direct, formal needs assessment may be unnecessary because one can document the needs by indirect or informal methods. Indirect and informal methods include using clinical specialists, educators, head nurses, supervisors, and nursing administrators as resources as well as having informal discussions with nurses. Learning needs can also be documented more readily through other sources, such as, through nursing audits and standardized care plans. For example, nursing service audits provide information about the kinds of needs that providers of care require. And, that while the audits do not address individual needs, they identify sources of difficulty that individuals have in relation to nursing care goals.

Tools and Techniques

Yoder-Wise (1981) identifies eight factors to consider before undertaking a needs assessment survey and prior to determining a method for

collecting data. The factors include:

1. Development time
2. Analysis time
3. Direct costs
4. Indirect costs
5. Equipment/supplies needed
6. Anonymity
7. Market match
8. Objectivity (p. 10).

Gessner (1982) also indicates that deciding how to conduct the assessment, designing a tool to collect the data, and defining the target audience all take time and effort. Cost is a factor too, considering staff time devoted to the project and funds used to reach the potential audience. Because of the time and effort expended, she indicates that the educator may be tempted to seek more information than needed to meet the original purpose of the assessment. This results in the assessment becoming less efficient and less effective because educators are tempted to use data inappropriately or a lot of unusable data is collected.

Many needs assessment tools and techniques are available which assess perceived needs, including the simple checklist, the Delphi II assessment, and a small group assessment (Lorig, 1977). Bell (1978) identified the advantages and disadvantages of eighteen techniques. She also indicates, for each technique, the source(s) from which data can most effectively be collected. Among the techniques relevant to this study include the use of an advisory group, the analysis of professional nursing literature, use of a competency-based model, job analysis, and a written survey.

Needs Assessment in Nursing Education

Conley (1973) states "decisions must be made concerning the goals of nursing education and the specific objectives of a particular type of curriculum" (p. 14). Curriculum, as an instrument used to attain educational objectives, is based on a complex set of assumptions and decisions and these should be derived from carefully validated and substantiated data. The needs assessment process is one way to develop such data. As Saylor and Alexander (1974) state, "goal setting without a deep and penetrating analysis of data gathered from leaders of the applied fields of study would be a complete contradiction to the principles of sound curriculum planning" (p. 170).

In the context of nursing education, Rothweiler (1978) states the needs assessment process involves a nursing department and other members of the profession in "1) determining what the curriculum objectives should be; 2) measuring the degree to which objectives are currently being met; and 3) specifying the difference between what should be and what actually exists (a statement of needs)" (p. 18).

Rothweiler (1978) indicates that the needs assessment process makes it possible to develop a carefully documented curriculum that is relevant to the needs of the nursing profession and society, and creates a new level of accountability for nursing educators. She describes one model of the needs assessment process (See Figure 1) which includes identifying objectives, rating objectives according to their importance and identifying omitted content, differentiating between required objectives and those which are less important, and determining whether the objectives are being met.

Gillespie (1981) outlined 12 steps for conducting an employer needs assessment (See Figure 2). The steps were intended for use by faculty

I Identify objectives

II Submit objectives to selected members of the profession for rating

III Translate resulting identified objectives into behavioral terms

IV Determine outcomes of current approach

- A. Set constraints on data collection
  - 1. Identify students to be involved
  - 2. Determine appropriate levels of achievement to be included
  - 3. Set time and place for evaluation to occur
- B. Assess degree to which students are achieving objectives identified as being important (at Step III)
  - 1. Set standards for student performance
  - 2. Decide how performance on each objective should be assessed

V Compare data collected in identifying current outcomes with perceived priority needs

VI Define discrepancies - Statement of Needs

VII Prioritize discrepancies

VIII Publish Needs Statement for use in curriculum development by faculty

IX Evaluate and recycle the assessment procedure

Figure 1. Flow Chart for Carrying Out a Needs Assessment (Rothweiler, 1978, p. 18).

within the School of Health Sciences at BCIT when developing health science programs, including nursing. These steps are reinforced by Lodge (1968) and Starck (1980) writing on conducting feasibility studies. Lodge (1968) delineates the preparatory steps as reviewing the literature; studying the feasibility in terms of needs and resources--human, physical, and financial; establishing a system of data collection and analysis; examining cost and cost accountability; and, selecting appropriate leadership and participants for planning, implementing, and evaluating the program. Starck (1980) views conducting a feasibility study is like doing a research thesis. One starts with a hypothesis that there is a need, gathers data to accept or reject that hypothesis, and ends with implications and recommendations. She indicates that it is important to agree upon the purpose and objectives for the study, to develop a critical path, to review the literature, to identify current offerings and trends, and to use a well designed questionnaire to get answers to specific questions.

The Research

The continuing education in nursing studies reported in this chapter are representative of the literature related to identifying the continuing education needs of nurses, to illustrate the divergent methodology used, the various types of data collected, and the results which may be considered when conducting a formal needs assessment, such as the present study. Of particular interest were those studies which reported on characteristics of the nurses, characteristics of the hospital, identification of content areas/objectives, and preferences for program format and delivery system.

Traditional continuing education models have failed to change attitudes and behavior (del Beuno, 1977; Kotaska, 1981). Many models have failed to

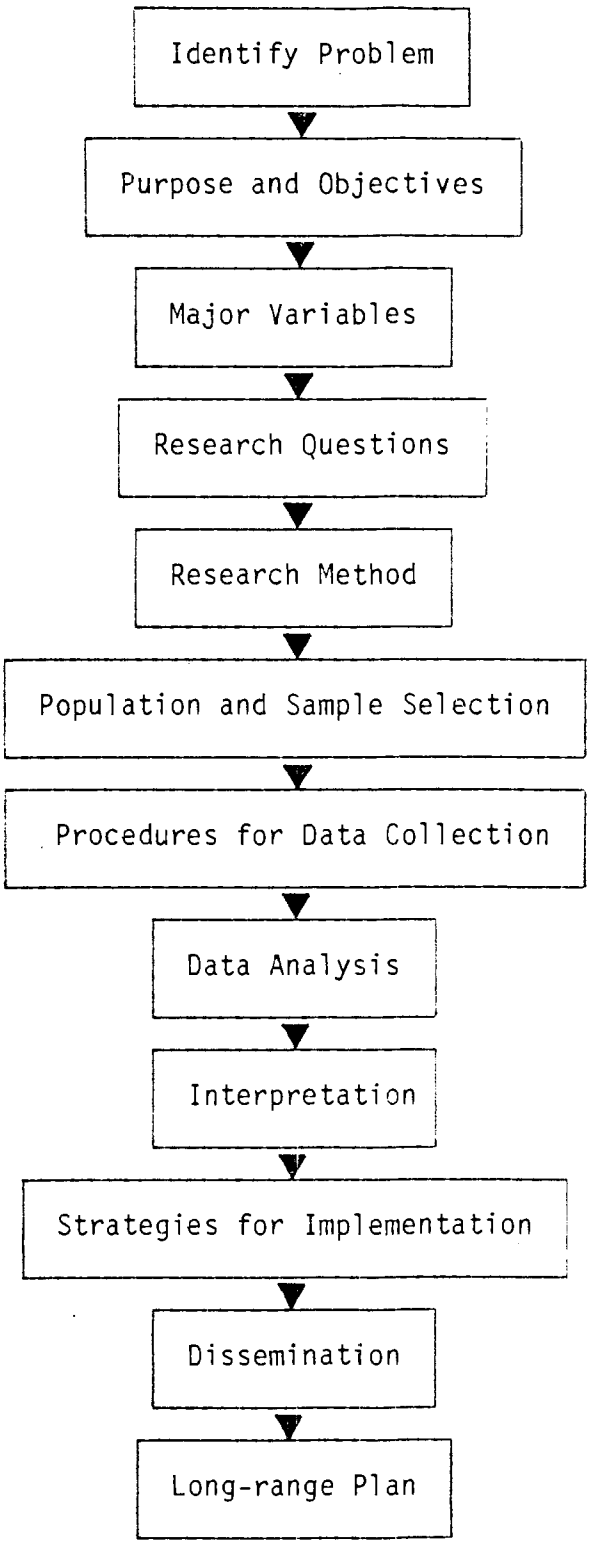

Figure 2. Steps for Assessing Needs (Gillespie, 1981, p. 1).

recognize the importance of time as a factor in behavior change, and of the necessity for support and reinforcement from peers and supervisors in the work setting if behavior changes are to occur and persist (Boyer, 1978; del Bueno, 1977; Kotaska, 1981). These findings are also supported by Knezevich (1981) based on follow-up questionnaires on nurses who had completed a Trauma Nurse Specialist Program. She reported that, after three months, graduates of the program reported being frustrated at having to prove themselves with their colleagues and being unable to practice all of their skills learned in the program in their home setting. After one year, responses revealed that many former students had made some changes at their home hospital, had sought out facilities where they could use their skills, or had returned to school. Based on these results, Knezevich concluded that retention of skills seems dependent on settings and practice.

Stevens (1976) points out two common problems in continuing education models: the failure of educators and program planners to recognize the difference between content and process learning, and the failure to fit the type of learning that needs to take place with the appropriate methodology.

The literature indicates that the design and components of a needs assessment usually reflect the stated purpose of the assessment, the model chosen, and the techniques used.

The Department of Education (1977), Government of the Northwest Territories developed a competency analysis tool referred to as the "CAP" system. The five phase system included the development of competency analysis profiles, validation of the profiles, specification of objectives and corresponding learning activities, selection and development of learning modules, and development of learning centres. The system was

designed to facilitate the development of a training and inservice program of professional development for the northern nurse in the Northwest Territories. Of particular relevance to this study was the first phase which consisted of the competency analysis profile. The components of the "CAP" system consisted of the competency statement, the priority level of the competency (phase 2), and the rating of each statement in relation to three categories: cognitive (C), affective (A), and psychomotor (P). Within each category, there were four levels for specifying the level of performance. For example, the four levels in the cognitive component were: Level 1 - Knowledge; Level 2 - Comprehension; Level 3 - Application; and, Level 4 - Analysis, Synthesis and Evaluation.

In a survey of 1155 Community health nurses and 147 community health supervisors and assistant supervisors in Michigan, Beach (1982) reported on significant factors which might serve as predictors of continuing education needs for use by adult educators. The study identified, in rank order, 113 continuing education needs as perceived by the nurses and their supervisors.

The results showed that eight needs were shared between the nurses and the supervisors (>10%), six needs were known to supervisors but not to the nurses, and four needs were known to the nurses but not to the supervisors. The eight needs identified by both the supervisors and the nurses were: motivation; improving interviewing techniques; effective recording; multiproblem families; changing health behavior; assisting clients with problem-solving; and, evaluating the effectiveness of your nursing care. The six needs identified by the supervisors, but not the nurses, were: organizing times, teaching/learning; increasing self-awareness of nurse; setting goals and priorities; giving family

focused service; and, assessing family dynamics. The four needs identified by the nurses, but not the supervisors, were: drug/alcohol addictions; basic process of disease; and, managing effective clinic services. The study reported that the highest degree earned had the most significant influence on the nurses' perceived continuing education needs. It was significant 26 times ($p<0.05$). Age and employment status ranked second and third at twelve and eleven times, respectively. The demographic characteristics of the supervisors which influenced their perception of the continuing education needs of their nurses were highest degree earned (7), and age (7). The agency characteristics influencing the perceived education needs of the community health nurses were job activities (33), and type of agency (16).

Smith, Ross, and Smith (1980) describe a model system for continuing education needs assessment in nursing. According to the authors, the system, called the Statewide Needs Assessment Program (SNAP), provides a flexible mechanism for collecting and analyzing large amounts of data and consists of a questionnaire, a computer program, a computer-generated report, and an interpretation manual. The purpose of the system was to construct a statewide profile of perceived education needs from practicing nurses in South Carolina. The questionnaire consisted, in part, of 63 items (content areas) which were seen as specific as well as comprehensive. Each item was rated by the 1500 respondents according to perceived need on a five-point Likert-type Scale--from "critical need" to "no need", the respondent was asked to indicate the level of instruction desired on a three-point Likert-like Scale--basic, intermediate, advanced. Part one of their report indicates response frequencies and percentages, for both "need" and "level". It also identifies a "need score" which

represents the item average as a percentage. The higher the need score, the greater the perceived need for instruction. The second part of their report ranks each item according to its need score and summarizes responses for the personal data items which include demographic, personal, work, education, and preferred learning style variables. Using the South Carolina data, the authors report no significant differences in perceived need patterns between regions, when comparing hospital size or urban and rural practice. The priority needs identified were emergency care, care of the coronary patient, drug interactions, and maintaining respiratory function.

In a survey of registered nurses employed in Iowa hospital emergency departments, to determine their characteristics and perceptions of their learning needs, Milde et al. (1980) reported most to be diploma graduates with more than three years of emergency department experience. The typical respondent was under 39, had graduated from a diploma program, and had four or more years of clinical experience. One-third had worked in emergency for six or more years, while over 60% had three or more years of clinical experience. The most frequent previous clinical experience reported by the nurses was medical-surgical nursing followed by obstetrics, pediatrics, and physician's office.

To determine perceived adequacy of preparation relevant to emergency nursing, the nurses were given a checklist of 48 topics with the option for each topic consisting of one of the following four responses: have had, don't need; have had, do need; haven't had, do need; and, haven't had, don't need. The data was then grouped into "adequate" (1 and 4) and "inadequate" (2 and 3) categories. The results indicated one-half of the topics listed were identified by 70% of the nurses as areas of inadequate

preparation. Neurological emergencies and chest injuries were areas identified by 90% of the nurses. The priorities identified by the nurses focused primarily on cardiovascular problems and management of trauma when ranking the items as first, second, or third priority. Psychiatric emergencies appeared as both second and third priorities. Hospital inservice programs and physicians, at the time of treatment, were the most frequently reported sources of education. The majority of nurses preferred one or two-day programs. Self-instructional packets and closed circuit television were their preferences regarding alternatives to traditional types of continuing education experiences.

Strickland et al. (1980), identified format and delivery system, evaluation of achievement, and outcomes for a program based on community needs, expanded nursing roles, and the needs of nursing staff relative to neonatal nursing. Specifically, they reported that nurses in community hospitals need educational programs to improve their skills in the recognition and stabilization of the high risk perinatal patient and preparation of that infant for transport to a tertiary care centre. The program was designed using classes at community hospitals and clinical experiences related directly to the place of practice and was carried out in that setting. The authors recommend that an inservice planning committee be established in which staff would be encouraged to assume responsibility for identifying some of their own learning needs. They identify an ideal inservice program as having the following characteristics: will meet the needs of all shifts, be of significant but common interest, be offered at convenient times and locations, and use resource people who have the expertise in that particular area.

In relation to factors which influence participation in continuing

education programs in nursing, Beach (1982) found that given a choice, nurses will choose those programs related to their professional needs. She found that supervisors are more likely to give time off to their staff if the need is shared by the supervisor and the nurse or felt by the supervisor alone. Nurses in turn are more willing to attend continuing education if the need is identified by their supervisor or is a shared need. Beach concludes that the above factors need to be considered for the highest nurse participation. Other literature indicates that nurses will attend those programs which are closest to home and lowest in cost.

Browne and Nagai-Jacobson (1981) conducted a study which focused on helping nurses, working in rural Appalachia, to respond better to the mental health needs of their patients. The authors describe the need for an innovative continuing education model for the population of nurses, the structure of the model, and focus on training methods used in implementing the model, and the outcomes. The authors report on five variables that they considered important to the project: the learner, the environment, the content, the faculty, and the methodology. Of particular interest is how the content was organized and the content itself. The content was divided into two types, based on the identification and clarification of the types of content needed to meet the needs of the learners. They identified experiential content aimed at consciousness-raising and increasing self-esteem. The second type of content was referred to as challenges. Examples of challenges include psychosocial assessment; communication and process; and groups, systems and the adult learner. The content is integrated. Participants are encouraged to learn about basic human needs and relate the knowledge to themselves, patients, families, staff, and people in general. They are encouraged to share their

application of this knowledge in specific situations. Theory is applied to the work experiences of participants. Readings and a bibliography are provided for persons to utilize as they are ready. They found it important to present the basic concepts many times and apply them to a variety of situations. Basic content is identified in advance, but relevant exercises and clinical experiences arise from active interchange with participants as they encounter situations to which basic content can be applied.

The authors indicate that the most crucial quality of faculty is the ability and willingness to act as role models for behaviors that enhance positive mental health in oneself and others, that faculty must take the same risks to learn and grow that they ask of others. The development and maintenance of trust and support were seen as an integral and on-going part of the program. They also indicate that methodology must also reflect the recognition of time and reinforcement as crucial factors in the development and utilization of new behaviors.

Changes they identified as a result of the project include: mental health issues are being identified and dealt with; mental health resources are being identified and used appropriately; an in-service program has been designed to help supervisory nurses deal with management issues; groups that formed during the program continue to meet to deal with mental health issues; nurses have more basic skills that help meet the mental health needs of all patients; work schedules are planned to allow for maximum participation; mental health principles have been integrated into the whole nursing in-service program, e.g., one week of every month head nurses meet regularly to deal with mental health issues; a group of nurses has been organized to identify areas of common concern and work together on shared goals; and, staff outside of nursing are including mental health components

in their discussions at departmental meetings.

Blankenheim and Felicky-Peneski (1981) conducted a study to assess the educational needs of nurses in emergency departments in 13 hospitals, located in 9 counties, and then designed a curriculum to meet the needs identified. The authors assessed the needs of the nurses over six weeks using four tools: nursing skills assessment, equipment checklist, statistical information, and a self-assessment. The initial program consisted of four programs taught by nurse coordinators. Each program was about one to one-and-a-half hours long and flexible enough to be geared to the individual needs of each hospital. Over a period of six months the program was presented 30 times in the 13 hospitals to a total of 334 emergency nurses. At the same time, other hospital needs were met by coordinating classes, seminars, and workshops on selected topics.

Based on the experience during the six months, the program was expanded into eight programs and continuing education contact hours for each presentation were given to nurses completing the programs. Based on the success of this program, a basic emergency course was developed using nine modules made up of 28 separate programs. The curriculum was designed so that it could be presented on an individual one-program basis, or as a complete 40-hour course, or on a modular basis as a half-day program. The distinction between the three programs was the method of implementation, not the curriculum.

In a survey of 1,002 health science technologists in British Columbia, Miller (1982) described the need for post-diploma education, identified the components of a post-diploma program of interest to health science technologists (including registered nurses and registered psychiatric nurses) and described their preferences for a program delivery system. The

overall response rate was 59.6% (596).

The major findings indicated an interest in post-diploma education (72%) with no significant differences by geographical district and area of specialization ($p=<0.01$). The major reasons cited by respondents for interest in post-diploma education were to maintain professional competence, for personal growth, and for advanced certification/accreditation. There were no significant differences in responses by the geographical district surveyed or by area of specialization. A significant difference in response by area of specialization was found related to wanting a post-diploma program which led to a baccalaureate degree. Public Health Inspectors, General Nurses, Psychiatric Nurses, Health Record Administrators, and Biomedical Electronic Technologists viewed credit towards a baccalaureate degree as important.

Respondents identified specific topics/subjects of interest to groups and subgroups of technologists. Content areas surveyed included: general knowledge; planning, management, and evaluation; health care system; educational skills; and, practical research. In most cases there was no significant difference by geographical district which suggested a province-wide need. Significant differences were found in most topics/subjects of interest by area of specialization. However, sub-groups were identified for which no significant differences in topics/subjects were found.

Miller reported that 85% of the health science technologists surveyed rated the need for advanced courses in their specialization as either quite important or very important, with no significant differences by area of specialization or geographical district. Respondents indicated a clear preference for part-time study. Their first choice was a program requiring

part-time attendance not at BCIT (302) followed by part-time attendance at BCIT (180). Their preferences for method of study for the theory component were attending classes at BCIT (148), attending classes at a regional college (132), and using self-directed material at home (84). The majority (75%) indicated being able to participate in concentrated lab/clinical experience and their preference of location was in their own regional district, except for respondents in the North region. Respondents also indicated an interest in challenging both theoretical (58%) and laboratory/clinical (60%) courses. Survey results in relation to access to technical literature indicated a significant difference by regional district. Respondents in the North and Island Coast regions did not have good access to technical literature.

The demographic results indicated that the majority of respondents were employed in health care agencies (85%) and that they did not have advanced certification within their own area of specialization (85%), management certification (88%), or a post-secondary degree (86%). The typical respondent had received their initial training either in a hospital setting (40%) or at BCIT (34%), had been employed for between one and 12 years (55%), was between 25 and 49 years of age, and, 61% had had their registration/certification for between one and 11 years. The typical respondent resided in the Greater Vancouver Regional District (53%).

Based on the results of Miller's study (1982), a post-diploma program proposal was drafted and reviewed by a BCIT faculty committee composed of representatives of the health science areas for which the program was designed.

Gillespie (1983) then conducted a study to assess the draft program against four research questions related to program purpose, curriculum

content, educational requirements, and delivery system to determine if health science technologists and employers agree. The major focus of the study was the design of a program of advanced studies for health science technologists and nurses in British Columbia.

The study sample consisted of a stratified random sample of 40 employers and 40 working health science technology graduates from seven health science fields and six major regional centres in British Columbia. An oral interview questionnaire was developed and consisted of 31 questions.. Participants were given a copy of the proposed post-diploma program prior to the interview. Seventy-seven interviews were used to obtain the data reported in the study.

The oral interview results were categorized numerically as agreement, agreement with qualifications, disagreement with qualifications, and disagreement. Consensus was considered to have been achieved when at least two-thirds of the employers and at least two-thirds of the health science technologists indicated agreement.

The results indicated agreement by employers and employees on all but five of the thirty-one questions.

The major findings included employer and employee agreement with the program purposes, the need for BCIT to obtain course accreditation or approval from professional associations, that the specialization component should establish clinical or laboratory skills, that course credit should be required for each of the program's six sections (specialization; planning, management, and evaluation; health care system; general knowledge; practical research; and, educational skills), and that the minimum credits allocated to each of the program's six sections were satisfactory. Respondents recommended that writing skills should be

emphasized in the practical research section and that the maximum number of possible course credits in the educational skills section be increased. No compulsory courses were agreed upon by the respondents.

In relation to the program's educational requirements, respondents agreed with flexibility in course selection for clinical/laboratory skills, teaching skills, and management skills. Respondents agreed that part-time study was preferred to full-time study. Employees indicated a need to maintain their income, that they could not get an educational leave-of-absence to maintain job security, and that shift work needed to be taken into consideration when scheduling courses. Respondents agreed that the program should be offered across British Columbia, that individual courses should be able to be taken without officially enrolling in the program, and that completion of the program should occur in three to six years. Respondents also agreed that there should be a maximum number of course credits granted, however the percentage ranged from 30% to 70%.

In relation to the program's delivery system, respondents agreed that qualified health care personnel exist who could act as preceptors, advisors, guest lecturers, and could provide expertise to facilitate contract learning. There was no agreement by employers and employees on the release of individuals to give or take courses. Both groups indicated a need to use only a few days for concentrated courses, to schedule courses around various hospital shifts, to recognize that there are no staff replacements for leaves-of-absences due to budget restraints, and that each hospital has its own guidelines for leaves. Both groups agreed on the use of health care facilities for short periods and on the use of non-traditional program delivery methods. Delivery methods agreed upon included experiential learning, challenge exams for credit or for

evaluating clinical performance, that the evaluation of clinical performance should include the clinical/laboratory skill plus the supporting knowledge base, that credit equivalence for learning achieved elsewhere be recognized, the use of contract learning, and the use of teleconferencing.

Continuing Nursing Education in British Columbia

Kotaska (1981) provides an excellent overview of the growth and changes in continuing nursing education in British Columbia. The changes she identifies range from individual actions taken to meet individual needs to programs based on sound educational principles.

She cites geographic isolation, shift work schedules, family commitment, and lack of financial support among the factors that create obstacles in planning programs that are accessible to all nurses who wish to participate. She perceives the need for learning new skills, as well as acquiring new knowledge as posing problems for program planners. She states that only about 250 nurses have graduated from post-basic courses in British Columbia between 1979 and 1981, and over half of those were in critical care nursing.

Despite creative planning (evening classes, short workshops, independent learning packages, travelling courses) and recent innovations (satellite television, independent study combined with full-time class/clinical experiences), she identifies the lack of coordination as the major problem. As a result, learning needs are not being accurately identified, resources are not being shared, and there are gaps and unnecessary duplication. She indicates the reason for the problem is lack of money for consistent funding, as continuing nursing education has always

been expected to be self-supporting. As a result, the programs are not effective in facilitating mastery of new skills, in facilitating attitude changes, or in facilitating changes in nursing practice. She indicates that the programs cannot be self-supporting if nurses are to improve practice and to become competent in specialty areas where opportunities for application of knowledge and skill practice are essential.

She also indicates that, despite numerous concerns expressed in a number of ways by nurses, other health care professionals, professional associations, and health care agencies, it has only been recently (1979) that the two educational ministries have taken on responsibility and approved funds for a number of post-basic programs on a year-to-year basis. Since her article appeared, all post-diploma programs in nursing are to be transferred to BCIT which has been designated to develop and carry out programs on a provincial basis.

Kotaska (1981) considered the situation as it was in 1981 and cited the following factors as being present: no sources of funds to assist with salary replacement; decreased enrollments leading to increased costs per student; cuts in hospital budgets; budgeting of courses on a temporary and yearly basis thus decreasing long-range planning for the providers, participants, and employers; lack of accurate information about post-basic needs and priorities; lack of speciality areas in hospitals being staffed with nurses with post-basic preparation; lack of funding for needed programs except some high priority programs; the offering of post-basic programs only in the lower mainland due to lack of availability of clinical experiences elsewhere, the difficulty of arranging for qualified instructors in regional areas, and the small number of nurses in regional areas available to form classes; high fees due to limitations associated

with clinical placements; patients exposed to increased risks of unsafe care because staff shortages resulted in under-educated and often, inadequately supervised nurses staffing speciality units; and, educational institutions were asked to plan how they would allocate funds if there were a budget cut in 1982/83.

Kotaska then proposed nine solutions for consideration which included coordination; financial assistance; establishing priorities; organization and structure of programs; increasing the numbers in basic nursing programs; changes in diploma programs regarding speciality areas; incentives for post-basic preparation; the use of innovative methods of instruction and delivery system; and, coordination and rationalization of the planning, development, and implementation of post-basic programs.

For more detailed information regarding the study of the provision of post-basic clinical nursing education in British Columbia see Stark and Kinnis (1984, p. 4-10).

Research in British Columbia

Since the present study was initiated in 1981, there have been several major studies conducted and made available.

The major studies on the continuing education needs of nurses employed in British Columbia have been undertaken by the Registered Nurses' Association (Kermacks, 1981), the Registered Psychiatric Nurses' Association (Collins, 1983), and the Ministry of Health (Stark & Kinnis, 1984).

The Post Basic Clinical Nursing Skills Study (Kermacks, 1981) was conducted for the Registered Nurses' Association of British Columbia as part of its Safety to Practice Program. Based on the size of the study, the methodology used, the documentation of the results, and the

implications for nursing practice and nursing education, the study represents the most comprehensive and sophisticated study undertaken to identify post-basic nursing skills found in the nursing literature. Because of its significance and its relevance to the present study, the following summary is presented.

The major purposes of the study were to identify post-diploma clinical nursing skills, to identify major nursing specialties and the skills needed to practice in these specialties, and to identify the combinations of skills required in major special care services in British Columbia. The author indicates that the findings could serve as a basis for defining nursing functions and for planning post-basic clinical courses.

Kermacks (1981) compiled a list of 513 skill statements, based on a review of the literature and a subsequent review by a group of clinical nursing experts, and organized them into 16 general categories. She designed a questionnaire to collect three types of data: 1) demographic and employment data, 2) data on the importance of each of the 513 skills using a six-point, Likert-type Scale, and, 3) data on a list of 76 specialized care units and services, which were subsequently reduced to 13 clinical areas. The study sample consisted of a random sample of 3,600 nurses. 1,893 responses (52.6%) were received of which 1,600 (44.4%) were used for data analysis.

The data was analyzed, using summary statistics, to determine the basic distribution characteristics of the respondents. Factor analytic techniques were applied to ratings of the 513 skills in order to cluster the skills into competencies (1st order) and to identify specialties (2nd order). The resulting competencies were reviewed and revised by clinical experts. The revised competencies were then analyzed for item by subtest

correlations, reliability, and other descriptive techniques. Groups of respondents employed in 13 major clinical areas were compared in relation to each competency.

Kermacks (1981) found that the majority of the respondents were married women and were employed full-time as a general staff nurse in an acute care hospital. Slightly more than half had 10 years or less experience in nursing and almost three-quarters had been with their present employer for five years or less. Almost three-quarters had graduated from a hospital-based diploma program and almost 70% had a diploma as the highest educational qualification received. The majority (70%) lived in large or very large communities.

The 513 skills loaded on 51 factors (competencies) which were subsequently named by clinical experts. Skills in each factor (competency) were grouped into three categories based on rated importance (over 65%, 16% to 64%, and 15% or less). The second order analysis identified 10 factors, of which the first five accounted for most of the variance. Kermacks interpreted the data to mean that there were five major groupings (specialties) and the other five factors were either sub-specialties of the first five or required further clarification. The five specialties identified were: caring for patients with critical physiological problems; assisting individuals and families to maintain and improve health; caring for patients with acute and long-term psychosocial problems; supporting maternal-child health and caring for patients in critical situations; and, managing and coordinating care programs and services.

The importance of each of the 51 factors identified in the first order factor analysis were calculated on the basis of the mean score ratings given to the skills in the cluster by the nurses in each of the 13

identified clinical areas. Competencies with a mean score of 4.0 were interpreted to indicate "high importance", means of 2.50 to 3.99 were interpreted as being of "some importance", and means of 2.5 or less were interpreted as being of "little or no importance".

Kermacks also reported two other significant findings. She reported that community and institutional settings did not have a significant effect on the requirements for specific competencies. Further, she indicated that the 51 identified competencies are needed by different combinations of nurses employed in a variety of clinical areas.

Kyle (1982), in a discussion paper presented at the National Nursing Research Conference, discussed the focus of Kermacks' study and commented on the area of definition, and on the statistical analysis used in the study. The major issues raised by Kyle included the definition and use of the terms "post-basic skills", the lack of analysis of skills being taught in basic programs to form a foundation for defining a list of post-basic skills, no definition of "clinical expert" or demographic data on the clinical experts especially related to whether or not they had any post-diploma clinical education preparation.

In relation to the methodology, she pointed out that the questionnaire design used acceptable research methods and commented on the use of a six-point scale to avoid central tendency. She noted the focus on the skills required, while skills possessed by the nurses and frequency of use of the skills were not considered. She addressed the fact that the pretest participants were chosen as opposed to using random selection and that no analysis of the pretest data was done but that changes were made in the research design. She pointed out that, while the focus of the study was on specialization skills, the study sample was a random sample of the total

population, with some exceptions, and that there was not adequate representation of nurses practicing in specialized areas to make some of the area-specific skills appear to be statistically significant during analysis. She notes that for factor analysis to be completely applicable, 2,000 usable questionnaires were required but that there is no a priori reason to reject the selection of the method.

With respect to the use of correlations, she noted the high level of correlations between and within the clusters and that the skills that were included in more than one cluster might point to a common curriculum core for those specialties. In regard to the definition of nursing specialties and sub-specialties, she indicated that acceptance would need to be based on confidence that the original sampling techniques provided adequate representation of nurses using the post-basic skills in their job. Finally, she noted that the reduction of the 76 clinical units into 13 clinical area categories and the subsequent analysis may be affected by the small numbers of nurses in relation to the number of variables.

Collins (1983) conducted a study to validate a list of 130 skill statements, developed by a Task Committee on Competencies for Community Psychiatric Nurses for the Registered Psychiatric Nurses' Association of British Columbia, expected of a community psychiatric nurse. The skill statements were grouped by nursing process (nine clusters containing 71 skills) and professional responsibility and accountability (seven clusters containing 59 skills). The nine clusters of nursing process skills were defined as: assessment, planning, implementation, therapeutic use of self, providing counselling, applying treatment, instructing clients and others, record and report preparation, and evaluation. The seven clusters of professional responsibility and accountability were defined as legal and

statuatory, personal and professional growth, provides consultation, research, leadership, ethics, and collaborative responsibilities. The committee determined that in order to be reliable and valid, the skills needed to demonstrate utility in three areas of professional practice: discriminate among the different roles on the mental health care teams; detect instances of differences between a persons own skills and the demands of the job; and, assist in identifying training needs. Collins designed and pretested a structured questionnaire. The final questionnaire consisted of 130 skill statements, grouped in 16 clusters. The total population surveyed was 450 which included all team members of all mental health care teams in the province, to all senior students and graduates in college psychiatric nursing programs and to the in-patient nurses at Tranquille (a facility for the mentally handicapped). Respondents (208) were asked to rate each item based on three criteria: match between own skills and job demands; own need for more job-related additional training; and, own skill compared to community registered psychiatric nurse team members. Each criteria had a five-point Likert-type scale to which respondents were to circle the appropriate response. For example, for more training, the choices were: T+++ = training is essential; T++ = training is important; T+ = training is useful; TØ = training is not necessary; and, T- = training would be wasted. The data was analyzed for reliability, validity, correlations of the skill clusters with sex, age, seniority, educational level, breadth and scope of experience in the mental health care system and for potential differences between workers in the Greater Vancouver Mental Health Services (GVMHS) and those in the B.C. Public Service, Mental Health.

The major findings of the study as reported by Collins included that

nearly all the 130 skills were excellent discriminations of workers' roles on the teams; that professional role appeared to be a better indicator of the respondent's skills than does their training or professional registration; that the 16 content-related clusters produced reliability and content validity estimates which ranged from .86 to .97; that competence, based on scores on the 16 clusters, correlated strongly with breadth, and scope of experience, weakly with educational level and seniority and almost not at all with sex or age; and, that all competency areas inter-correlated.

The average respondent reported six skill areas where job demands were greater than his/her own skill; 17 skill areas where Community Psychiatric Nurses (CPNs) demonstrate the skill better than the average respondent and 76 topics where additional job-related training was seen as important or critical. The study found that registered nurses overestimated their skills as compared to CPNs and denied their jobs posed challenges, yet they admitted to equal numbers of training needs as did other mental health professionals. The results indicated that CPNs were underrated based on self-perceived comparisons among the major team roles; but are higher than the other professionals in terms of match between their skills and jobs. Further, mental health professionals in the B.C. Public Service reported more problem areas in competency comparisons with other CPNs than did their colleagues in the GVMHS, but that the differences were not significant when measured in terms of possible job mismatches or on-the-job training needs.

Finally, twenty-six skills were identified by more than 20% of the resondents and as topics where the training needs were important or essential.

Stark and Kinnis (1984) conducted a three phase study to identify the

need and to develop a long-range plan for identification of need for post-basic (clinical) courses for nurses in British Columbia, considering areas of specialization, numbers needed, priorities, and priority locations; and, to make policy recommendations which would facilitate the implementation of the plan.

First, the researchers surveyed 121 directors of nursing to determine the specialized nursing services provided by hospitals, the proportions of registered nursing staff providing those services, and the level of preparation required for those positions, as perceived by the respondents (70.2%). The respondents were asked to create a profile of their nursing staffs in each of the major service areas and was to include all nursing positions subdivided by full-time, part-time, or casual. The positions of interest were general nusing services, special nursing services, and advanced special nursing services.

The results indicated, using an estimate for non-respondents, that 43.2% of the 10,861 positions were labelled as providing "special" or "advanced" nursing services. Initially 203 nursing service areas were identified and then reduced to 29 practice areas, based on the opinion of steering committee members. The results indicated that the proportion of positions which required "special" or "advanced" nursing skills varied among service areas--from 98% of critical care, 94% of "other" positions (eg. Neuro Services, Burns), over 50% of obstetrics, operating room, psychiatry, and emergency, to less than five percent of general medicine, general surgery, and combined skills. The data was also analyzed by the nine health regions and by hospital size for the North Central Region and for the Greater Vancouver Regional Hospital District. The results indicated that the regions requiring the highest proportion ($\pm$ 50%) of

nurses with special preparation were the metropolitan areas with tertiary care facilities.

In phase two, an attempt was made to verify competencies identified by Kermacks (1981), in order to determine which skills were essential to practice in ICU/CCU, Obstetrics. Another objective of the study was to determine what was the preferred method of obtaining these skills. A modified Dephi technique and a panel of experts was the methodology used. Round 1 was designed to obtain verification of the skills required, and round 2 was used to verify the preferred learning site. The authors reported difficulties with question clarity and low response rates which influence being able to make generalizations. However, the authors indicated that a majority of respondents indicated that large numbers of competencies were essential to practice in Critical Care and Obstetrics, and for the majority of registered nurses employed there.

The study concludes by making a number of recommendations in the form of options and policy recommendations.

Summary

At present, the literature indicates that the major task for program planners is the systematic development, implementation, and evaluation of continuing education programs by conducting formal needs assessments. Program evaluation completes the curriculum cycle and brings planners back to identifying needs. Therefore, identifying needs can be both the foundation and the result of continuing education curriculum planning. The lack of empirical data on the continuing education needs of nurses working in small hospitals underlines the value of an accurate needs assessment.

Based on the review of the literature on needs assessment, the present

study incorporated the following formal needs assessment techniques: a survey questionnaire, the formation of an advisory committee, and the use of job analysis and a competency based model (see Bell, 1978). The review of the literature provided this investigator with invaluable information which facilitated the design, implementation, and analysis of this needs assessment study, and in particular, the design of the questionnaire.

CHAPTER THREE

METHODOLOGY

This study was both descriptive and inferential in nature. In order to meet the stated purpose and objectives of the study, a cross-sectional survey was undertaken using a structured questionnaire developed by the investigator and mailed to a stratified random sample of nurses. The data on the completed questionnaires were checked for coding, and keypunched onto computer cards for computer analysis.

The target population was a predetermined and specific professional group, namely, registered nurses employed in 53 small hospitals throughout British Columbia. Registered nurses employed in 45 of these hospitals became the experimentally accessible population.

Survey methodology was considered most appropriate to achieve the study purpose and objectives. Polit and Hungler (1978) refer to survey methodology as "that branch of research that examines the characteristics, behaviors, attitudes and intentions of a group of people by asking individuals belonging to that group (typically only a subset) to answer a series of questions" (p. 206). Borg and Gall (1979) indicate that survey methodology facilitates obtaining standardized information; it provides similar conditions of administration; it simplifies quantification of data, especially when items are stated in closed form; it allows analysis of the data by a variety of methods; and, it allows one to make inferences and reach conclusions about the entire population. According to Bailey (1978), advantages include savings in time and money, greater respondent anonymity, accessibility, and lack of interview bias. Disadvantages of a mailed questionnaire include low response rates, lack of control over the research setting, and limitations in the follow-up of non-respondents.

The above advantages were important considerations given the size of the population to be surveyed, their geographic distribution throughout British Columbia, and the nature and limitations of the available resources. A satisfactory response rate was encouraged through the design and format of the questionnaire, the letter of transmittal, and the follow-up procedures.

A description of the population, the development of the questionnaire, the selection of the pilot study sample, and the pilot testing of the questionnaire follows. The procedures for sample selection, for administering the final questionnaires, for coding the responses, and for data analysis are also presented.

The Population

A list identifying the name, location, and acute bed capacity of all hospitals in British Columbia was obtained from the Research Division, Hospital Programs, Ministry of Health. Fifty-three hospitals met the criterion of 75 beds or fewer (See Appendix B). These hospitals were grouped according to acute bed capacity, using the following categories: 1 - 10; 11 - 20; 21 - 30; 31 - 40; 41 - 50; and, 51 - 75. The categories were chosen to facilitate analysis of the effect of hospital size on respondents' ratings of the questionnaire items.

A letter was written to the directors of nursing or administrators of the 53 hospitals asking that they forward to the researcher the names, and if possible, the addresses of all their registered nursing staff--full-time, part-time, and casual (See Appendix C). Thirty-three (62.3%) initial positive responses were received. A follow-up telephone call resulted in 12 additional nursing staff lists. As a result, staff

lists were obtained for 45 hospitals, that is, from 85% of the total number of small hospitals in the province (See Table 1). Of the eight administrators who chose not to participate, one indicated it was against their policy to forward the names, a second said they were too isolated to participate in such a program, a third indicated that an extensive inservice education program was already available, and the remaining five administrators did not follow through on their stated intention to submit the names of their nursing staff.

Table 1

Number of Hospitals by Size

Category	Acute Bed Capacity	No. of Hospitals in Population	No. of Hospitals in Study
A	1 - 10	9	7 (77.8)[a]
B	11 - 20	8	6 (75.0)
C	21 - 30	13	12 (92.3)
D	31 - 40	8	7 (87.5)
E	41 - 50	8	7 (87.5)
F	51 - 75	7	6 (85.7)
TOTAL		53	45 (84.9)

[a]The numbers in parentheses are the percentages.

In summary, the survey population of nurses had the following characteristics:

1. they were registered to practice as Registered Nurses in British Columbia.

2. they were currently employed in small hospitals in British Columbia.

3. their director of nursing or hospital administrator had allowed their names to be included in the study.

Development of the Instrument

The instrument used for this study was a structured questionnaire developed by the investigator and is included in Appendix H. Given the stated purposes of the study, a three part questionnaire was developed which reflected the three types of data to be collected. The first section was designed to collect demographic data related to selected personal, employment status, work experience, and educational variables. These items were chosen because it had been suggested that they influence a nurse's decision to become involved in continuing education programs. The information was designed to provide a profile of the nurses employed in small hospitals in British Columbia. By knowing the characteristics of potential students, the program developers could utilize learning approaches and teaching strategies seen as effective for students with those characteristics. The information would assist in establishing entry level behaviors expected for nurses entering the program, and in identifying possible content areas for review either prior to or upon entry into the program.

In order to meet the specific educational needs of the group of nurses, part three of the questionnaire sought information on variables which may facilitate or hinder participation in post-basic programs. Nurses' preferences and interest in such a program were also solicited, as this information was critical to program developers in terms of program format,

delivery system, and the pool of potential candidates. In part one, respondents were grouped by regional hospital district and by acute bed capacity. In part three, respondents were grouped by interest in taking the program.

Development of the second part of the questionnaire, the skills statements, necessitated the use of several strategies. First, a covering letter and open-ended questionnaire were sent to twenty-five of the directors of nursing of small hospitals asking them to "brainstorm" and identify all the skills required by their nurses related to obstetrics, emergency, and psychiatry (See Appendix C). The skills lists were compiled into a composite list. These directors of nursing had expressed an interest in, and the need for, such a program in earlier contacts with BCIT through the Nursing Administrators' Association of British Columbia. Eighteen responses were received. No follow-up procedures were carried out on non-respondents.

Several diploma nursing programs, which were two years in length and college based, were reviewed to determine content areas covered and terminal objectives to help identify what knowledge and skills should be possessed by nurses entering post-basic programs. Finally, a review of the literature was conducted to identify behaviors related to standards of practice, post-basic courses on obstetrics, emergency and mental health, competency statements, and standard care plans.

The list of skills generated by the directors of nursing was expanded upon by the program developers using the taxonomy for education objectives (Bloom, 1956) for the cognitive, the psychomotor, and the affective domains of learning. To verify the initial list of skills, 12 psychiatric and general nursing faculty at BCIT as well as members of the advisory

committee were asked to review and comment on the skill statement section, the demography section, and the course preferences section. Specifically, they were asked to: complete the questionnaire; indicate how long it took to complete it; comment on, and suggest changes to improve the clarity, conciseness, understandability, and appropriateness of each item; comment on, and suggest changes related to the level of each item; and, identify additional skills they thought should be included.

The initial draft consisted of three parts. The first part contained ten closed-form questions. The second part contained 153 skill statements which respondents were asked to rate on a Likert-type scale of 1 to 5, "Not at all Important" to "Very Important", respectively. The third part consisted of ten questions, of which one was open-form and nine were closed-form.

The initial draft of the questionnaire was revised based on the suggestions made by the aforementioned groups and in consultation with experts in questionnaire development. The most significant changes occurred in part two of the questionnaire, the skill statements. In the initial draft, respondents were asked to rate the items in terms of level of importance. When revised, this part was expanded so that respondents were also to indicate their level of theoretical knowledge and their level of clinical competence concerning each item. It was thought that differences among the three levels on a particular item would assist the program developers in formulating content and clinical experiences to meet more accurately the needs of the nurses.

The Pilot Study

Purpose

The purpose of the pilot study was to help assess the appropriateness of the items identified by preliminary survey, from the nursing literature, and by content experts; to help assess the appropriateness of the level of the skill statements; and, to receive comments that could lead to improvement of the questionnaire. According to Polit and Hungler (1978) a pilot study cannot guarantee a perfect instrument but it can "provide an opportunity for detecting at least gross inadequacies or unforeseen problems before going to the expense of a full scale study" (p. 347).

Sample

Staff lists from 38 hospitals had been received when the pilot study sample was selected. These nurses became the pilot study population. Individuals selected came from the same population as those individuals subsequently selected for the main study. Borg and Gall (1979) state that the number of individuals in the pilot study need not be large and that "if the subjects are taken from a well-defined professional group . . . as few as twenty cases will often be sufficient" (p. 301). The sample size for this pilot study was determined by identifying the total number of nurses in each category of acute bed capacity and by identifying the number of hospitals within each category. As an illustration of the sampling process, in category A there were seven hospitals with an acute bed capacity of 1 to 10 beds and a total of 69 nurses. Four nurses were selected, a number proportional to the size of the category relative to the other categories. Four hospitals were randomly selected, and then one nurse was randomly selected from each (See Table 2). A seventh category consisted of the directors of nursing from each of the above hospitals.

One director of nursing was randomly selected from each of the categories A to F in order to validate that the questionnaire items represented items identified earlier in the open-ended questionnaire completed by directors of nursing (See Appendix C).

In summary, the total number of nurses surveyed was 57, of which 51 were practicing nurses and six were directors of nursing. Stratified systematic and random sampling was used in which the number of nurses selected from each category was proportionate to the number of nurses in each category in the population. This procedure facilitated comparing and combining responses for analysis.

Table 2

Pilot Study Sampling Procedure

Category (No. of beds)	No. of Hospitals	No. of Nurses	No. of Nurses in Sample
A (1 - 10)	7	69	4
B (11 - 20)	6	73	4
C (21 - 30)	9	177	10
D (31 - 40)	5	96	6
E (41 - 50)	6	207	12
F (51 - 75)	5	250	15
G (D.O.N.s)[a]	---	---	6
TOTAL	38	872	57

[a]Directors of Nursing

Administration of the Questionnaire

The revised questionnaire consisted of three parts. The first part consisted of 12 closed-form questions to which respondents were asked to circle or check the appropriate response(s). The second part consisted of four sub-sections: mental health; emergency; obstetrics; and, nursing process, professional, and supervisory items. The number of items in each sub-section was 55, 39, 47, and 35, respectively, for a total of 176 items. Each statement was to be rated on three scales: level of importance, level of knowledge possessed, and level of clinical skill possessed. The following five-point Likert-type scale was used:

1 = Very Low Level

2 = Low Level

3 = Moderate Level

4 = High Level

5 = Very High Level

Opportunities were provided for respondents to add and rate items in part two as well as to make comments and suggestions in all three parts. The third part consisted of 15 closed-form questions to which respondents were to either circle or check the appropriate response(s).

In January 1982, coded questionnaires were mailed to the sample of 57 nurses, at their place of employment. Accompanying the questionnaire was a covering letter which stated the nature of the study, gave general directions, outlined participant's rights, and requested their cooperation (See Appendix D). A separate sheet of directions typed on green paper was enclosed (See Appendix D). A stamped, self-addressed envelope was also enclosed in the questionnaire packet.

Response Rate

A three week period was allowed for return of the questionnaire. During this period, 26 completed questionnaires were returned for a response rate of 45.6%. To improve the response rate, a follow-up letter was sent to those nurses who had not returned the questionnaire (see Appendix D). This procedure produced 14 additional completed questionnaires.

A total of 40 responses out of a possible 57 were received, yielding a final response rate of 70.2% (See Table 3). Of these, 37 were valid. Two respondents no longer resided in B.C., and one respondent was employed in extended care. No questionnaires were returned as undeliverable. No

Table 3

Pilot Study Respondents by Category

Category (No. of beds)	Number Mailed	Number Received			Response Rate %
		After First Mailing	After Follow-Up Letter	Total	
A (1 - 10)	4	2	1	3	75.0
B (11 - 20)	4	0	0	0	0.0
C (21 - 30)	10	5	3	8	80.0
D (31 - 40)	6	3	2	5	83.3
E (41 - 50)	12	7	0	7	58.3
F (51 - 75)	15	5	8	13	86.7
G (D.O.N.s)	6	4	0	4	66.7
TOTAL	57	26	14	40	70.2

additional attempts were made to assess the nature of the non-respondents nor the reasons for their non-response. All questionnaires were completed appropriately as directed in the instrument.

Of the 37 valid responses, 35 were used for the preliminary analysis. Two responses were received after the deadline set for initiation of data analysis. Analysis was done using 61.4% of the sample.

Data Analysis

A trial computer run was made to determine: basic distribution characteristics of the respondents; the distribution of responses to the skill statements; and, program preference characteristics. The Frequencies program from the Statistical Package for Social Sciences (SPSS) (Nie, Hadlai-Hull, Jenkins, Steinbrenner, & Bent, 1975) was used to generate frequency and percentage distributions and, where appropriate, mean scores and standard deviations.

Discussion

The results indicated that respondents were able to answer the questions related to the first section without difficulty and that a variety of characteristics were present in the respondents.

In the second section, the results indicated that there were differences between the ratings of items, and that there were differences among the three categories for each item. This information was critical to the design of the main study. Mean item ratings on the level of importance scale, for example, ranged from 1.90 to 4.60. Consistently the respondents rated the level of importance higher than either the level of theory or the level of practice. No consistent relationship was found between the level of theory and the level of practice.

In the third section, a variety of responses were received for each

question, and some trends appeared to emerge. For example, responses were evenly split between full-time and part-time study. The majority of respondents indicated there should be challenge exams and assessment of nursing skills prior to taking the program. There was a fairly even split between those respondents needing some supervision and those respondents who could study independently. Respondents indicated there was a need for assistance in evaluating their own progress as opposed to being able to do so independently. Interest in taking such a program also appeared quite high.

Most respondents made comments on their questionnaire. The majority of comments were of a general nature; others suggested specific skills for inclusion although there was not consensus among the items suggested. The majority of the respondents indicated that the items were relevant, clearly stated, and at the appropriate level. The majority of the respondents took between one and two hours to complete the questionnaire. No comments were received on the categories or scales used.

Summary

The pilot study results were used to make several editorial, content, and coding revisions to the instrument. All the additional items suggested, and the comments made by the respondents were reviewed by the three program developers. One question was added to the first part in order to identify the acute bed capacity of the hospital in which the nurses were employed. In the second part, several editorial changes were made to clarify items, several items were deleted, and several new items added. In the third part, one question was divided into two separate questions to enhance clarity.

The Final Questionnaire

The final questionnaire, modified on the basis of the pilot study, consisted of three parts. The first part consisted of 14 closed-form questions to which respondents were asked to circle or check the appropriate response(s). The second part consisted of 176 items, divided into four sub-sections, to which respondents were asked to rate each item three times by drawing a circle around the appropriate number in each category according to the importance of the item, the level of knowledge of the respondent, and the level of clinical skill of the respondent. The third part consisted of 16 closed-form questions to which respondents were asked to circle or check the appropriate response(s). The questionnaire was printed commercially. Graphics were included on the cover in black on yellow paper. The questionnaire itself was printed using light green paper. The questionnaire was coded for direct keypunching and computer analysis. The questionnaire was bound in booklet form, a sample of which is included in Appendix H.

Reliability and Validity

In developing the questionnaire used in this research study it was necessary to assess whether the questionnaire was valid and reliable. Borg and Gall (1979) identify four major types of validity--content, concurrent, predictive, and construct. They define validity as "the degree to which a measure actually measures the characteristics or phenomenon it claims to measure" (p. 25). Because of the nature of the study undertaken, content validity was considered to be of greatest importance as it relates to the degree to which the questionnaire items represented the knowledge and skill areas that the questionnaire was designed to measure. Evidence of validity was important because interpretation of the results hinged on

the validity of the measures upon which the results were based as were any conclusions that were to be made. Reliability, as defined by Borg and Gall (1979), is "the level of internal consistency or stability of the measuring device over time" (p. 217). In this situation, it refers to the degree to which the questionnaire can be expected to provide similar results from the same sample of nurses under different conditions or at a different time. Kerlinger (1973) indicates that the potential for uniformity of stimulus and thus greater reliability is achieved with the fixed response type of question.

Strategies used to enhance the reliability and validity of the research instrument included:

1. the use of an open-ended questionnaire to directors of nursing to generate the initial list of skill statements;

2. the refinement of the items by the three program developers with theoretical and clinical expertise in emergency nursing, obstetrical nursing, and psychiatric nursing;

3. the review of the literature and of diploma nursing curricula;

4. the use of consultants in questionnaire design and in research methodology;

5. the review of the initial questionnaire by 12 faculty members of the general and psychiatric nursing departments at BCIT and by members of the Small Hospital Nursing Advisory Commitee;

6. the use of a questionnaire containing closed-form items;

7. the administration of the pilot study using a systematic and stratified random sample from the experimentally accessible population of nurses working in small hospitals; and

8. the examination of the responses and of the comments made by the

respondents to the pilot study.

The Study Sample

Staff lists from 45 hospitals had been received when the study sample was selected. The total population of nurses employed in these hospitals was 1066. The 57 nurses who participated in the pilot study were deleted from the lists leaving a total population of 1009 nurses for the main study (See Table 4).

Table 4

Total Population & Sample Populations by Category

Category	Total Population[a]	Pilot Study	Study Sample
(No. of Beds)	No. of Nurses	No. of Nurses	No. of Nurses
A (1 - 10)	63	4	42
B (11 - 20)	67	4	45
C (21 - 30)	221	10	150
D (31 - 40)	141	6	96
E (41 - 50)	219	12	146
F (51 - 75)	313	15	214
G (D.O.N.s)	42	6	29
TOTAL	1066	57	722

[a]Based on staff lists submitted from 45 hospitals.

Borg and Gall (1979, chap. 6) identify several factors that should be considered in determining the size of a sample. They state the size of the

sample should be the largest sample possible so that the mean and standard deviation are more likely to be representative of the population mean and standard deviation. They indicate that larger samples are necessary when many uncontrolled variables are present, when small differences or relationships are anticipated, when groups must be broken into subgroups, and, when reliable measures of the dependent variable(s) are not available.

The factors considered in determining the size of the sample in this study were:

1. the number of variables in the second section of the questionnaire;
2. the size of the population;
3. the statistical analysis to be performed;
4. the use of subgroups; and,
5. the percentage of respondents to the pilot study.

Particular attention was given to the number of variables in the second section of the questionnaire. In order to use factor analysis, it was decided that ideally there should be at least three responses for each item, however, because the items were grouped under four specific headings, programs could be run on each section. This would mean a ratio of approximately 5 to 9 responses for each item, the largest section having 55 items.

Initially, the sample size was designed to give three responses for each of the 176 objectives, for a total of 528 respondents. Based on the pilot study, a return rate of 70% was assumed hence the sample size was determined to be 744. A sample, stratified by size of hospital was drawn in which 70% of the number of nurses in each category were selected. In the final calculation, the number of nurses used in the pilot study were

deleted, yielding a sample size of 722. Individual names on the staff lists, within each category, were assigned a number sequentially. Individuals were then eliminated from each of the categories A to F using a table of random sampling numbers (Erickson & Nosanchuk, 1977, p. 377) by subtracting the number needed from the category population. For example, in category A, the number of names to be eliminated was 59 - 42 = 17. Twenty-nine directors of nursing were included in category G in order to meet the minimum requirements for subgroup analysis.

In summary, the total number of nurses surveyed was 722. The sample was stratified by acute bed capacity. Systematic and random sampling was used to determine the required number of respondents and to identify actual participants. The number of nurses surveyed in each category was proportional to the number of nurses in each category in the total population.

Administration of the Questionnaire

On March 29, 1982, questionnaires were mailed to the sample of 722 nurses at their place of employment. Accompanying the questionnaire was a covering letter which stated the nature of the study, gave general directions, outlined participant's rights, and requested their cooperation (See Appendix E). A stamped, self-addressed envelope was also enclosed in the questionnaire packet. Each envelope was coded with a number to permit follow-up of non-respondents.

Response Rate

A six week period was allowed for return of the questionnaire. During this period, 224 completed questionnaires were returned for a response rate

of 32.2% (See Table 5). Twenty-one questionnaires were returned by the post office as undeliverable and five questionnaires were returned because the individual was no longer employed or was on leave. To improve the response rate, a follow-up letter was sent to those nurses who had not returned the questionnaire (See Appendix E). Forty-seven additional questionnaires were

Table 5

Number and Percentage Distribution of Respondents By Mailing (N=696)

Category	1st Mailing		2nd Mailing		3rd Mailing		Total	
(No. of Beds)	NS[a]	NR[b]	NS	NR	NS	NR	No.	%
A (1 - 10)	42	19	23	0	23	0	19	(45.2)
B (11 - 20)	45	18	27	2	25	6	26	(57.8)
C (21 - 30)	150	51	94	13	31	8	72	(48.0)
D (31 - 40)	96	28	65	8	29	12	48	(50.0)
E (41 - 50)	146	32	112	6	106	20	58	(39.7)
F (51 - 75)	214	65	135	15	55	18	98	(45.8)
G (D.O.N.s)	29	11	18	1	17	6	18	(62.1)
No Code[d]	---	0	---	2	---	6	8	
Total No.	722	224	474	47	286	76	347	
%[c]		(32.2)		(38.9)		(49.9)		

[a]NS = Number Sent.

[b]NR = Number Received.

[c]Cumulative percentage based on study population of 696.

[d]Some respondents removed the code on the envelope.

received, increasing the response rate to 38.9%. At the end of June, 1982, a second follow-up letter (See Appendix E), questionnaire, and stamped, self-addressed envelope was sent to randomly selected nurses within each category--A to G. Each category was examined to determine the rate of response for that group. Based on the rate, the number of additional responses needed to raise the rate to 50% for that category was identified. For example, the response rate for category B was 44% or 20 out of the sample of 45. To help raise the response rate to 50%, 11 questionnaires were mailed out in anticipation of getting 44% or 5 returned. A total of 286 questionnaires were mailed.

A total of 347 questionnaires were received out of a possible 696. The final response rate was 49.9%. A questionnaire was deemed valid if at least the first section and three of the four parts of section two of the questionnaire were completed. Of the 347 questionnaires received, 323 or 46.4%, were valid and used for data analysis. No further attempt was made to assess the nature of the non-respondents nor the reasons for their non-response.

Data Analysis

Each questionnaire was assigned an identification number and checked for coding errors. Non-responses on specific items were coded as missing. The responses on the usable questionnaires were keypunched onto computer cards for analysis. The analysis of the data was conducted between September, 1982 and April, 1983.

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) (Nie et al., 1975), BMDP Statistical Software 1981 (Dixon, 1981), and SPSS Update 7 - 9 (Hadlai-Hull & Nie, 1981).

The first task of the data analysis was to analyze the nursing skills data contained in part two of the questionnaire. Factor analysis techniques were employed using the SPSS FACTOR Subprogram - Principal Factoring with Iteration: PA2. Varimax orthogonal rotation was specified as the method of rotation. Factor analysis was considered an appropriate method to use in order to represent the large number of nursing skills (176) in terms of a smaller number of hypothetical variables to facilitate organizing curriculum content. Four separate programs were run using the categories used in the questionnaire, namely: Mental Health Nursing; Emergency Nursing; Obstetrical Nursing; and, Nursing Process, Professional, and Supervisory Skills. The responses to the Level of Importance category were used for each variable in each of the categories identified above. Some skill statements were deleted prior to analysis because of missing data, namely: questions 24, 27, 45, 47, 74, and 125. Each initial program was run without specifying the number of factors to be extracted in order to ascertain the number of hypothetical factors that might account for the observed correlations and to facilitate possible data reduction. Then, based on the eigenvalue and using the Scree-Test (Cattell, 1965), the programs were re-run specifying the number of factors to be extracted for each program.

The second task of the data analysis was to determine if there were differences in the factor scores identified within each factor for each of the categories: Mental Health Nursing, Emergency Nursing, Obstetrical Nursing, and, Nursing Process, Professional, and Supervisory Skills in relation to the three independent variables of acute bed capacity, regional hospital district, and interest in taking the program. The rationale for obtaining this data was to determine if the program might need to be

modified in order to meet the needs of different groups in the event that significant differences were found. One-way analysis of variance for repeated measures were employed using the SPSS Subprogram MANOVA in order to obtain Multivariate Tests of Significance and Univariate F-Tests to determine on which factors the differences occurred and by which groups. Separate programs were run for each of the categories: Mental Health Nursing, Emergency Nursing, Obstetrical Nursing, and Nursing Process, Professional and Supervisory Skills using the previously obtained factor scores.

The third task of the data analysis was to determine if there were differences between level of importance and level of theory, and level of importance and level of practice for each skill statement in each of the four categories: Mental Health Nursing, Emergency Nursing, Obstetrical Nursing, and, Nursing Process, Professional and Supervisory Skills. It was perceived that this data would assist the program developers to determine the focus or priority for the theory and clinical components of the program. That is, the focus could be placed on either content or practice or both for particular skill items depending on whether the differences in the means were significant. One-way analysis of variance for repeated measures were employed using the BMDP program P4V General Univariate and Multivariate Analysis of Variance and Covariance, Including Repeated Measures (URWAS). Two separate programs were run for each of the four categories: Mental Health Nursing, Emergency Nursing, Obstetrical Nursing, and Nursing Process, Professional, and Supervisory Skills to obtain data comparing level of importance and level of theory, and level of importance and level of practice. Because the number of items was large, the significance level was established at $p<.01$ for reporting significant

differences. When data was missing for an individual on a particular item, the mean for that item was substituted.

The fourth task of the data analysis was to determine the basic distributional characteristics of the questionnaire items using summary statistics. One-way frequency distributions with descriptive statistics were generated for all the items using SPSS subprogram FREQUENCIES. The results for part one and part three of the questionnaire are reported in chapter four. The results for part two of the questionnaire in the form of means and standard deviations are reported in Appendix F.

The fifth task of the data analysis was to investigate possible relationships among selected questionnaire items. Contingency table analysis, using the SPSS subprogram CROSSTABS, was used to explore the relationship between each of interest in taking the program, acute bed capacity, geographic region, and selected demographic and course preference items. A level of significance of 0.05 was assumed for all analyses.

For example, to determine if there was a difference between nurses who expressed interest in taking this post-diploma program and those who did not express an interest, respondents were put in one of two groups based on a "Yes" or "No" response. Frequencies were calculated for each group and a chi-square statistic applied to the following variables: employment status, present position, basic nursing education, years since graduation, years employed full-time, years employed part-time, years employed in a small hospital, regional hospital district, acute bed capacity, age, preferred type of course, participation in block clinicals, preferred location, use of challenge exams, pretesting nursing skills, ability to study independently, and ability to evaluate own progress.

To determine if there were differences among nurses by regional

hospital district in their responses to selected items, respondents were assigned to one of six groups: Capital, Okanagan, South-East, Island Coast, Central, and North Central. Frequencies were calculated and a chi-square statistic applied to the same variables as above.

A similar procedure was followed to determine if there were differences in item responses among nurses by acute bed capacity. Respondents were assigned to one of three groups: 1 - 20 beds, 21 - 40 beds, and 41 - 75 beds.

CHAPTER FOUR

RESULTS OF THE STUDY

This study was concerned with the development of a post-diploma program in small hospital nursing. The main purpose of the study was to describe selected characteristics of the nurses, to determine their learning needs in four areas of nursing practice, and to determine their preferences for program content, format, and delivery system.

The results of the study are presented in nine sections. In the first section, the demographic data of the respondents are documented. The second section describes program preferences of the nurses and includes interest, type of program, program format, and factors influencing their choice of a part-time program. Learner characteristics of respondents are presented in section three. Section four describes the characteristics of potential learners. The relationships between acute bed capacity and selected program variables, and between regional hospital district and selected program variables are presented in sections five and six, respectively. Section seven describes the ratings of the learning objectives. A proposal for organizing the content of the program is presented in section eight. In the last section, the relationships between acute bed capacity, regional hospital district, and interest/non-interest and the factors for each category of content is presented.

A total of 347 questionnaires were returned out of a possible 696 (49.9%) of which 323 (46.4%) were considered valid and used for data analysis.

Characteristics of Respondents

The typical small hospital nurse who responded was between 25 and 44

years of age, was employed full-time in a general duty position, had graduated from a hospital diploma program, had experience working in a large general hospital setting on a medical-surgical unit, had been working full-time for ten years or less, and had been working in a small hospital setting for five years or less.

Age, employment status, and present position are presented in Table 6. Age distribution ranged from under 25 through over 55 years, with the greatest number falling in the 25 to 34 year-old (36.2%) and 35 to 44 year-old (35.6%) groups respectively. Younger nurses selected small hospital nursing more frequently than older nurses.

The majority (61.0%) were employed full-time while the remainder were evenly split between part-time (18.9%) and casual (19.2%). Thus, small hospitals appear to rely on the availability of casual and part-time staff to maintain staff levels as opposed to using them to compliment full-time staff. The vast majority were general duty nurses (75.5%). Those respondents who checked the Other category included five supervisors, five involved in inservice or education, two administrators, one nursing care coordinator, and one community nurse. Five individuals did not identify their position.

The nurses represented a range of regional hospital districts and acute bed capacities as shown in Table 7. Of the nine districts listed, seven are represented in the sample with one-third (33.9%) of the respondents working in the South-East district, 20.1% in the North Central district, 14.9% in the Okanagan district, and 13.6% in the Island Coast district. Data on the acute bed capacity of the hospitals in which respondents work shows that all categories are represented and the percentages are proportional to the total population of nurses in each category, including

Table 6

Number and Percentage Distribution of Respondents by Age, Employment Status, and Present Position (N = 323)

CHARACTERISTICS	NUMBER	PERCENT
Age		
Under 25	11	3.4
25 - 34 years	117	36.2
35 - 44 years	115	35.6
45 - 54 years	56	17.3
Over 55	20	6.2
No Response	4	1.2
Total	323	100.0
Employment Status		
Full-time	197	61.0
Part-time	61	18.9
Casual	62	19.2
No Response	3	0.9
Total	323	100.0
Present Position		
General Duty	244	75.5
Charge Nurse	13	4.0
Head Nurse	32	9.9
Director	15	3.2
Other	19	7.4
Total	323	100.0

the D.O.N. group (see Tables 4 & 7). Only the 11 to 20 bed category had a proportionally higher percentage of respondents. The percentage of the

total sample population (1009) by category and the percentage of respondents by category are, respectively: 1 to 10 beds (5.8% and 6.5%), 11 to 20 beds (6.2% and 11.5%), 21 to 30 beds (20.9% and 19.2%), 31 to 40 beds (13.4% and 13.9%), 41 to 50 beds (20.5% and 18.9%), and 50 to 75 beds (29.5% and 29.7%).

Table 7

Number and Percentage Distribution of Respondents According to Regional Hospital District and Acute Bed Capacity (N = 323)

CHARACTERISTICS	NUMBER	PERCENT
Regional Hospital District		
Greater Vancouver	0	0.0
Capital	21	6.5
Fraser Valley	0	0.0
Okanagan	48	14.9
South-East	109	33.7
Island Coast	44	13.6
Central	26	8.0
North Central	65	20.1
North	9	2.8
No Response	1	0.3
Total	323	100.0
Acute Bed Capacity		
1 to 10 beds	21	6.5
11 to 20 beds	37	11.5
21 to 30 beds	62	19.2
31 to 40 beds	45	13.9
41 to 50 beds	61	18.9
50 to 75 beds	96	29.7
No Response	1	0.3
Total	323	100.0

The number of years of employment in nursing since graduation and years of employment in a small hospital setting are shown in Table 8. The majority (68.9%) of respondents have been employed full-time for ten years or less and have been employed part-time for five years or less (71.8%). Three-quarters (75.3%) of the respondents have been employed in a small hospital setting for ten years or less, and almost half (46.2%) have been employed in the setting for five years or less.

Table 8

Number and Percentage Distribution of Respondents According to Employment Experience (N = 323)

NUMBER OF YEARS	SMALL HOSPITAL SETTING	SINCE GRADUATION	
		FULL-TIME	PART-TIME
None	0 (0.0)[a]	2 (0.6)	84 (26.0)
Less than 1 year	18 (5.6)	5 (1.5)	51 (15.8)
1 to 5 years	131 (40.6)	130 (40.2)	97 (30.0)
6 to 10 years	94 (29.1)	88 (27.2)	49 (15.2)
11 to 15 years	39 (12.1)	39 (12.1)	18 (5.6)
16 to 20 years	19 (5.9)	33 (10.2)	0 (0.0)
Over 20 years	14 (4.3)	21 (6.5)	6 (1.9)
No Response	8 (2.4)	5 (1.5)	18 (5.6)
Total	323 (100.0)	323 (100.0)	323 (100.0)

[a]Percentage

The majority of nurses currently employed in small hospitals report experiences in other types of clinical settings (See Table 9). The most common facility was a general hospital with more than 75 beds (273). Experience in a psychiatric hospital ranked tenth out of the thirteen types of facilities listed. Of the 104 respondents who indicated that they have other experience, the vast majority indicated that it was in a small hospital (86). Other types of facilities included: outpost nursing (4), intermediate care (2), physically handicapped (2), mentally handicapped (2), T.B. Sanitorium (1), private lab (1), camp nurse (1), and maternity hospital (1). Of the respondents (273) who had worked in a large general hospital, the most frequently identified areas of experience were on medical units (204) and surgical units (201) followed by obstetrics/maternity (152), pediatrics (125), and newborn nursery (97). To a lesser extent, they report experience in the operating room (64), extended care (62), and medical/surgical intensive care (60). Their experience tends to reflect the general medical/surgical/maternity focus of their diploma education, with some having experience in selected speciality areas. Within a general hospital setting, obstetrics was the third most frequently reported experience, emergency was fifth, and psychiatry was twelfth. Other areas (22) of a general hospital that respondents identified having experience in were very individualized and ranged from admitting (1) to intensive care (3) and urology (2). Five individuals had worked as floats and four respondents had experience in each of burns, neurology/neurosurgery, and the nursing office. Three individuals had worked in coronary care while two individuals had experience in each of infection control and isolation.

Table 9

Number of Respondents According to Type of Facility Previously Employed

TYPE OF FACILITY		NUMBER[a]
General Hospital (larger than 75 beds)		273
Medical	203[b]	
Surgical	201	
Obstetrics/Maternity	152	
Pediatrics	125	
Emergency	109	
Newborn Nursery	97	
Operating Room	64	
Extended Care	62	
Medical/Surgical Intensive Care	60	
Outpatient/Ambulatory Care	49	
Intravenous Therapy	33	
Psychiatry	25	
Central Supply	17	
Renal Dialysis	14	
Other	38	
Extended Care Hospital		59
Physician's Office		44
Education Facility		37
Private Duty		32
Children's Hospital		30
Nursing Home		30
Health Unit		21
Convalescent/Rehab. Hospital		19
Psychiatric/Mental Hospital		12
Industry		8
Mental Health/Community Care		6
Victorian Order of Nurses		5
Other		104

[a]Numbers do not total 323 as respondents were asked to indicate all facilities employed in.

[b]In rank order except Other category.

Basic educational preparation for nursing ranges from a diploma to a degree (See Table 10). The majority (81.7%) received their basic preparation in a hospital-based diploma program. 15.2% received their education in a community college program, including those from BCIT, while only 3.7% reported having taken a university program. Length of time since graduation ranged from less than one year to over 20 years. Nurses fell into three groups, each containing roughly one-third of the nurses--under 10 years (34.3%), 11 to 20 years (36.6%), and over 20 years (28.5%).

With respect to post-basic education, 20 nurses (6.2%) indicated that they had completed a degree. Fourteen nurses identified their degrees as being either a B.S.N. or B.N., and two of them had a masters degree--one an M.A. degree and one an M.Ed. degree. One nurse had a B.A. degree, two nurses indicated they were working on a degree, and three nurses indicated dual qualifications--R.N. and R.P.N.

Approximately half of the nurses (141) reported having completed a diploma/certificate or had participated in other types of educational programs. The number and type of programs varied greatly from those obtained in workshops to courses of at least one year in length. The most frequently cited course was nursing unit administration (30) which is offered through independent study and block classroom once a year. The next most frequent course identified was midwifery (28) and this may indicate that the nurses were educated outside of Canada. Other courses identified were intensive care (19), refresher course (12), operating room (10), obstetrics (9), university courses (8), emergency (6), critical care (6), C.P.R. (6), management skills (5), and industrial first aid (4).

Table 10

Number and Percentage Distribution of Respondents According to Basic Nursing Education, Years Since Graduation, and Post-Basic Education Completed

EDUCATION IN NURSING	NUMBER	PERCENT
Basic Education		
Hospital Diploma	264	81.7
College Diploma	37	11.5
University	10	3.1
BCIT	12	3.7
Total	323	100.0
Years Since Graduation		
Less than 1 year	3	0.9
1 to 5 years	41	12.7
6 to 10 years	67	20.7
11 to 15 years	60	18.6
16 to 20 years	58	18.0
Over 20 years	92	28.5
No response	2	0.6
Total	323	100.0
Post-Basic Education		
Degree	20[a]	
Certificate	77	
Other	85	

[a]Respondents were asked to check all that applied, percentages are not calculated.

Program Preferences

The nurses clearly indicated an interest in taking a post-diploma program in small hospital nursing. Sixty percent of all respondents were interested.

Type of Program

The nurses clearly indicated a preference of type of program given a choice between a full-time program and a part-time program. A part-time program was the choice of 195 (60.4%) of the nurses. When the relationship between interest and preferred type of course was investigated, it showed that two-thirds (129) of the 195 nurses preferred a part-time program.

Factors which influenced the nurses' choice of a part-time program are presented in Table 11. Of the 195 nurses that chose a part-time program, approximately three-quarters cited being able to work and family responsibilities as major factors. Approximately one-half of the nurses indicated economic and permanent shift work as considerations. Almost one-third indicated babysitting, day-time jobs, and a need for more time to study than allowed in a full-time course. Other factors identified by some respondents included ability to get time off (4), location (2), transportation (2), and working 12 hour shifts. Distance and economics were each identified by two respondents.

Program Format

Part-time program format preferences are reported in Table 12 and Table 13. The majority (86.7%) of the nurses indicated that the course should be 34 weeks or less with 55.9% preferring a 20 week course. Three-quarters of the nurses indicated that they would be able to participate in a two-week block of clinical experience (76.9%) and preferred that it be scheduled at a regional college (75.4%). Those respondents (37) who indicated that they

Table 11

Factors Influencing Respondents' Choice of a Part-time Program

FACTOR	NUMBER[a]
Able to continue career and study simultaneously	166
Children/family responsibilities	152
More economical to attend evening/weekend classes	93
Continue to hold a permanent shift job	85
Babysitting easier to arrange on evenings/weekends	66
Continue to hold a day-time job	62
Need longer period to study than allowed in full-time course	30
Other	12

[a]Respondents were asked to check all that applied, percentages are not calculated.

could not participate in a block clinical experience gave the following reasons: financial (20), family responsibilities (11), and location (9). The major focus of the comments made related to finances and working conditions. Concerns identified were loss of salary; the unavailability of time off, leave-of-absences, or education leaves; and, not wanting to give up holidays. Location was an important factor identified, especially for those with family responsibilities.

Table 12

Preferred Part-Time Program Format:

Length of Course, Participation, and Location Block Clinical

COMPONENT	NUMBER	PERCENT
Expected Length of Course		
20 weeks	109	55.9
34 weeks	60	30.8
50 weeks	9	4.6
Other	3	1.5
No Response	14	7.2
Total	195	100.0
Participation in Block Clinical		
Yes	150	76.9
No	37	19.0
No Response	8	4.1
Total	195	100.0
Location for Block Clinical		
Regional College	147	75.4
BCIT	11	5.6
No Response	37	19.0
Total	195	100.0

The nurses' preferences for the theory format and times, lab times, and clinical practice times are presented in Table 13. The majority of respondents indicated a preference for either classes at a regional college or for using self-directed materials at home. To a lesser extent, they preferred the use of instructional and interactive television at a regional

Table 13

Preferred Part-Time Program Format:

Theory, Lab, and Clinical Components

COMPONENT	NUMBER[a]
Theory	
Classes at regional college	136[b]
Self-directional materials at home	125
Instructional and interactive television classes at regional college	80
Interactive T.V. at home (KNOW)	41
Weekly telephone conferences	38
Other	5
Class Times	
Weekdays 1900 - 2200 hours	99
Saturdays 0900 - 1300 hours	59
Saturdays 0900 - 1600 hours	58
Weekdays 0900 - 1300 hours	57
Weekdays 1600 - 1900 hours	40
Weekdays 0900 - 1600 hours	29
Other	24
Lab Times	
Weekdays 1900 - 2200 hours	87
Saturdays 0900 - 1300 hours	67
Saturdays 0900 - 1600 hours	64
Weekdays 0900 - 1300 hours	59
Weekdays 1600 - 1900 hours	41
Weekdays 0900 - 1600 hours	28
Other	20
Clinical Practice	
Weekdays 1700 - 2200 hours	107
Saturdays 0700 - 1500 hours	97
Saturdays 1500 - 2300 hours	37
Other	25
Location Clinical and Lab	
Hospital and resource people in own geographic region	164
Use instructional and interactive television for demonstration and practice at regional college	94
Travel to Lower Mainland	25
Live in Lower Mainland	5
Other	8

[a]Respondents were asked to check all that apply. Percentages are not calculated.

[b]In rank order.

college. Use of the Knowledge Network and telephone conferences were not highly regarded. It would appear that they chose the more traditional formats for learning--classes and correspondence.

The most frequent stated preference by the nurses for class times for theory, lab, and clinical practice was in the evenings (1900 - 2200 hours) during the week. The nurses also indicated a strong preference for lab and clinical experiences to be located in a hospital within their own geographic region and utilizing local resource people. The use of interactional television and regional colleges was their second choice.

All respondents were asked to indicate whether challenge exams and assessment of nursing skills should be included in the program. Almost two-thirds of the nurses indicated that there should be challenge exams (63.2%) and that there should be an assessment of nursing skills in a lab setting before beginning the program (64.4%).

Learner Characteristics of Respondents

All respondents, regardless of interest expressed in the program, were asked to rate their ability to evaluate their own progress in a learning situation (See Table 14). With respect to ability to study independently, nurses fell into two groups on each variable, each containing roughly one-half of the nurses--those who could study independently (47.4%) and those who would need some supervision/direction (46.7%). Fewer than one-half of the nurses indicated that they were able to evaluate their own progress (40.6%) while the majority (56.0%) indicated they would need assistance.

Characteristics of Potential Learners

Respondents who indicated interest in taking a part-time post-diploma

Table 14

Number and Percentage Distribution of Respondents According to Ability to Study Independently and Ability to Evaluate Own Progress

CATEGORY	NUMBER	PERCENT
Ability to Study Independently		
Need Supervision/Direction	10	3.1
Need Some Supervision/Direction	151	46.7
Can Study Independently	153	47.4
No Response	9	2.8
Total	323	100.0
Ability to Evaluate Own Progress		
Unable to Evaluate	2	0.6
Need Some Assistance	181	56.0
Able to Evaluate	131	40.6
No Response	9	2.8
Total	323	100.0

program in small hospital nursing were compared with respondents who indicated no interest by means of a chi-square analysis on selected demographic, education, employment, and learning preference variables. Tables 15 to 17 present the data on the variables for which there were statistically significant differences ($p<.05$) between the two groups.

The major findings are that proportionally more nurses:

1. interested in taking the program perceived themselves as being less able to study independently.

2. interested in taking the program perceived themselves as being

less able to evaluate their own progress in a learning situation.

3. who received their basic nursing education in a college setting are interested in taking the program.

4. with 15 years or less since graduation are interested in the program, particularly those in the categories 1 - 5 years (79.5%) and 11 - 15 years (82.5%).

5. who have worked full-time for 5 years or less are interested in the program.

6. who have worked part-time for 5 years or less are interested in the program.

7. who are 44 years old or younger are interested in the program, especially those in the under 25 year-old category (91.0%). In the 25 to 34 year-old groups, 76% in each group are interested.

8. who have worked in a small hospital setting for five years or less are interested in the program.

9. who work in the South-East and North Central Hospital Districts are interested in the program.

No significant differences were found between interest/non-interest on the following variables: type of program, challenge exams, pretesting nursing skills, present position, employment status, acute bed capacity, and timeframes for taking the program.

Based on the results of the chi-square analysis, the typical potential learner has the following characteristics. The learner is under 45 years of age, has graduated from a college-based diploma program, and works in either the South-East or North Central Hospital District. The learner has been employed in a small hospital setting for five years or less, has worked full-time for five years or less, and has worked part-time for five

Table 15

2 x 2 Contingency Table for Selected Variables by Respondents' Program Interest/Non-Interest

VARIABLE	INTEREST	NON-INTEREST
Study Independently		
Supervision	114	43
Independent	81	69
	$\chi^2 = 10.68$	$p = 0.001$
Evaluate Progress		
Some Assistance	123	54
Able to Evaluate	72	58
	$\chi^2 = 5.84$	$p = 0.016$
Basic Nursing Education		
Hospital	152	100
College	35	21
	$\chi^2 = 3.94$	$p = 0.047$

years or less. The learner requires some assistance to evaluate his or her progress and some supervision/direction in studying.

Table 16

2 x 5 Contingency Table for Selected Variables by Respondents' Program Interest/Non-Interest

VARIABLE	INTEREST	NON-INTEREST
Years Since Graduation		
1 - 5 years	35	9
6 - 10 years	38	26
11 - 15 years	47	10
16 - 20 years	31	27
Over 20 years	43	41
	χ^2 = 22.12	p = 0.001
Years Employed Full-Time		
Less 1 year	6	1
1 - 5 years	91	34
6 - 10 years	53	35
11 - 15 years	24	13
16 - 20 years	18	29
	χ^2 = 19.63	p = 0.002
Years Employed Part-Time		
Never	51	
Less 1 year	23	
1 - 5 years	70	
6 - 10 years	29	
11 - 15 years	9	
	χ^2 = 17.99	p = 0.001
Age		
Under 25	10	1
25 - 34	76	36
35 - 44	76	36
45 - 54	24	29
Over 54	8	10
	χ^2 = 15.79	p = 0.003

Table 17

2 x 6 Contingency Table for Selected Variables by Respondents' Program Interest/Non-Interest

VARIABLE	INTEREST	NON-INTEREST
Years Employed Small Hospital		
Less 1 year	16	2
1 - 5 years	90	39
6 - 10 years	52	38
11 - 15 years	17	18
16 - 20 years	11	7
Over 20 years	6	7
	χ^2 = 13.54	p = 0.019
Regional Hospital District		
Capital	10	10
Okanagan	26	16
South-East	75	33
Island Coast	22	22
Central	11	13
North Central	50	20
	χ^2 = 11.75	p = 0.038

Hospital Size and Program Variables

Chi-square analysis was performed to investigate the relationship between acute bed capacity and selected program variables. In order to ensure adequate expected cell frequencies greater than five, the following categories were combined: 1 to 20 beds, 21 to 40 beds, and, 41 to 75 beds. No significant differences ($p<.05$) were found related to acute bed capacity on the following variables: type of program, participation in

block clinical, preferred location, challenge exams, pretesting nursing skills, ability to study independently, and ability to evaluate own progress.

Hospital District and Program Variables

Chi-square analysis was also performed to investigate the relationship of geographic location on selected program variables. No significant differences ($p<.05$) were found related to geographic location on the following variables: type of program, participation in block clinical, preferred location, challenge exams, ability to study independently, ability to evaluate own progress, timeframes for taking the program, employment status, present position, basic nursing education, years since graduation, years employed full-time, years employed part-time, years employed in a small hospital, and age.

A significant difference was found by geographic location on the variable pretesting nursing skills as shown in Table 18.

Respondents in the Capital and South-East Regional Hospital Districts were proportionally more in favor of pretesting nursing skills. In the Central Regional Hospital District, the majority were opposed to pretesting nursing skills.

Program Content

In section two of the questionnaire, respondents identified their own level of preparation for practice in a small hospital setting. The nurses rated each of the 176 objectives three times according to the item's level of importance, their own level of knowledge in relation to the item, and their own level of practice in relation to the item. The results, in the

Table 18

2 x 6 Contingency Table for Pretesting Nursing Skills by Respondents' Regional Hospital District

VARIABLE	PRETESTING NURSING SKILLS	
	YES	NO
Regional Hospital District		
Capital	17	2
Okanagan	28	13
South-East	75	27
Island Coast	27	15
Central	11	14
North Central		
	$\chi^2 = 12.53$	$p = 0.028$

form of means and standard deviations, are presented in Appendix F.

The results show that there are differences between the ratings of individual objectives and that there are differences among the three categories for each objective. The ratings nurses gave on the level of importance scale, for example, ranged from 1.71 (participate in electroconvulsive therapy) to 4.66 (provide immediate care for the patient with head injuries). Consistently, the nurses rated the level of importance higher than either of the level of theory or the level of practice category items. On some items, the level of theory is higher than the level of practice. On some items, the level of practice is higher than the level of theory. This may indicate that for specific objectives, some

nurses require only theory and some nurses require only clinical experience, while other nurses may require both theory and clinical.

In order to investigate these differences among the objectives on the three levels, one-way analysis of variance for repeated measures was employed comparing level of importance and level of theory, and level of importance and level of practice for each of the four categories. The results show that there are statistically significant differences ($p<.01$) on both levels--importance and theory, and importance and practice--for all objectives.

In order to determine what objectives to consider for inclusion in the proposed program, the following criteria were developed to assist in interpretation of the data. The criteria enabled the program developers to categorize the objectives as to their degree of importance for inclusion in the program when examined in relation to the nurses' present level of theory and present level of practice. The grand mean and standard deviation was calculated for each of the four sections (mental health, emergency, obstetrics, and nursing process, supervisory and professional) and for each level category (importance, theory, and practice) (See Table 19).

The three program developers agreed to the following guidelines in interpreting the data for each category:

1. objective must be included if objective mean is more than one standard deviation above the category mean.

2. objective should be excluded if objective mean is more than one standard deviation below the category mean.

3. objective may be included if objective mean is within one standard deviation from the category mean.

Table 19

Means and Standard Deviations of Group Means for Level of Importance, Theory, and Practice (N = 320)

SECTION	IMPORTANCE		THEORY		PRACTICE	
	G.M.[a]	S.D.[b]	G.M.	S.D.	G.M.	S.D.
Mental Health (55 items)	3.54	0.51	2.92	0.39	2.81	0.50
Emergency (39 items)	4.13	0.47	3.45	0.35	3.25	0.43
Obstetrics (47 items)	3.97	0.54	3.35	0.41	3.07	0.51
Nursing Process[c] (35 items)	3.80	0.38	3.39	0.35	3.26	0.42

[a]Grand mean.

[b]Standard deviation.

[c]Includes supervisory and professional objectives.

Each objective was examined in relation to the three categories of level of importance, level of theory, and level of practice. A decision was then made on whether the objective should be included as a theory objective, a clinical objective, or both, and in which module it should be placed. Appendix G contains an example of the process used to identify and eliminate objectives related to mental health nursing.

Organization of Program Content

Factor analytic techniques were employed to represent the large number of learning objectives in terms of a smaller number of hypothetical

variables in order to identify possible organizers for the curriculum content. A separate analysis was carried out for each of the four categories: Mental Health Nursing, Emergency Nursing, Obstetrical Nursing, and Nursing Process, Professional and Supervisory Skills. Each category was analyzed to determine the factors and the factor loading of each learning objective on each factor. Initially, eighteen factors were identified: five for Mental Health Nursing, six for Emergency Nursing, three for Obstetrical Nursing, and four for Nursing Process, Professional and Supervisory Skills. Based on reallocation of the two learning objectives in Emergency Nursing that initially loaded on factor six (Q69.1 and Q70.1) to factor five, the total number of factors identified for the program content was seventeen.

The objectives which loaded on each factor were reviewed to determine their appropriateness in relation to other objectives on the same factor, and to determine the common characteristic among the learning objectives on each factor in order to propose a name for each factor. Objectives which did not fit with the major hypothetical variable were reallocated to a factor that was determined to be more appropriate. Reallocation was based on the commonality of the objective to other objectives on one of the other factors. The results for each category are presented in Tables 20 to 23.

Mental Health Nursing

The 51 objectives loaded on five factors (See Table 20). Initially, 19 objectives loaded on Factor 1. After examination, six learning objectives were reallocated in Factor 1. The common characteristic of the final learning objectives were speciality areas of practice within psychiatric nursing--developmentally handicapped, children, adolescents, and families. The second major characteristic related to specific therapy

approaches--groups and crisis intervention--which usually require additional skills. The title chosen reflects the idea of specialization.

Initially, nine learning objectives loaded on Factor 2. One objective was reallocated and two objectives were added. The characteristic for the final learning objectives is that they are common behavior patterns.

Some difficulty was encountered with the initial ten objectives that loaded on Factor 3. Two common threads seem to emerge for the objectives namely, dependency and an underlying physical and/or behavioral process. For example, confusion can be either physical or psychological in terms of cause of the behavior as can drugs, alcohol, and hysteria, while grief relates to a psychological or physical loss. Following much discussion, four objectives were reallocated and three objectives were added. The naming of the factor requires further study.

Seven objectives initially loaded highest on Factor 4. The common characteristics were therapeutic communication and therapeutic relationships. Seven other objectives deemed appropriate were added. It was decided that therapeutic communication is necessary in order to develop therapeutic relationships and therefore could be considered a sub-concept of therapeutic relationships.

Six objectives initially loaded on Factor 5. The common characteristics were communication skills and assessment. Three objectives were reallocated and three were added to reflect assessment.

Table 20

Mental Health Nursing: Objectives by Factor

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Factor 1: Psychiatric Specialities/Skills (N = 13)		
Q42.1	Assess patients with developmental delays.	0.77[a]
Q43.1	Assess functional and dysfunctional families.	0.73
Q52.1	Conduct small therapeutic groups.	0.70
Q53.1	Conduct small activity groups.	0.69
Q41.1	Assess children with behavior problems.	0.68
Q48.1	Use selected therapies.	0.65
Q44.1	Identify issues and problems associated with nursing care of the adolescent.	0.63
Q36.1	Identify counselling and assessment strategies when working with families.	0.62
Q37.1	Analyze family interactions.	0.61
Q49.1	Counsel psychiatric patients over the telephone.	0.56
Q51.1	Apply crisis intervention techniques.	0.54
Q38.1	Assess abuse and neglect in children.	0.54
Q18.1	Apply concepts of selected theories.	0.48
Factor 2: Behavior Patterns (N = 10)		
Q10.1	Intervene with patients who are suicidal.	0.73
Q 9.1	Assess the lethality of a suicide plan.	0.71
Q13.1	Intervene with patients who are suspicious.	0.70
Q12.1	Intervene with patients who are withdrawn from reality.	0.67
Q14.1	Intervene with patients who are delusional.	0.66
Q 8.1	Intervene with patients who are depressed.	0.47

Table 20, cont'd

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Q16.1	Intervene with patients who are overactive.	0.47
Q 6.1	Intervene with patients who are anxious.	0.44
Q19.1	Intervene with patients who are physically or verbally aggressive.	0.36[b]
Q54.1	Implement nursing orders for special and constant attention.	0.23[b]
Factor 3: Psychobiological Concepts: Dependency (N = 9)		
Q33.1	Intervene with patients who are confused.	0.63
Q29.1	Intervene with patients who are dependent on drugs.	0.62
Q28.1	Intervene with patients who are addicted to alcohol.	0.59
Q32.1	Intervene with patients who have psychophysiological disorders.	0.58
Q39.1	Intervene appropriately in the grief process.	0.52
Q23.1	Intervene with patients who are hysterical.	0.47
Q46.1	Assess the effects and side effects of the major psychotropic drugs.	0.38[b]
Q21.1	Intervene with patients who are dependent.	0.38[b]
Q40.1	Complete a neurological assessment.	0.26[b]
Factor 4: Therapeutic Relationships (N = 13)		
Q 4.1	Demonstrate observational and listening skills.	0.62
Q 1.1	Initiate, maintain, and terminate therapeutic relationships.	0.60
Q 7.1	Demonstrate warmth, respect, and empathy.	0.55
Q15.1	Demonstrate interpersonal skills in therapeutic relationships.	0.45

Table 20, cont'd

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Q 3.1	Identify the dynamics and phases of a helping relationship.	0.44
Q11.1	Demonstrate self-awareness.	0.41
Q34.1	Demonstrate effective verbal and non-verbal communication.	0.40[b]
Q55.1	Demonstrate awareness of local ethnic and cultural customs and beliefs when providing care.	0.38[b]
Q26.1	Demonstrate genuineness, immediacy, and self-disclosure.	0.37
Q20.1	Apply principles and techniques of therapeutic communication.	0.37
Q22.1	Manage a therapeutic environment.	0.36[b]
Q35.1	Apply alternate approaches when interactions are ineffective.	0.33[b]
Q50.1	Set limits on behavior in a therapeutic manner.	0.22[b]
Q25.1	Demonstrate appropriate use of confrontation.	0.20[b]
Factor 5: Psychiatric Assessment (N = 6)		
Q17.1	Complete a psychosocial assessment.	0.47[b]
Q31.1	Analyze verbal and non-verbal communication.	0.43[b]
Q30.1	Accurately identify the verbal and non-verbal content of interactions.	0.43
Q 5.1	Complete a mental status examination.	0.38
Q 2.1	Complete a psychiatric history.	0.24[b]

[a]In rank order.

[b]Initially loaded higher on another factor.

Emergency Nursing

The 38 learning objectives in this category loaded on five factors. Initially, seven learning objectives loaded highest on Factor 1. All objectives had the common characteristic of being the result of a trauma. Five objectives were multiple system trauma. Two were considered single system trauma and were reallocated to Factor 2.

Eleven objectives initially loaded on Factor 2. Based on an analysis of the underlying relationship among the objectives, the objectives were considered to be of a more traditional medical nature. Three objectives were reallocated and three other objectives added.

Initially, eight objectives loaded on Factor 3. Given common characteristics identified for other factors, five objectives were reallocated and one objective was added. The remaining objectives were seen as having the characteristic of being social problems.

For Factor 4, six objectives initially loaded on this factor. Of these, one was seen as common across several of the factors and was retained while a second objective was deemed more appropriate for Factor 2. The commonality among the three remaining objectives was that they were related to orthopedics. Two other objectives were added from Factor 6 for a total of seven objectives.

Four objectives loaded highest on Factor 5 and had a common characteristic of being a procedure. Four other objectives were deemed appropriate and added to this factor.

As noted earlier, only two learning objectives loaded highest on Factor 6 initially. Upon examination, the objectives (Q69.1 & Q70.1) were deemed appropriate to be added to Factor 4 and the sixth factor was deleted.

Table 21

Emergency Nursing: Objectives by Factor

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Factor 1: Trauma: Multiple System (N = 5)		
Q59.1	Provide immediate care for the patient with burns.	0.85[a]
Q57.1	Provide immediate care for the patient with chest injuries.	0.84
Q60.1	Provide immediate care for the patient with spinal injuries.	0.84
Q56.1	Provide immediate care for the patient with head injuries.	0.78
Q58.1	Provide immediate care for the patient with multiple fractures.	0.74
Factor 2: Medical: Multiple System (N = 14)		
Q81.1	Provide immediate care for patients with serious medical problems (CVA, MI, GI, Coma, NYD).	0.70
Q76.1	Initiate and perform CPR.	0.65
Q79.1	Stabilize patients prior to transporting to other agencies.	0.64
Q83.1	Provide immediate care for patients who have ingested common poisons.	0.64
Q92.1	Conduct rapid initial assessment of patients.	0.62[c]
Q80.1	Manage patients who are unconscious.	0.62
Q84.1	Use poison control protocol.	0.57
Q66.1	Carry out initial physical assessments to identify problems.	0.41[c]
Q90.1	Provide care to victims of near drowning.	0.38[b]
Q78.1	Manage patients with hypothermia.	0.35[b]

Table 21, cont'd

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Q61.1	Provide immediate care for the patient with asthma.	0.22[b]
Q94.1	Provide care to patients with hyperthermia.	0.21[b]
Q63.1	Provide immediate care for the patient with an eye injury.	0.15[b]
Q62.1	Provide immediate care for the patient with epistaxis.	0.07[b]
Factor 3: Social Problems (N = 4)		
Q85.1	Follow appropriate procedures when providing care to victims of rape.	0.63
Q88.1	Follow appropriate procedures when providing care to victims of assault.	0.55
Q89.1	Follow appropriate procedures when providing care to patients with venereal disease.	0.38
Q82.1	Provide immediate care for overdose patients.	0.38[b]
Factor 4: Trauma: Orthopedic (N = 7)		
Q86.1	Use hard orthopedic devices.	0.72
Q87.1	Use soft orthopedic devices.	0.71
Q91.1	Coordinate transfer and transport of patients.	0.51[c]
Q93.1	Make appropriate referral of patients to community agencies.	0.49[c]
Q73.1	Assist with local anesthetics, including clocks.	0.40
Q70.1	Apply Colles splints.	0.38[b]
Q69.1	Apply Thomas splints.	0.32[b]

Table 21, cont'd

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Factor 5: Special Emergency Procedures (N = 8)		
Q65.1	Administer xylocaine into intravenous drugs.	0.74
Q64.1	Interpret lead 2 cardiac monitor tracings.	0.66
Q72.1	Manage patients with xylocaine infusion.	0.63
Q68.1	Assist with chest tube insertion.	0.39
Q75.1	Administer common emergency drugs.	0.39[b,c]
Q71.1	Initiate intravenous infusions.	0.37[b]
Q67.1	Assist with peritoneal taps.	0.36[b]
Q77.1	Conduct 12 lead electrocardiogram.	0.35[b]

[a]In rank order.

[b]Initially loaded higher on another factor.

[c]Seen as common across several factors.

Obstetrical Nursing

The 46 learning objectives in this category loaded on three factors. Initially, 24 learning objectives loaded highest on Factor 1. Examination of the learning objectives indicated that a number of underlying concepts were included on this factor. As well, in obstetrical nursing pregnancy includes three concepts, which are usually treated separately for teaching purposes: antepartum, intrapartum, and postpartum. The newborn is traditionally viewed separately also. The loading of the objectives did not reflect this separation. Given the objectives that loaded on the other

two factors, it was decided to reallocate six objectives so that the objectives in Factor 1 reflect care from antepartum to postpartum.

Fourteen objectives initially loaded highest on Factor 2. The commonality among the objectives was that the objectives were either procedures or required additional skills. On this basis, four objectives were added increasing the number of objectives in Factor 2 to 18.

Nine objectives initially loaded highest on Factor 3. All of the objectives, except one which was reallocated, seemed related to resources available to the child-bearing family.

In summary, some difficulties were encountered in analyzing how the objectives were allocated on the three factors. Two tentative reasons may be the wording of the objectives or the restriction of the factor analysis program to three factors based on the Scree Test.

Table 22

Obstetrical Nursing: Objectives by Factor

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Factor 1: Antepartum to Postpartum Care (N = 18)		
Q119.1	Identify bleeding disorders postpartum.	0.82[a]
Q 98.1	Recognize the complications of labor and delivery.	0.81
Q103.1	Perform vaginal examination for dilatation and fetal position.	0.72
Q123.1	Differentiate between normal and abnormal delivery.	0.72
Q112.1	Recognize the need for transportation of high risk patients.	0.70
Q113.1	Prepare for transport of patient in labor.	0.67

Table 22, cont'd

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Q111.1	Establish and maintain I.V. fluids and medications during labor and delivery.	0.66
Q118.1	Identify bleeding disorders antepartum.	0.66
Q 96.1	Instruct patient and spouse during labor.	0.66
Q114.1	Provide care for a patient during transport.	0.65
Q 99.1	Assist physician with vaginal delivery.	0.63
Q124.1	Demonstrate knowledge of drugs common to antepartum, intrapartum, and postpartum care.	0.62
Q109.1	Prepare O.R./Case Room and equipment for vaginal and cesarean section delivery.	0.59
Q108.1	Maintain environmental safety of O.R./Case Room.	0.57
Q102.1	Palpate abdomen for fetal size and position.	0.56
Q133.1	Conduct physical and psychosocial appraisal of the newborn.	0.49
Q128.1	Identify physiological changes which occur in pregnancy, labor, and delivery.	0.49
Q120.1	Identify physical disorders which contribute to high risk pregnancy.	0.46
Factor 2: Specialized Procedures/Skills (N = 18)		
Q141.1	Maintain I.V. on newborn.	0.74
Q140.1	Start I.V. on newborn.	0.73
Q107.1	Interpret fetal monitor strips.	0.73
Q106.1	Maintain internal fetal monitors.	0.72
Q134.1	Do gavage feedings on newborn.	0.72
Q137.1	Prepare nursery equipment for care of the high risk newborn.	0.67

Table 22, cont'd

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Q135.1	Do gastric lavage on newborn.	0.67
Q100.1	Assist physician during cesarean section.	0.64
Q110.1	Instruct patient and spouse during a cesarean section delivery.	0.63
Q131.1	Demonstrate knowledge of diagnostic tests used to identify high risk newborn.	0.58
Q138.1	Provide immediate care for the high risk newborn.	0.52[b]
Q129.1	Conduct prenatal assessment.	0.52
Q130.1	Identify the variations in intrauterine growth patterns.	0.50
Q105.1	Establish and maintain external fetal monitors.	0.49
Q136.1	Prepare the high risk newborn for transportation.	0.47[b]
Q132.1	Assess the high risk newborn.	0.46[b]
Q101.1	Conduct safe, efficient emergency delivery of newborn without supervision.	0.37[b]
Q139.1	Provide care for infants undergoing phototherapy.	0.28[b]
Factor 3: Family Resources (N = 8)		
Q122.1	Identify appropriate support system for the childbearing family.	0.74
Q117.1	Instruct family members in the parenting role.	0.67
Q127.1	Demonstrate skill in discussing sexuality issues with parents.	0.66
Q116.1	Assess and record bonding behaviors of the family.	0.63
Q121.1	Identify psychosocial disorders which contribute to high risk pregnancy.	0.58

Table 22, cont'd

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Q126.1	Provide counselling to patient regarding family planning.	0.58
Q 97.1	Demonstrate awareness of trends in maternal care.	0.53
Q 95.1	Coordinate community resources for the childbearing family.	0.53

[a]In rank order.

[b]Initially loaded higher on another factor.

Nursing Process, Professional, and Supervisory Skills

The 35 learning objectives loaded on four factors. Thirteen learning objectives initially loaded on Factor 1. The commonality among the objectives related to application of the nursing process. Four other objectives were deemed appropriate and subsequently added to Factor 1.

The commonality among the 12 objectives which initially loaded on Factor 2 was an administrative component. Five objectives were reallocated--four to Factor 1 and one to Factor 3.

All of the six objectives which initially loaded on Factor 3 related to being a member of a health care team. One objective was added from Factor 2.

Four objectives loaded highest on Factor 4 and all were deemed appropriate for a leadership component, although several of the objectives had loaded across either three or all four factors.

Table 23

Nursing Process, Professional, and Supervisory Skills by Factor

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Factor 1: Applies Nursing Process in Practice (N = 17)		
Q146.1	Develop nursing actions related to identified goals.	0.76[a]
Q142.1	Use problem-solving approach to nursing care.	0.70
Q145.1	Develop goals in consultation with patient.	0.70
Q143.1	Develop individualized care plans for each patient.	0.69
Q148.1	Able to write goals which are observable, measureable, and realistic.	0.68
Q154.1	Modify goals/nursing actions according to patient's met or unmet needs.	0.68
Q147.1	Able to state rationale for nursing actions.	0.67
Q144.1	Formulate a nursing diagnosis.	0.63
Q149.1	Use hospital format to record relevant data.	0.61
Q150.1	Use appropriate terminology.	0.55
Q153.1	Assist patients with discharge plans.	0.55
Q152.1	Apply procedures for documenting medical-legal situations.	0.53
Q151.1	Use problem oriented charting (POMR) in recording care.	0.45
Q155.1	Participate in nursing audits.	0.44[b]
Q165.1	Use Standards of Practice to guide practice.	0.41[b]
Q164.1	Use ICN Code to guide practice.	0.34[b]
Q162.1	Make appropriate referrals.	0.32[b]

Table 23, cont'd

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Factor 2: Administration (N = 7)		
Q167.1	Assess hospital's operational effectiveness.	0.77
Q169.1	Participate in hospital budgetary process.	0.75
Q168.1	Participate in the development of unit/hospital policy, procedures, and guidelines.	0.63
Q173.1	Evaluate hospital service to patients.	0.63
Q163.1	Demonstrate knowledge of the B.C. health care system.	0.61
Q161.1	Demonstrate knowledge of relevant legislation, policies, and guidelines for practice setting.	0.59
Q166.1	Interpret hospital policies to others.	0.53
Factor 3: Health Team Member (N = 7)		
Q175.1	Work effectively as a member of a health care team.	0.68
Q171.1	Facilitate positive staff relationships.	0.67
Q174.1	Evaluate own performance.	0.63
Q172.1	Demonstrate skill in resolving conflicts.	0.60
Q159.1	Recognize own strengths and weaknesses.	0.54
Q170.1	Practice emergency/evacuation procedures.	0.45
Q176.1	Participate in the performance appraisal of others.	0.31[b]
Factor 4: Team Leadership (N = 4)		
Q156.1	Apply principles of supervision and delegation.	0.62
Q157.1	Assign duties and schedule staff.	0.56

Table 23, cont'd

OBJECTIVE NO.	LEARNING OBJECTIVE	FACTOR LOADING
Q158.1	Set priorities on own work activities.	0.53[c]
Q160.1	Instruct/teach patients/staff.	0.49[c]

[a]In rank order.

[b]Initially loaded higher on another factor.

[c]Seen as common across factors.

Hospital Size, Hospital District, Interest/Non-Interest and Program Objectives

The relationship between objectives in each content category and acute bed capacity, regional hospital district, and interest/non-interest was examined using multivariate analysis of variance with repeated measures. Factor scores, for the level of importance category, from the factor analysis programs were used for each objective. A significance level of 0.05 was chosen for each of the omnibus Fs. Where the multivariate F was significant, univariate tests were used to assess the significance of group effects for each factor score different from 0. Table 24 and Table 25 show the summary univariate F-test tables for content categories where the omnibus F was significant. The level of significance for the univariate tests was also established at 0.05. The relationship of each variable to each content category are presented separately.

Acute Bed Capacity

No significant differences ($p<.05$) were found on factor scores and

acute bed capacity in the following content categories: all mental health nursing factors and all nursing process, professional, and supervisory skills factors.

An examination of the data in Table 24 and 25 indicates that there are significant differences associated with acute bed capacity on four factors--Factor 2 and Factor 6 (Q69.1 & Q70.1) in Emergency Nursing, and Factor 1 and Factor 2 in Obstetrical Nursing. For Emergency Nursing, nurses in small-sized hospitals (1 - 20 beds) perceived Factor 2 as significantly more important ($p<.05$) and nurses in large hospitals (41 - 75 beds) perceived it as less important. Nurses in medium-sized hospitals (21 - 40 beds) perceived Factor 5 as more important while nurses in small-sized hospitals perceived it as less important. For Obstetrical Nursing, nurses in medium-sized hospitals perceived Factor 1 as more important while nurses in large hospitals perceived it as less important. Nurses in large hospitals saw Factor 2 as more important while nurses in small hospitals saw it as less important.

Regional Hospital District

No significant differences ($p<.05$) were found on factor scores and regional hospital district on the following content categories: all mental health nursing factors, and all nursing process, professional, and supervisory skills factors.

An examination of the data in Table 24 and Table 25 indicates that there are significant differences associated with regional hospital district on three factors--Factor 2 and Factor 5 in Emergency Nursing and on Factor 2 in Obstetrical Nursing. For Emergency Nursing, nurses in the Okanagan Hospital District perceived Factor 2 as more important ($p<.05$) while nurses in the South-East Hospital District saw it as less important.

Table 24

Univariate F-Tests

Acute Bed Capacity and Regional Hospital District

for Emergency Nursing Factors (N = 314)

SOURCE OF VARIANCE		DEGREES OF FREEDOM	MEAN SQUARE	ERROR	F
Acute Bed Capacity (Pillai's F = 3.00, p<.05)					
Factor 1:	Trauma: Multiple System	2,311	1.36	0.92	1.47
Factor 2:	Medical: Multiple System	2,311	6.30	0.81	7.76*
Factor 3:	Social Problems	2,311	0.71	0.80	0.90
Factor 4:	Trauma: Orthopedic[a]	2,311	0.69	0.84	0.83
Factor 5:	Emergency Procedures	2,311	4.01	0.77	5.18*
Factor 6:	Trauma: Orthopedic[a]	2,311	0.93	0.79	1.17
Regional Hospital (Pillai's F = 1.58, p<.05)					
Factor 1:	Trauma: Multiple System	5,308	0.27	0.94	0.29
Factor 2:	Medical: Multiple System	5,308	2.25	0.83	2.72*
Factor 3:	Social Problems	5,308	0.88	0.80	1.10
Factor 4:	Trauma: Orthopedic[a]	5,308	0.15	0.84	0.18
Factor 5:	Emergency Procedures	5,308	2.64	0.76	3.46*
Factor 6:	Trauma: Orthopedic[a]	5,308	1.22	0.79	1.54

*p<.05

[a]Combined into one factor

Table 25

Univariate F-Tests

Acute Bed Capacity and Regional Hospital District

for Obstetrical Nursing Factors (N = 314)

SOURCE OF VARIANCE		DEGREES OF FREEDOM	MEAN SQUARE	ERROR	F
Acute Bed Capacity (Pillai's F = 6.49, p<.05)					
Factor 1:	Antepartum to Postpartum Care	2,300	6.75	0.91	7.43*
Factor 2:	Specialized Procedures/Skills	2,300	9.30	0.84	11.02*
Factor 3:	Family Resources	2,300	0.51	0.88	0.58
Regional Hospital (Pillai's F = 2.00, p<.05)					
Factor 1:	Antepartum to Postpartum Care	5,297	1.21	0.94	1.28
Factor 2:	Specialized Procedures/Skills	5,297	3.45	0.86	4.04*
Factor 3:	Family Resources	5,297	0.55	0.88	0.63

*p<.05

Nurses in the South-East Hospital District perceived Factor 5 as more important while nurses in the North and North Central Hospital Districts saw it as less important. For Obstetrical Nursing, nurses in the South-East Hospital District perceived Factor 2 as more important while nurses in the Central Hospital District saw it as less important.

Interest/Non-Interest

No significant differences ($p<.05$) were found on factor scores and interest/non-interest on any content category factors.

Summary

The results are summarized in Chapter Five.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study was concerned with the development of a post-diploma program in small hospital nursing using data obtained by conducting a needs assessment of the registered nurses employed in 45 of 53 small hospitals in British Columbia. In this chapter, the results of the study are summarized, conclusions are drawn, implications of the findings are discussed, and recommendations made.

The main purpose of the study was to describe selected characteristics of registered nurses working in B.C.'s small hospitals, and to determine their learning needs in four areas of nursing practice, and to determine their preferences for program content, format, and delivery system.

The research questions posed in this study were:

1. What are the characteristics of the nurses as they relate to selected personal, work-related, and educational variables?

2. What are the characteristics of the nurses who express an interest in taking a post-diploma program?

3. How important are selected nursing skills in relation to the nurses' overall professional responsibilities in the small hospital setting?

4. What is the present level of nurses' knowledge in relation to selected nursing skills?

5. What is the present level of nurses' clinical competence in relation to selected nursing skills?

6. What factors influence nurses' participation in post-diploma programs?

7. What type of program format and delivery system is preferred?

8. What is the potential pool of candidates for such a program?

9. What difference, if any, does acute bed capacity, geographic location, and interest in the program have on selected variables?

10. How can specific skill statements be organized to facilitate the development of program content?

In order to answer these questions, a descriptive and inferential study was carried out using a structured questionnaire, consisting of three parts, as the data collection tool. The questionnaire used was developed and pilot-tested by the investigator. The first part consisted of 14 closed-form questions related to demographic, education, work, and personal variables. The second part consisted of 176 items, divided into four sub-sections, and for each item respondents were asked to rate its importance, the level of knowledge of the respondent, and the level of clinical skill of the respondent. The third part consisted of 16 closed-form questions related to program interest, program format, and program delivery system.

The study sample consisted of a random sample, stratified by acute bed capacity, of 722 registered nurses employed in small hospitals throughout British Columbia and whose names had been forwarded to the investigator by their director of nursing or hospital administrator. The number of nurses surveyed in each category was proportional to the number of nurses in each category in the total population. Three hundred and forty-seven respondents (49.9%) participated in the study of which 323 (46.6%) were used for data analysis.

The results were computer analyzed using summary statistics, contingency table analysis, factor analysis techniques, one-way analysis of variance for repeated measures, and multivariate analysis.

The results are discussed in relation to each of the research questions.

Summary of the Findings

A registered nurse who most closely resembles the majority of registered nurses who participated in the study would be between 25 and 44 years of age, would be employed full-time in a general duty position in either the South-East or North Central Hospital District. He or she would have graduated from a hospital diploma program. He or she would have experience working on a medical-surgical unit of a large general hospital, would have been employed full-time in nursing for ten years or less, part-time for five years or less, and in a small hospital setting for five years or less. In relation to learner characteristics, he or she would need some assistance in evaluating his or her own progress in a learning situation and may be able to study independently or may need some assistance (See Tables 6 to 10).

Sixty percent of respondents were interested in enrolling in a post-diploma program in small hospital nursing. Nurses who express an interest in taking the program differ significantly from those nurses who are not interested (See Tables 15 to 17). Proportionally, the potential learner would be under 45 years of age. He or she would have graduated from a college diploma program, with 15 years or less since graduation. He or she would have been employed full-time in nursing for five years or less, part-time for five years or less, and in a small hospital setting for five years or less, in either the South-East or North Central Hospital Districts. He or she would be less able to study independently and would be less able to evaluate his or her own progress.

The majority of respondents indicated a preference for a part-time program, particularly by those nurses who indicated an interest in taking the program. Factors which influenced the nurses' choice of a part-time program were being able to work, family responsibilities, economics, and shift work.

The preferences identified by the nurses were a program of 34 weeks or less, with the majority preferring a 20-week program. They indicated an ability to participate in a two-week block of clinical experience. They stated a preference for classes to be held at a regional college or the provision of self-directed materials at home. They indicated a preference for classes to be held in the evening and that lab and clinical experiences be held in a hospital within their own geographic location utilizing local resource personnel. They also indicated a preference for the use of challenge exams and for assessing nursing skills prior to commencing the program.

The results showed no significant relationship between hospital size, acute bed capacity, and geographic location on the program format and delivery system variables, except on the variable pretesting nursing skills. Respondents in the South-East and Capital Regional Hospital Districts were more in favor while nurses in the Central Regional Hospital District were more opposed.

On the list of 170 learning objectives rated by respondents in terms of the item's level of importance, the nurses' level of theory, and the nurses' level of clinical practice, the findings indicated that there are differences between the ratings of individual objectives and among the three level categories for each objective. The nurses consistently rated the item's level of importance higher than either their level of theory or

level of practice. On some objectives, the nurses rated their level of theory higher than their level of practice, and, on other objectives, they rated their level of practice higher than their level of theory. Significant differences were found on both levels of importance and theory, and importance and practice for all objectives. Based on the results, criteria were established to determine what objectives to consider for inclusion in the proposed program.

The 170 learning objectives were organized into 17 factors, for which tentative titles were proposed. No significant relationships were found between the learning objectives, using factor scores, for the Mental Health Nursing Factors, and Nursing Process, Professional, and Supervisory Skills Factors and acute bed capacity and regional hospital district. Significant relationships were found between the learning objectives on Factor 2 and Factor 5 for Emergency Nursing and acute bed capacity and on Factor 2 and Factor 5 for Emergency Nursing and regional hospital district. Significant relationships were also found between the learning objectives on Factor 1 and Factor 2 for Obstetrical Nursing and acute bed capacity, and on Factor 2 for Obstetrical Nursing and regional hospital district. No significant relationships were found between interest/non-interest and the learning objectives.

A number of the findings of this study related to program format and delivery system have been supported by research conducted by Crane (1981), Miller (1982), and Gillespie (1983).

Conclusions

The findings of this study suggest a number of conclusions.

The formal needs assessment proved to be a useful tool for identifying

the continuing education needs of registered nurses employed in small hospitals in British Columbia. The study was cost effective in relation to the costs of developing such a program and the amount and type of detailed information provided by this study.

The need for developing a post-diploma program in small hospital nursing, initially identified by the directors of nursing, was high by the overall response rate of the nurses (49.9%) and by their stated interest in participating in such a program (60.4%).

The extent to which registered nurses in the study sample represent a potential pool of candidates for the program is related to their stated preferences for type of program, the format and delivery system, and the program content (See Table 18 to Table 23). For example, they indicated a preference for a part-time program of less than 34 weeks length, that theory be covered by classes at a regional college or by self-directed learning materials, that lab and clinical experiences be held in their local geographical region using local resource personnel, and that challenge exams be developed. Factors identified which influenced their choice of a part-time program included being able to work and family responsibilities.

The use of follow-up procedures in this study significantly increased the response rate. The number of responses received after the first mailing was 224 (32.2%) and was 347 (49.9%) after the third mailing.

The methodology used in this study was appropriate for achieving the purpose and objectives of the study. In particular, the design of the questionnaire facilitated the identification and analysis of the characteristics of the respondents and their preferences for the type of program, format, and delivery system. As well, the scales used in part two

of the questionnaire provided valuable information for determining the content of the program and how the objectives could be organized and taught.

The names given to the factors must be viewed as tentative. The original factors and factor loadings of the objectives were reviewed by two of the program developers and a head nurse from an emergency department of a large urban hospital and changes were made based on consensus of the three resource people. The names of the factors were suggested by three individuals with clinical and teaching expertise in each content area of Emergency Nursing, Obstetrical Nursing, and Psychiatric Nursing.

The extent to which a formal needs assessment is effective as a marketing strategy will be dependent upon the number of nurses who actually register in the program. However, it did serve as an initial contact with the potential pool of candidates and the study did involve them in identifying their own learning needs from a predetermined list and their preferences for the type of program, the format, and the delivery system of the proposed program to more accurately meet their learning needs.

Implications

Because it is essential for professional nurses to keep abreast of the rapid changes in technology and nursing practice, the findings of this study have implications for patients who, after all, are the consumers of the health care services provided by small hospitals, for nurses employed in small hospitals, for their employers, and for program planners.

Implications for Patients

Positive benefits can be expected by patients from nurses engaging in post-diploma educational programs which increase their level of knowledge

and skill. Potential benefits for the consumer include greater congruency between health care services and their health care needs, an increase in the quality of emergency, obstetrical, and psychiatric care they receive and therefore, increased satisfaction with utilization of services. With the providers of care increasing their level of knowledge and skills there may be a decreased need for some patients to leave their local community in order to receive needed health care services. This in turn would have positive benefits to the patient's family and relatives and also provide additional support to the patient during hospitalization.

Implications for Nurses

The results of this study have major implications for nurses employed in small hospitals in British Columbia. First, the results show that the nurses would be interested in participating in post-diploma education programs if the programs meet certain criteria in relation to content, format, and delivery system. Second, the results show that the nurses demonstrate differences in their level of theory and clinical competence in relation to the level of importance they assigned to selected objectives.

Thus, they must assume some individual responsibility to increase their level of knowledge and clinical skill. Sharing the results with the nurses might help them recognize areas of growth and learning from which they might benefit. The identification of the importance of selected skills to their practice setting should enable individual nurses to identify their own strengths and weaknesses, and to develop an individual plan of action, either through self-study, a formal educational program, or both to meet their learning needs. Further, the grouping of the objectives by factors may facilitate setting of priorities by the nurses to increase their level of knowledge and skills in specific content areas by participating in

selected courses based on their individual learning needs.

A third implication of the findings of the study for nurses is that with mastery of the knowledge and skills identified in this study, the nurses may be able to serve in expanded clinical roles, i.e., positions which require advanced or specialized nursing skills. In addition, nurses can use this knowledge to improve the quality of patient care and optimal wellness--both physical and psychosocial. Positive benefits in personal and professional areas of life should occur, including a possible increase in job satisfaction.

Implications for Employers

The results of this study also have major implications for the directors of nursing and administrators of small hospitals. For the employers who want nurses to engage in advanced studies to improve the quality of patient care in their hospitals they will have to facilitate employee participation in very concrete ways.

While the nurses who perceive a need for education beyond the diploma level are interested in participating in such a program, their participation is subject to certain conditions (See Tables 11 to 13). The major areas that employers may need to address are related to providing human and financial resources.

Sharing the results with the directors of nursing and administrators might assist them to meet the individual professional learning needs of their staff. Potential benefits include an increase in staff satisfaction, productivity, and increases in length of employment in that setting. Employers may also be able to use the objectives as a guide in recruiting staff, for developing or revising role/job expectations, and for providing inservice education programs.

Employers, in negotiations with labour organizations, may wish to formally recognize advanced preparation of their nurses by considering them for an expanded clinical role, a different job classification, and/or salary differentials. There are also implications for employers to facilitate the nurses' participation in continuing education programs by increasing flexibility in staffing patterns, facilitating time off, and providing leave-of-absences/educational leaves.

Implications for Program Planners

Most registered nurses working in small hospitals in British Columbia are hospital diploma graduates with 10 years or less of clinical experience in predominantly medical-surgical areas. Knowing this information provides essential information for the decision-making process including program levels, prerequisites, and granting credits.

The regionalization of health care services throughout British Columbia means that nurses in small hospitals must provide immediate assessment and decision-making regarding the necessary management and transfer of patients to a larger centre. Because it is well known that care provided during the initial few minutes is directly related to outcome, immediate, accurate assessment and decisive action must be carried out by the nurse. The result of regionalization together with the characteristics of the nurses may explain the ratings of the learning objectives in the four categories and provides direction for program planning. This also becomes apparent when the level of importance for each objective is considered in relation to their present level of knowledge and their present level of clinical competence in relation to emergency and obstetrical nursing. The ratings of the objectives should provide direction to program developers in planning learning activities and in determining whether the learning need

for specific objectives should have a theory component, a clinical component, or both.

It is of particular interest to note that the nurses included in the study indicated little or no experience in psychiatric nursing or community care. This leads one to speculate that these nurses are limited in their ability to provide care to psychiatric patients and to recognize the need for follow-up or referral services. It should also be noted that many small British Columbia communities may not have local agencies to which to refer. Another point of interest is the fact that the nurses rated the mental health category objectives the lowest of the four categories (See Table 19), in relation to level of importance, their present level of theory, and their present level of practice. Yet, the statistics indicate that up to 25% of visits to hospitals are related to psychiatric problems, of which up to 15% may be individuals with a moderate level of suicide ideation and/or have made a recent suicidal attempt or gesture. It has also been estimated that up to one out of every two individuals who seek medical attention have an illness related to emotional stress. Closely related is the need for the nurses to use facilitative communication techniques such as active listening, warmth, respect, empathy, immediacy, genuineness, concreteness, self-disclosure, confrontation, and problem-solving, within the context of a therapeutic relationship and to provide support and anticipatory guidance for families who are also under stress. However, the above techniques have been systematically incorporated into nursing diploma programs only within the last five to ten years.

The study findings, in relation to respondents' characteristics (See Table 14) and characteristics of the potential learner (See Table 15),

support the need for program planners to consider a variety of teaching, supervision, and evaluation strategies in developing the program. The majority of nurses interested in taking the program need some assistance in a learning situation and need some assistance in studying independently.

The study findings also support the need to consider varied approaches in developing the program in relation to content and delivery system. Many of the priorities identified are closely related, yet specific aspects of a broader area of care within each content category, and in some instances across content categories. This suggests the need for a series of theoretical and application components in each area which could be based on the objectives within each factor. For example, initially content on psychiatric nursing could include core concepts such as theories of psychiatry, psycho-social aspects of growth and development, stress and adaptation, self-concept, and human sexuality. The next focus could include common behavior patterns--assessing for stressors and dysfunctional behaviors, and nursing intervention strategies, including facilitative communication skills. The third focus could be on more specialized concepts such as family, groups, the handicapped, and adolescents.

The strong preference for a part-time program, the factors which influenced choice (See Table 11), and preferences for program format (See Table 12 & Table 13) for theory, lab, and clinical experiences reaffirms the need to offer post-diploma programs which do not take the nurses away from their jobs and families for an extended period of time. For example, nurses had a strong preference for theory to be taught at a regional college or by independent study modules and that the clinical component utilize local resources. Even more flexibility could result with the development of independent study modules, complemented with

teleconferencing and teletutoring, and if appropriate, supplemented by on-site practice and evaluation. In addition, they would like to receive recognition for previous learning and skill mastery by having challenge exams and assessment of nursing skills prior to beginning the program.

In summary, the results of the study indicate the need for a post-diploma program in small hospital nursing. It seems critical that available technology be used to facilitate continuing education programs for nurses working in small hospitals. The problem of staying current is a challenge that must be met by the nurses, the employers, and program planners in order to improve the quality of nursing care provided in the 53 small hospitals in British Columbia.

Recommendations

This study attempted to identify those significant factors which might serve as predictors of continuing education needs and preferences for use by nursing educators in the development of post-diploma nursing education programs. However, because this study was contracted for by BCIT, the major recommendations are directed to them as the educational facility which intends to develop and implement the program.

Based on the results of the study, the following major recommendations are made.

BCIT should continue to develop and implement the post-diploma program in small hospital nursing by allocating appropriate human and material resources.

This program should be incorporated into the proposed Advanced Diploma in Health Science Program when it receives approval and is then developed and implemented.

BCIT should explore external sources of funding for the development of the post-diploma program in small hospital nursing.

BCIT should formally recognize graduates of the program by issuing a post-diploma certificate indicating specialization in small hospital nursing.

Outcomes of the Study

This study was initiated in 1981, the data was collected and analyzed in 1982, and the results were used as a base to proceed with the development of the post-diploma program in small hospital nursing. In the time between the conduct of this study and this report of the study, a number of outcomes have occurred.

The proposed post-diploma program in small hospital nursing has been incorporated into the Advanced Diploma Program in Health Sciences presently being offered by BCIT and based on this research and research conducted by Miller (1982), and Gillespie (1983). BCIT did investigate the feasibility of external funding for the development of the small hospital nursing program and received some development funds from the Registered Nurses' Association of British Columbia.

The Advanced Diploma in Health Science Program has six components of which a Health Science Speciality is one component. Within the Health Science Speciality are Nursing Specialities which includes Non-Departmentalized Hospitals. This speciality prepares nurses for employment in hospitals where patient load includes obstetric, emergency, and psychiatric services, and/or in non-departmentalized hospitals. To date, seven courses are offered and six courses are under development. This investigator is currently a tutor for two of the courses.

BCIT intends to issue a certificate to students who successfully complete the required 45 credits.

Research Questions

Based on the methodology used in this study and the analysis and results of the data, the following research questions are posed for further study:

1. How are the results of this study similar or different from Kermacks' study (1981)? Do the rating of the objectives identified in this study validate the clinical skills identified by Kermacks for nurses employed in small hospitals? What is the relationship between the loading of objectives on specific factors in this study and in Kermacks' study?

2. What difference, if any, does acute bed capacity, geographic location, and interest/non-interest have on the learning objectives in relation to level of theory and level of practice?

3. What difference, if any, does position (director of nursing and general duty nurse) have on the importance of the learning objectives either individually or by factor?

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APPENDIX A

Letter of Agreement

BCIT

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA, V5G 3H2 AREA CODE (604) 434-5734

LETTER OF AGREEMENT

BETWEEN: British Columbia Institute of Technology, Department of General Nursing and Department of Psychiatric Nursing

AND: John Crawford, R.P.N., B.A., M.A. (Ed.) candidate, Simon Fraser University

SUBJECT:

1. To develop a Needs Assessment Tool for the Post Diploma Program in Small Hospital Nursing;
2. To conduct a descriptive study of registered nurses, using the above tool, who are presently employed in small hospitals in British Columbia;
3. To write a report based on the analysis of the data obtained from the study; and,
4. To participate in the development of the above post diploma program and specifically, the psychiatric nursing component.

The General and Psychiatric Nursing Departments of British Columbia Institute of Technology hereby grants John Crawford permission to use data obtained by the departments to contact nurses in order to carry out the research described above and to develop components of the post diploma program described above.

It is understood all information obtained from participating nurses will be held in confidence, and remain the property of B.C.I.T. Further, that questionnaires will be destroyed upon completion of the final report. And, results of the analysis will be made available to authorized persons.

The final report of the study will contain statistical analysis of responses only.

Date: October 12/81

Signed: _____
Brian Gillespie
Dean, Health Division

Signed: _____
John Crawford

Signed: _____
Carole Orchard
Department Head
General Nursing

Signed: Margaret Neylan
Margaret Neylan
Department Head
Psychiatric Nursing

APPENDIX B

List of Hospitals

SMALL HOSPITALS IN BRITISH COLUMBIA

BY ACUTE BED CAPACITY

1 - 10 BEDS (9)[A]	No. of Beds
Dr. Helmcken Memorial, Clearwater	(10)
Port Alice Hospital, Port Alice	(7)
Port McNeill & District, Port McNeill	(10)
St. Bartholomew's, Lytton	(10)
Victorian Hospital, Kaslo	(7)*
Port Hardy Hospital, Port Hardy	(10)
Tahsis Hospital, Tahsis	(10)
Stewart General, Stewart	(10)
Bella Coola Hospital, Bella Coola	(10)*

11 - 20 BEDS (8)	
Arrow Lakes, Naskusp	(14)
McBride & District, McBride	(16)
Armstrong & Spallumcheen, Armstrong	(16)
Enderby & District, Enderby	(20)
R. W. Large, Waglisla	(19)
Queen Charlotte Is., Queen Charlotte City	(17)
Mackenzie & District, Mackenzie	(18)*
Princeton General, Princeton	(20)

21 - 30 BEDS (13)

Ashcroft & District, Ashcroft	(21)*
Chemainus General, Chemainus	(27)
Chetwynd General, Chetwynd	(30)
Stuart Lake, Fort St. James	(25)
Lady Minto, Ganges	(25)
Wrinch Memorial, Hazelton	(27)*
Slocan Community, New Denver	(21)
Queen Victoria, Revelstoke	(30)
Mater Misericordiae, Rossland	(26)
Sparwood General, Sparwood	(27)
Squamish General, Squamish	(21)
Summerland General, Summerland	(28)
Tofino General, Tofino	(21)

31 - 40 BEDS (8)

St. Georges, Alert Bay	(33)
Golden & District, Golden	(31)
Boundary Hospital, Grand Forks	(35)
Fraser Canyon, Hope	(38)*
Windermere District, Invermere	(31)
Ladysmith & District, Ladysmith	(35)
100 Mile House, 100 Mile	(38)

41 - 50 BEDS (8)

Burns Lake & District, Burns Lake	(50)*
Creston Valley, Creston	(44)
Fort Nelson, Fort Nelson	(41)
Kimberley & District, Kimberley	(50)
Nicola Valley, Merritt	(45)
South Okanagan, Oliver	(45)
St. Mary's, Sechelt	(48)
St. John, Vanderhoof	(45)

51 - 75 BEDS (7)

Castlegar & District, Castlegar	(55)
Delta Centennial, Delta	(75)*
Fernie District, Fernie	(64)
Kitimat General, Kitimat	(73)
Saanich Peninsula, Saanichton	(75)
Shuswap Lake, Salmon Arm	(68)
Bulkley Valley, Smithers	(72)

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[a]Denotes the total number of hospitals in each category.

*Denotes those hospitals which chose not to participate in the study.

APPENDIX C

Letters to Directors of Nursing

BCIT
BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY
3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA V5G 3H2

The purpose of this letter is to inform you of what is occurring in relation to the development of the Post-Diploma Program in Small Hospital Nursing to be offered by B.C.I.T. in September 1982.

At the present time funds are being allocated which will allow faculty to be released as of September 1981 to commence program development work.

On September 18th an all day meeting will be identification of the competencies needed by nurses to work in non-departmentalized hospitals.

The proposed timeframe for the program is:

May 1981 - January 1982

1. identification of terminal mid-point and entrance behaviors for program.

2. development of the framework for program.

3. develop 21 point proposal and submit for funding.

January 1982 - April 1982

1. develop learning materials.

2. identify criteria for student and faculty selection.

.../2

3. develop administrative procedures for

   (a) processing applicants
   (b) implementation of program
   (c) record keeping functions

4. secure clinical placements for program.

April 1982 - July 1982

1. submit program for RNABC/RPNABC approval.

2. advertise for faculty and students.

3. hire faculty commencing in August 1982.

4. select students.

5. develop evaluation measures

September 1982 - implement program

May 1983 - evaluate program

It would be appreciated if you could identify any skills nurses working in your hospital are required to have. The skills list would be collected into a composite to ensure that all needs are addressed during the program development phase.

Utilizing the enclosed form would you please brainstorm and list all the skills required by nurses working in your hospital within each of the three categories. This list should be returned in the self-addressed envelope by September 4th.

Thank you for your continued interest in this educational endevour.

Sincerely,

Carole Orchard
Department Head
General Nursing Program

Margaret Neylan
Department Head
Psychiatric Nursing Program

CO:MN:sfn
encl.

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

GENERAL/PSYCHIATRIC NURSING DEPARTMENTS

POST-DIPLOMA PROGRAM IN SMALL HOSPITAL NURSING

ASSESSMENT IN SKILL NEEDS

Please list all the skills needed by nurses in your hospital within each of the three areas.

A. Psychiatric Nursing

B. Obstetrical Nursing

C. Emergency Nursing

Name:

Hospital:

Address:

BCIT

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY
3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA, V5G 3H2, AREA CODE (604) 434-5734

October 23, 1981

Dear

RE: POST DIPLOMA PROGRAM IN SMALL HOSPITAL NURSING

The General and Psychiatric Nursing Departments, BCIT are currently undertaking the development of the above-named program.

A very important step in the development of this program is to have previously generated competencies validated.

In order to facilitate this, I ask your co-operation in helping us identify nurses who work in small hospitals.

I would greatly appreciate it if you could forward to me the names and, if possible the addresses of all your registered nursing staff (directors, assistant directors, head nurses and staff nurses). Please include full-time, part-time and casual staff.

The information will be used only by the program developers to develop a pool of names from which individuals will be randomly selected to complete a questionnaire.

The survey questionaire will help us determine what skills, knowledge and attitudes are required and how important they are to the nurse's present position in small hospitals in British Columbia.

Anonymity of those individual nurses who are selected will be assured in that the data will be used for statistical purposes only.

If you have any questions or desire any further information please do not hesitate to contact me at 434-5734, local 310.

...2/

We are counting on your co-operation so that a comprehensive program can be developed to meet the needs of nurses working in small hospitals in British Columbia.

A reply at your earliest convenience would be greatly appreciated. We hope to mail out the questionnaire to individual nurses during the week of November 9, 1981.

Thank you for your anticipated co-operation.

Sincerely

John Crawford
Program Developer
Psychiatric Nursing Department

JC/ad

cc B. Gillespie, Dean, Health Division
M. Neylan, Department Head, Psychiatric Nursing Department
C. Orchard, Department Head, General Nursing Department
J. Campbell, President, Nursing Administrators Association

APPENDIX D

Pilot Study Correspondence

Covering Letter

Directions to Participants

Follow-up Letter

BCIT

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA, V5G 3H2, AREA CODE (604) 434-5734

January 15, 1982

Dear Respondent:

The General and Psychiatric Nursing Departments, BCIT, are currently undertaking the development of a Post Diploma Program in Small Hospital Nursing. The need for such a program has been identified by Directors of Nursing of small hospitals throughout the province. The program will focus on the role of the nurse in the small hospital setting, mental health, obstetrics and emergency nursing components. A very important step in the development of this program is to have registered nurses employed in small hospitals (non-departmentalized and having seventy-five beds or less) identify what post diploma knowledge and skills are required in order to provide safe, competent care to their patients.

The method chosen to identify the learning needs of the nurses is to conduct a province wide random sample survey using a questionnaire. To ensure that the final survey instrument is reliable and valid, I ask your cooperation by participating in this pilot study of the proposed survey instrument. The information you provide will be used only by the program developers to revise the survey instrument and to conduct a preliminary analysis of the data. The voluntary nature of your participation in this study implies your consent to allow the researcher to use the information you provide. Upon completion of the study, all questionnaires will be destroyed. The final report of the study will be available upon request from BCIT.

All information obtained will be confidential and in no way will individuals be identified. To ensure individual anonymity, please do not write your name on the questionnaire. Please enclose your completed questionnaire in the plain brown envelope and seal it. Then, place the envelope inside the stamped, self-addressed envelope. A code appears on the self-addressed envelope to facilitate follow-up of non-respondents. I would appreciate receiving your response within two weeks.

I appreciate your cooperation and look forward to receiving your completed questionnaire, comments and suggestions.

Thank you.

Sincerely

John Crawford
Psychiatric Nursing Department

Enclosures

PILOT STUDY DIRECTIONS

I would appreciate, in addition to your completing the enclosed questionnaire, receiving your comments related to the following. Please feel free to write your comments on the questionnaire as you proceed through it. All of your comments and suggestions will be considered.

When answering the questionnaire, please consider the following:

1. Is each item appropriate? If not, please suggest alternatives.

2. Is each item clearly stated? If not, please indicate how it might be made more concise, more understandable and/or less ambiguous.

3. Is the level of each item appropriate? That is, is it a post basic skill, knowledge or attitude? If not, would you please reword it to indicate the appropriate level.

4. Are there other knowledge, skills or attitudes required by nurses that are not stated in the questionnaire that you think should be included? The items should be related to mental health, maternity and emergency as well as to the role of the nurse in the small hospital setting (legal, ethical, supervisory).

5. How long did it take you to complete the questionnaire?

PLEASE RETURN THIS SHEET WITH YOUR COMPLETED QUESTIONNAIRE.

THANK YOU.

BCIT

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY
3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA, V5G 3H2, AREA CODE (604) 434-5734

82:02:12

Several weeks ago we sent a needs assessment survey instrument to you as part of the pilot study for the proposed B.C.I.T. Post Diploma Program in Small Hospital Nursing.

The information that you can provide us, as a registered nurse working in a small hospital, is extremely important. It will ensure that the final survey instrument to be sent to your colleagues is reliable and valid. It will also assist us in the development of a post diploma program to meet your needs. To date, we have not received your completed questionnaire.

If you have already completed and mailed the instrument please accept our thanks and disregard this reminder. If you have overlooked completing the questionnaire, could you please take the time to do so now, and return it by February 22, 1982. A stamped, self-addressed envelope was previously enclosed.

If you did not receive the package or have misplaced it, we would be pleased to send you another package. Please telephone 434-5734, local 310. (Collect)

Thank you.

John Crawford
Program Developer

JC/pc

APPENDIX E

Main Study Correspondence

Covering Letter

First Follow-up Letter

Second Follow-up Letter

BCIT

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY
3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA V5G 3H2 AREA CODE 604 434-5734

March 29th, 1982

Dear Colleague:

The General and Psychiatric Nursing Departments, BCIT, are currently undertaking the development of a Post Diploma Program in Small Hospital Nursing. The need for such a program has been identified by Directors of Nursing of small hospitals throughout the province. The program will focus on the role of the nurse in the small hospital setting, with emphasis on mental health, obstetrics and emergency nursing components. A very important step in the development of this program is to have registered nurses employed in small hospitals (non-departmentalized and having seventy-five beds or less) identify what post diploma knowledge and skills are required in order to provide safe, competent care to their patients.

To provide the required information, we have chosen to conduct a province-wide survey using the enclosed questionnaire. Your name was selected as part of a random sample of nurses employed in small hospitals, and your cooperation would be greatly appreciated. The information you provide will be used only for statistical analysis of the questionnaire items. The voluntary nature of your participation implies your consent to allow the researcher to use the information you provide. Upon completion of the study, all questionnaires will be destroyed. The final report of the study will be available from BCIT or the Bennett Library at SFU.

This study is being conducted by John Crawford, a member of the Psychiatric Nursing faculty, as part of the thesis requirement for a master's degree in arts (education) at SFU.

All information obtained will be confidential and in no way will individuals be identified. To ensure individual anonymity, please do not write your name on the questionnaire. Please enclose your completed questionnaire in the plain envelope and seal it. Then, place the envelope inside the stamped, self-addressed envelope. A code appears on the self-addressed envelope to facilitate follow-up of non-respondents.

Your cooperation in completing and returning the questionnaire by April 23, 1982 is very important to the development of the program.

Thank you.

Sincerely,

Brian Gillespie
Dean, Health Division

John Crawford
Psychiatric Nursing Department

BG:JC:ad
enclosure

BCIT

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY
3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA V5G 3H2 AREA CODE 604 434-5734

May 10, 1982

Dear Colleague

Several weeks ago we sent a needs assessment survey instrument to you as part of the proposed BCIT Post-Diploma Program in Small Hospital Nursing.

The information that you can provide us is extremely important, as it will assist us greatly in developing a post-diploma program to meet the needs of all nurses working in small hospitals. To date, we have not received your completed questionnaire.

If you have already completed and mailed the instrument please accept our thanks and disregard this reminder. If you have overlooked completing the questionnaire, could you please take the time to do so now, and return it by May 26, 1982. A stamped, self-addressed envelope was previously enclosed.

If you did not receive the package or have misplaced it, we would be pleased to send you another package. Please telephone 434-5734, local 310. (Collect)

Thank you.

Sincerely

John Crawford
Program Developer
Psychiatric Nursing Department

JC/ad

BCIT

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY
3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA V5G 3H2 AREA CODE 604 434-5734

June 28, 1982

Dear Colleague:

I urgently request your assistance in identifying skills needed by registered nurses working in small hospitals. I am enclosing a duplicate questionnaire in case you did not receive the first one. If you have already completed and returned the first questionnaire, please accept my thanks. If not, I urge you to take the time to do so since your responses and opinions, positive or negative, are critical to us in this development process.

The survey takes approximately one hour to complete. It is very important that the courses to be developed accurately reflect what is really needed by nurses working in small hospitals in order to give the best care possible to their patients. Your input, comments and suggestions, are important to me in defining the types of courses to be developed for this program which will be offered to you and your colleagues.

All of your responses will remain strictly confidential and your participation does not represent any commitment to take such a program. Copies of the results of the survey will be made available to you upon request to the General Nursing Department, B.C.I.T.

If you still choose not to participate, I would appreciate it if you would return the questionnaire uncompleted in the enclosed paid envelope.

Sincerely yours,

John Crawford
General Nursing Department

JC:bt
encl.

APPENDIX F

Means and Standard Deviations for Skill Statements

SECTION A: MENTAL HEALTH NURSING

	LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		
	1 2 3 4 5 Very Low Low Moderate High Very High		1 2 3 4 5 Very Low Low Moderate High Very High		1 2 3 4 5 Very Low Low Moderate High Very High		
1. Initiate, maintain and terminate therapeutic relationships.	3.66	(0.95)	3.05	(0.83)	2.97	(0.92)	5-7 c. [2]
2. Complete a psychiatric history.	3.11	(1.07)	2.60	(0.80)	2.22	(0.83)	8-10
3. Identify the dynamics and phases of a helping relationship.	3.31	(0.95)	2.82	(0.90)	2.69	(0.94)	11-13
4. Demonstrate observational and listening skills.	4.20	(0.72)	3.53	(0.79)	3.52	(0.77)	14-16
5. Complete a mental status examination.	3.17	(0.99)	2.61	(0.87)	2.44	(0.90)	17-19
6. Intervene with patients who are anxious.	3.95	(0.75)	3.18	(0.77)	3.26	(0.81)	20-22
7. Demonstrate warmth, respect and empathy.	4.48	(0.66)	3.85	(0.86)	4.02	(0.75)	23-25
8. Intervene with patients who are depressed.	4.02	(0.78)	3.14	(0.82)	3.11	(0.82)	26-28
9. Assess the lethality of a suicide plan.	3.89	(1.06)	2.60	(0.93)	2.43	(0.96)	29-31
10. Intervene with patients who are suicidal.	3.99	(1.02)	2.67	(0.92)	2.51	(0.98)	32-34
11. Demonstrate self-awareness.	3.72	(0.90)	3.14	(0.91)	3.23	(0.87)	35-37
12. Intervene with patients who are withdrawn from reality.	3.48	(1.00)	2.69	(0.86)	2.52	(0.93)	38-40
13. Intervene with patients who are suspicious.	3.35	(0.97)	2.68	(0.83)	2.49	(0.87)	41-43
14. Intervene with patients who are delusional.	3.34	(0.98)	2.65	(0.87)	2.43	(0.89)	44-46
15. Demonstrate interpersonal skills in therapeutic relationships.	3.56	(0.89)	2.92	(0.88)	2.87	(0.97)	47-49
16. Intervene with patients who are over-active.	3.26	(0.92)	2.65	(0.87)	2.50	(0.90)	50-52
17. Complete a psychosocial assessment.	3.07	(1.04)	2.42	(0.94)	2.22	(0.92)	53-55
18. Apply concepts of selected psychiatric theories.	2.86	(1.05)	2.30	(0.95)	2.07	(0.91)	56-58
	IMPORTANCE		THEORY		PRACTICE		

	LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		
	1 2 3 4 5 Very Low Low Moderate High Very High		1 2 3 4 5 Very Low Low Moderate High Very High		1 2 3 4 5 Very Low Low Moderate High Very High		
19. Intervene with patients who are physically or verbally aggressive.	3.79	(0.86)	2.92	(0.84)	2.98	(0.90)	59-61
20. Apply principles and techniques of therapeutic communication.	3.60	(0.85)	2.85	(0.95)	2.78	(0.97)	62-64
21. Intervene with patients who are dependent.	3.34	(0.92)	2.82	(0.85)	2.75	(0.93)	65-67
22. Manage a therapeutic environment.	3.55	(0.98)	2.89	(0.91)	2.79	(0.98)	68-70
23. Intervene with patients who are hysterical.	3.67	(0.96)	2.81	(0.83)	2.75	(0.94)	71-73
24. Intervene with patients who are ritualistic.	2.81	(1.03)	2.43	(0.86)	2.17	(0.85)	74-76
25. Demonstrate appropriate use of confrontation.	3.17	(0.97)	2.53	(0.91)	2.37	(0.91)	77-79
26. Demonstrate genuineness, immediacy and self-disclosure.	3.34	(0.95)	2.86	(0.89)	2.84	(0.97)	5-7 c. 3
27. Intervene with patients who are phobic.	2.82	(1.02)	2.38	(0.86)	2.12	(0.88)	8-10
28. Intervene with patients who are addicted to alcohol.	3.85	(0.91)	3.19	(0.96)	3.31	(1.03)	11-13
29. Intervene with patients who are dependent on drugs.	3.67	(0.92)	2.95	(0.91)	2.86	(0.96)	14-16
30. Accurately identify the verbal and non-verbal content of interactions.	3.57	(0.94)	2.91	(0.93)	2.84	(1.00)	17-19
31. Analyze verbal and non-verbal communication.	3.58	(0.92)	2.97	(0.96)	2.98	(0.98)	20-22
32. Intervene with patients who have psychophysiological disorders (Asthma, Anorexia Nervosa, etc.).	3.66	(0.84)	2.99	(0.85)	2.94	(0.89)	23-25
33. Intervene with patients who are confused.	3.84	(0.80)	3.38	(0.84)	3.49	(0.88)	26-28
34. Demonstrate effective verbal and non-verbal communication.	3.83	(0.88)	3.25	(0.88)	3.31	(0.86)	29-31
	LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		

	LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		
	1 Very Low 2 Low 3 Moderate 4 High 5 Very High		1 Very Low 2 Low 3 Moderate 4 High 5 Very High		1 Very Low 2 Low 3 Moderate 4 High 5 Very High		
35. Apply alternate approaches when interactions are ineffective.	3.53	(0.90)	2.74	(0.87)	2.69	(0.87)	32-34
36. Identify counselling and assessment strategies when working with families.	3.31	(1.08)	2.48	(0.88)	2.31	(0.92)	35-37
37. Analyze family interactions.	3.29	(1.02)	2.61	(0.90)	2.47	(0.93)	38-40
38. Assess abuse and neglect in children.	4.09	(1.00)	3.14	(0.99)	2.78	(1.11)	41-43
39. Intervene appropriately in the grief process.	4.17	(0.78)	3.41	(0.92)	3.43	(0.90)	44-46
40. Complete a neurological assessment.	3.82	(0.99)	3.05	(1.02)	2.88	(1.04)	47-49
41. Assess children with behavior problems.	3.33	(1.13)	2.62	(0.97)	2.36	(1.01)	50-52
42. Assess patients with developmental delays.	3.10	(1.07)	2.49	(0.97)	2.26	(1.00)	53-55
43. Assess functional and dysfunctional families.	2.89	(1.09)	2.24	(0.93)	2.07	(0.93)	56-58
44. Identify issues and problems associated with nursing care of the adolescent patient.	3.26	(1.04)	2.59	(0.83)	2.46	(0.90)	59-61
45. Assist with psychiatric somatic therapies.	2.52	(1.08)	2.05	(0.89)	1.82	(0.87)	62-64
46. Assess the effects and side effects of the major psychotropic drugs.	3.48	(1.08)	2.62	(1.00)	2.47	(1.05)	65-67
47. Participate in electroconvulsive therapy (ECT).	1.71	(1.06)	2.07	(1.12)	1.55	(0.92)	68-70
48. Use selected therapies eg. Reality Therapy, Biofeedback, Transactional Analysis, etc.	2.19	(1.23)	1.88	(1.00)	1.56	(0.85)	71-73
49. Counsel psychiatric patients over the telephone.	2.71	(1.27)	2.09	(1.01)	1.91	(1.03)	74-76
50. Set limits on behavior in a therapeutic manner.	3.08	(1.13)	2.46	(0.99)	2.37	(1.02)	77-79
	LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		

	LEVEL OF IMPORTANCE	LEVEL OF THEORY	LEVEL OF PRACTICE	
	1 Very Low 2 Low 3 Moderate 4 High 5 Very High	1 Very Low 2 Low 3 Moderate 4 High 5 Very High	1 Very Low 2 Low 3 Moderate 4 High 5 Very High	
51. Apply crisis intervention techniques.	3.45 (1.17)	2.47 (0.95)	2.28 (0.99)	*5-7 c.* [4]
52. Conduct small therapeutic groups.	2.20 (1.17)	1.94 (0.94)	1.58 (0.80)	*8-10*
53. Conduct small activity groups.	2.31 (1.16)	2.12 (0.96)	1.77 (0.89)	*11-13*
54. Implement nursing orders for special and constant attention.	3.42 (1.23)	2.93 (1.10)	2.82 (1.22)	*14-16*
55. Demonstrate awareness of local ethnic & cultural customs and beliefs when providing care.	3.85 (0.94)	3.20 (0.97)	3.33 (1.02)	*17-19*

SECTION B: EMERGENCY NURSING

56. Provide immediate care for the patient with head injuries.	4.66 (0.67)	3.70 (0.82)	3.60 (0.93)	*20-22*
57. Provide immediate care for the patient with chest injuries.	4.62 (0.77)	3.47 (0.84)	3.20 (1.01)	*23-25*
58. Provide immediate care for the patient with multiple fractures.	4.49 (0.75)	3.58 (0.90)	3.38 (1.03)	*26-28*
59. Provide immediate care for the patient with burns.	4.55 (0.79)	3.61 (0.86)	3.32 (1.06)	*29-31*
60. Provide immediate care for the patient with spinal injuries.	4.59 (0.79)	3.50 (0.90)	3.16 (1.12)	*32-34*
61. Provide immediate care for the patient with asthma.	4.46 (0.72)	3.71 (0.81)	3.70 (0.90)	*35-37*
62. Provide immediate care for the patient with epistaxis.	4.12 (0.85)	3.82 (0.84)	3.76 (0.94)	*38-40*
63. Provide immediate care for the patient with an eye injury.	4.36 (0.79)	3.51 (0.92)	3.38 (1.06)	*41-43*
	LEVEL OF IMPORTANCE	LEVEL OF THEORY	LEVEL OF PRACTICE	

		LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		
		1 2 3 4 5 Very Low Low Moderate High Very High		1 2 3 4 5 Very Low Low Moderate High Very High		1 2 3 4 5 Very Low Low Moderate High Very High		
64.	Interpret lead 2 cardiac monitor tracing.	4.13	(0.88)	2.96	(1.18)	2.89	(1.20)	44-46
65.	Administer xylocaine into intravenous drips.	4.18	(0.97)	3.22	(1.23)	3.15	(1.33)	47-49
66.	Carry out initial physical assessments to identify problems.	4.42	(0.77)	3.69	(0.84)	3.67	(0.94)	50-52
67.	Assist physician in performing peritoneal taps.	3.19	(1.14)	3.03	(1.07)	2.68	(1.24)	53-55
68.	Assist physician in chest tube insertion.	3.71	(1.10)	3.20	(1.02)	2.81	(1.25)	56-58
69.	Apply Thomas splints.	3.31	(1.12)	3.00	(1.02)	2.64	(1.11)	59-61
70.	Apply Colles splints.	3.33	(1.05)	3.02	(1.11)	2.77	(1.23)	62-64
71.	Initiate intravenous infusions.	4.46	(0.75)	3.99	(0.99)	3.87	(1.16)	65-67
72.	Manage patients with xylocaine infusion.	4.18	(1.01)	3.33	(1.25)	3.21	(1.34)	68-70
73.	Assist with local anaesthetics, including blocks.	3.69	(1.11)	3.29	(1.20)	3.25	(1.32)	71-73
74.	Assist with general anaesthetics.	2.96	(1.42)	2.61	(1.35)	2.39	(0.90)	74-76
75.	Administer commonly used emergency drugs.	4.38	(0.90)	3.72	(0.96)	3.53	(1.09)	77-79
76.	Initiate and perform C.P.R.	4.73	(0.65)	4.13	(0.83)	3.68	(1.12)	5-7 c. 5
77.	Conduct 12 lead electrocardiogram.	3.22	(1.33)	2.65	(1.33)	2.38	(1.39)	8-10
78.	Manage patients with hypothermia.	3.86	(1.13)	3.12	(1.01)	2.68	(1.17)	11-13
79.	Stabilize patients prior to transporting to other agencies.	4.47	(0.80)	3.71	(0.94)	3.65	(1.06)	14-16
80.	Manage patients who are unconscious.	4.49	(0.80)	3.91	(0.80)	3.78	(1.00)	17-19
81.	Provide immediate care for patients with serious medical problems (CVA, MI, GI, Coma NYD).	4.63	(0.69)	3.78	(0.86)	3.71	(1.01)	20-22
		IMPORTANCE		THEORY		PRACTICE		

		LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		
		1 Very Low 2 Low 3 Moderate 4 High 5 Very High		1 Very Low 2 Low 3 Moderate 4 High 5 Very High		1 Very Low 2 Low 3 Moderate 4 High 5 Very High		
82.	Provide immediate care for overdose patients.	4.44	(0.85)	3.56	(0.88)	3.44	(1.06)	23-25
83.	Provide immediate care for patients who have ingested common poisons.	4.45	(0.84)	3.41	(0.94)	3.23	(1.11)	26-28
84.	Use poison control protocol.	4.34	(0.88)	3.39	(1.04)	3.20	(1.23)	29-31
85.	Follow appropriate procedures when providing care to victims of rape.	3.92	(1.15)	2.89	(1.09)	2.45	(1.26)	32-34
86.	Use hard orthopedic devices eg. cervical collars.	3.56	(1.02)	3.24	(1.00)	3.05	(1.13)	35-37
87.	Use soft orthopedic devices eg. clavicular straps.	3.53	(1.04)	3.24	(0.98)	3.10	(1.14)	38-40
88.	Follow appropriate procedures when providing care to victims of assault.	3.76	(1.00)	2.93	(1.03)	2.71	(1.11)	41-43
89.	Follow appropriate procedures when providing care to patients with venereal disease.	3.40	(1.15)	2.92	(1.03)	2.48	(1.15)	44-46
90.	Provide care to victims of near drowning.	4.09	(1.08)	3.13	(0.92)	2.64	(1.17)	47-49
91.	Coordinate transfer and transport of patients.	4.24	(0.91)	3.74	(1.01)	3.80	(1.05)	50-52
92.	Conduct rapid initial assessment of patients.	4.55	(0.72)	3.62	(0.88)	3.61	(0.98)	53-55
93.	Make appropriate referral of patients to community agencies.	3.46	(1.05)	3.10	(0.98)	2.89	(1.07)	56-58
94.	Provide care to patients with hyperthermia.	3.83	(1.07)	3.33	(1.20)	3.03	(1.41)	59-61
		LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		

SECTION C: OBSTETRICAL NURSING

	LEVEL OF IMPORTANCE	LEVEL OF THEORY	LEVEL OF PRACTICE	
	1 Very Low 2 Low 3 Moderate 4 High 5 Very High	1 Very Low 2 Low 3 Moderate 4 High 5 Very High	1 Very Low 2 Low 3 Moderate 4 High 5 Very High	
95. Coordinate community resources for the childbearing family.	2.98 (1.10)	2.84 (1.02)	2.46 (1.11)	62-64
96. Instruct patient and spouse throughout labor.	4.32 (0.85)	3.65 (1.04)	3.58 (1.21)	65-67
97. Demonstrate awareness of trends in maternal care.	3.86 (0.90)	3.39 (1.02)	3.28 (1.15)	68-70
98. Recognize the complications of labor and delivery.	4.66 (0.71)	3.66 (0.99)	3.51 (1.18)	71-73
99. Assist physician with vaginal delivery.	4.41 (0.91)	3.85 (0.99)	3.78 (1.20)	74-76
100. Assist physician during cesarean section.	3.36 (1.45)	3.07 (1.27)	2.54 (1.47)	77-79
101. Conduct safe, efficient emergency delivery of newborn without supervision.	4.38 (0.96)	3.42 (1.16)	3.03 (1.42)	5-7 c. E
102. Palpate abdomen for fetal size and position.	4.08 (0.89)	3.32 (1.11)	3.15 (1.27)	8-10
103. Perform vaginal examination for dilatation and fetal position.	4.37 (0.88)	3.50 (1.24)	3.32 (1.41)	11-13
104. Assess high risk intrapartum patient.	4.33 (0.89)	3.26 (1.12)	2.97 (1.26)	14-16
105. Establish and maintain external fetal monitors.	3.53 (1.31)	2.88 (1.33)	2.69 (1.43)	17-19
106. Maintain internal fetal monitors.	2.52 (1.38)	1.85 (1.07)	1.55 (0.97)	20-22
107. Interpret fetal monitor strips.	2.69 (1.46)	1.81 (1.12)	1.58 (1.03)	23-25
108. Maintain environmental safety of O.R./Case Room.	4.30 (0.83)	3.71 (1.04)	3.67 (1.20)	26-28
109. Prepare O.R./Case Room and equipment for vaginal and cesarean section delivery.	4.32 (0.86)	3.75 (1.14)	3.72 (1.25)	29-31
	LEVEL OF IMPORTANCE	LEVEL OF THEORY	LEVEL OF PRACTICE	

		LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		
		1 Very Low 2 Low 3 Moderate 4 High 5 Very High		1 Very Low 2 Low 3 Moderate 4 High 5 Very High		1 Very Low 2 Low 3 Moderate 4 High 5 Very High		
110.	Instruct patient and spouse during a cesarean section delivery.	3.33	(1.41)	2.99	(1.28)	2.67	(1.44)	32-34
111.	Establish and maintain I.V. fluids and medications during labor and delivery.	4.24	(0.91)	3.71	(1.03)	3.51	(1.25)	35-37
112.	Recognize the need for transportation of high risk patients in labor.	4.39	(0.87)	3.48	(1.09)	3.24	(1.30)	38-40
113.	Prepare for transport of patient in labor.	4.20	(0.96)	3.48	(1.08)	3.18	(1.30)	41-43
114.	Provide care for a patient during transport.	4.15	(1.01)	3.38	(1.12)	2.99	(1.38)	44-46
115.	Provide care for a patient with a prolapsed cord.	4.43	(0.96)	3.38	(1.20)	2.65	(1.44)	47-49
116.	Assess and record bonding behaviors of the family.	3.51	(1.05)	3.14	(1.13)	2.90	(1.22)	50-52
117.	Instruct family members in the parenting role.	3.44	(1.07)	3.09	(1.09)	2.81	(1.22)	53-55
118.	Identify bleeding disorders antepartum.	4.38	(0.83)	3.60	(0.99)	3.29	(1.23)	56-58
119.	Identify bleeding disorders postpartum.	4.51	(0.76)	3.81	(0.94)	3.59	(1.17)	59-61
120.	Identify physical disorders which contribute to high risk pregnancy.	4.04	(1.00)	3.32	(1.00)	3.03	(1.20)	62-64
121.	Identify psychosocial disorders which contribute to high risk pregnancy.	3.68	(1.06)	2.98	(1.05)	2.66	(1.17)	65-67
122.	Identify appropriate support system for the childbearing family.	3.37	(1.06)	2.83	(1.08)	2.60	(1.16)	68-70
123.	Differentiate between normal and abnormal labor.	4.49	(0.78)	3.55	(1.03)	3.38	(1.23)	71-73
		LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		

	LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		
	1 Very Low 2 Low 3 Moderate 4 High 5 Very High		1 Very Low 2 Low 3 Moderate 4 High 5 Very High		1 Very Low 2 Low 3 Moderate 4 High 5 Very High		
124. Demonstrate knowledge of drugs common to antepartum, intrapartum and postpartum care.	4.23	(0.81)	3.46	(1.00)	3.32	(1.16)	74-76
125. Provide counselling to patient and/or family regarding genetics.	2.56	(1.20)	2.11	(0.98)	1.68	(0.85)	77-79
126. Provide counselling to patient regarding family planning.	2.94	(1.15)	2.90	(1.11)	2.37	(1.19)	5-7 c. 7
127. Demonstrate skill in discussing sexuality issues with patients.	2.85	(1.09)	2.57	(1.08)	2.15	(1.10)	8-10
128. Identify physiological changes which occur in pregnancy, labor and delivery.	3.82	(0.90)	3.47	(0.96)	3.21	(1.15)	11-13
129. Conduct prenatal assessment.	3.26	(1.14)	3.00	(1.14)	2.60	(1.28)	14-16
130. Identify the variations in intrauterine growth patterns.	2.89	(1.12)	2.65	(1.13)	2.22	(1.15)	17-19
131. Demonstrate knowledge of diagnostic tests used to identify high risk newborn.	3.22	(1.15)	2.62	(1.05)	2.25	(1.09)	20-22
132. Assess the high risk newborn.	4.16	(1.00)	3.11	(1.09)	2.74	(1.25)	23-25
133. Conduct physical and psychosocial appraisal of the newborn.	3.73	(1.02)	3.06	(1.05)	2.81	(1.16)	26-28
134. Do gavage feedings on newborn.	3.63	(1.22)	3.21	(1.18)	2.88	(1.41)	29-31
135. Do gastric lavage on newborn.	3.33	(1.29)	2.95	(1.22)	2.47	(1.42)	32-34
136. Prepare the high risk newborn for transportation.	4.23	(0.98)	3.19	(1.17)	2.85	(1.35)	35-37
	LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		

		LEVEL OF IMPORTANCE	LEVEL OF THEORY	LEVEL OF PRACTICE	
		1 Very Low 2 Low 3 Moderate 4 High 5 Very High	1 Very Low 2 Low 3 Moderate 4 High 5 Very High	1 Very Low 2 Low 3 Moderate 4 High 5 Very High	
137.	Prepare nursery equipment for care of the high risk newborn.	3.99 (1.14)	3.11 (1.12)	2.75 (1.31)	38-40
138.	Provide immediate care for the high risk newborn.	4.31 (0.96)	3.16 (1.09)	2.79 (1.29)	41-43
139.	Provide care for infants undergoing phototherapy.	3.98 (1.10)	3.44 (1.17)	3.33 (1.33)	44-46
140.	Start I.V. on newborn.	2.90 (1.41)	2.30 (1.22)	1.47 (0.84)	47-49
141.	Maintain I.V. on newborn.	3.56 (1.42)	2.92 (1.28)	2.47 (1.40)	50-52

SECTION D:

THE FOLLOWING ITEMS ARE RELATED TO NURSING PROCESS, PROFESSIONAL AND SUPERVISORY SKILLS.

142.	Use the problem solving approach to nursing care eg. assess, plan, impliment, evaluate.	3.88 (0.86)	3.40 (0.90)	3.23 (0.97)	53-55
143.	Develop individualized care plans for each patient.	3.85 (0.92)	3.57 (0.94)	3.28 (1.03)	56-58
144.	Formulate a nursing diagnosis.	3.64 (0.94)	3.29 (0.91)	3.13 (1.04)	59-61
145.	Develop goals in consultation with patient.	3.69 (0.97)	3.24 (0.93)	2.98 (1.03)	62-64
146.	Develop nursing actions related to identified goals.	3.74 (0.90)	3.33 (0.90)	3.15 (0.99)	65-67
147.	Able to state rationale for nursing actions.	3.90 (0.82)	3.53 (0.90)	3.46 (0.94)	68-70
		LEVEL OF IMPORTANCE	LEVEL OF THEORY	LEVEL OF PRACTICE	

	LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		
	1 Very Low 2 Low 3 Moderate 4 High 5 Very High		1 Very Low 2 Low 3 Moderate 4 High 5 Very High		1 Very Low 2 Low 3 Moderate 4 High 5 Very High		
148. Able to write goals which are observable, measurable and realistic.	3.61	(0.85)	3.30	(0.87)	3.05	(0.97)	71-73
149. Use hospital format to record relevant data.	3.95	(0.84)	3.61	(0.92)	3.63	(0.91)	74-76
150. Use appropriate terminology (nursing, medical, psychiatric) and abbreviations.	4.03	(0.80)	3.79	(0.81)	3.77	(0.79)	77-79
151. Use problem oriented charting (POMR) in recording care.	3.14	(1.10)	2.88	(1.07)	2.58	(1.11)	5-7 c. 8
152. Apply procedures for documenting medical-legal situations eg. rape, child abuse, etc.	3.76	(0.97)	2.93	(1.00)	2.65	(1.14)	8-10
153. Assist patients with discharge plans.	3.73	(0.91)	3.39	(0.84)	3.22	(0.94)	11-13
154. Modify goals/nursing actions according to patient's met or unmet needs.	3.78	(0.83)	3.33	(0.83)	3.19	(0.87)	14-16
155. Participate in nursing audits.	3.06	(1.09)	2.78	(1.11)	2.56	(1.21)	17-19
156. Apply principles of supervision and delegation.	3.83	(0.89)	3.46	(0.97)	3.37	(1.05)	20-22
157. Assign duties and schedule staff.	3.57	(1.07)	3.28	(1.08)	3.18	(1.19)	23-25
158. Set priorities on own work activities.	4.31	(0.70)	3.90	(0.81)	4.01	(0.78)	26-28
159. Recognize own strengths and weaknesses.	4.40	(0.67)	3.82	(0.67)	3.90	(0.80)	29-31
160. Instruct /teach patients/staff.	4.03	(0.85)	3.54	(0.90)	3.59	(0.94)	32-34
161. Demonstrate knowledge of relevant legislation, policies and guidelines for practice setting.	3.58	(1.02)	3.07	(1.02)	2.94	(1.05)	35-37
	LEVEL OF IMPORTANCE		LEVEL OF THEORY		LEVEL OF PRACTICE		

		LEVEL OF IMPORTANCE 1 Very Low 2 Low 3 Moderate 4 High 5 Very High	LEVEL OF THEORY 1 Very Low 2 Low 3 Moderate 4 High 5 Very High	LEVEL OF PRACTICE 1 Very Low 2 Low 3 Moderate 4 High 5 Very High	
162.	Make appropriate referrals.	3.43 (1.01)	3.08 (0.85)	2.88 (0.99)	38-40
163.	Demonstrate knowledge of the B.C. health care system.	3.27 (0.97)	2.79 (0.97)	2.68 (1.01)	41-43
164.	Use ICN Code to guide practice.	2.93 (1.14)	2.39 (1.09)	2.33 (1.12)	44-46
165.	Use Standards of Practice to guide practice eg. CNA, RNABC Quality Assurance Program]	3.42 (0.99)	2.88 (1.01)	2.76 (1.05)	47-49
166.	Interpret hospital policies to others.	3.68 (0.92)	3.35 (0.94)	3.32 (1.01)	50-52
167.	Assess hospital's operational effectiveness.	3.11 (1.06)	2.78 (1.10)	2.67 (1.12)	53-55
168.	Participate in the development of unit/hospital policy, procedures and guidelines.	3.38 (1.07)	3.01 (1.09)	2.86 (1.15)	56-58
169.	Participate in hospital budgetary process.	2.51 (1.25)	2.19 (1.16)	1.95 (1.14)	59-61
170.	Practice emergency/ evacuation procedures.	4.12 (0.92)	3.33 (0.93)	2.89 (1.14)	62-64
171.	Facilitate positive staff relationships.	4.22 (0.79)	3.52 (0.89)	3.56 (0.88)	65-67
172.	Demonstrate skill in resolving conflicts.	3.89 (0.93)	3.25 (0.86)	3.17 (0.88)	68-70
173.	Evaluate hospital service to patients.	3.41 (1.03)	3.07 (0.94)	2.93 (1.02)	71-73
174.	Evaluate own performance.	4.06 (0.80)	3.55 (0.85)	3.51 (0.85)	74-76
175.	Work effectively as a member of a health care team.	4.41 (0.67)	3.92 (0.75)	3.95 (0.74)	77-79
176.	Participate in the performance appraisal of others.	3.49 (1.08)	3.27 (1.02)	3.07 (1.13)	5-7 c. 9
		LEVEL OF IMPORTANCE	LEVEL OF THEORY	LEVEL OF PRACTICE	

APPENDIX G

Selection of Program Objectives

MENTAL HEALTH NURSING	LEVEL OF IMPORTANCE: THEORY	LEVEL OF IMPORTANCE: PRACTICE	MUST INCLUDE	MAY INCLUDE	EXCLUDE	MODULE
	MEAN	MEAN				
35. Apply alternate approaches when interactions are ineffective.	3.70	2.94	2.93		T, P		
36. Identify counselling and assessment strategies when working with families.	3.47	2.71	2.57		T, P		
37. Analyze family interactions.	3.42	2.79	2.68		T, P		
38. Assess abuse and neglect in children.	4.22	3.30	2.99	T, P			
39. Intervene appropriately in the grief process.	4.28	3.55	3.60	T, P			
40. Complete a neurological assessment.	3.97	3.23	3.07	P			
41. Assess children with behavior problems.	3.49	2.80	2.57		T, P		
42. Assess patients with developmental delays.	3.39	2.79	2.60		T, P		
43. Assess functional and dysfunctional families.	3.06	2.43	2.28		?		
44. Identify issues and problems associated with nursing care of the adolescent patient.	3.45	2.79	2.69		T, P		
45. Assist with psychiatric somatic therapies.	2.86	2.40	2.20			X	
46. Assess the effects and side effects of the major psychotropic drugs.	3.62	2.76	2.63		T, P		
47. Participate in electroconvulsive therapy (ECT).	1.94	2.27	1.78			X	
48. Use selected therapies e.g., Reality Therapy, Biofeedback, Transactional Analysis, etc.	2.40	2.10	1.82			X	
49. Counsel psychiatric patients over the telephone.	2.88	2.27	2.11			X	
50. Set limits on behavior in a therapeutic manner.	3.25	2.65	2.59		P		

APPENDIX H

The Study Questionnaire

(See pocket inside back cover)

BCIT POST DIPLOMA NURSING EDUCATION

NEEDS ASSESSMENT SURVEY

The General and Psychiatric Nursing Departments at BCIT are surveying registered nurses who work in non-departmentalized hospital settings as a step in developing a Post Diploma Program in Small Hospital Nursing.

It would be appreciated if you would provide some information about yourself before responding to the questions related to your nursing role.

Please draw a circle around the number beside the answer that best describes you.

1. What is your present employment status?

   Full-time (35 hrs./week or more) 1
   Part-time (less than 35 hrs./week) 2
   Casual (on call) 3

5 C. 7

2. What is your present position?

   Staff Nurse/General Duty 1
   Charge Nurse/Team Leader 2
   Head Nurse/Assistant Head Nurse 3
   Director/Assistant Director 4
   Other (Specify) _____ 5

6

3. Where did you take your basic nursing education?

   Hospital diploma program 1
   College diploma program 2
   University program 3
   BCIT 4
   Other (Specify) _____ 5

7

4. How long has it been since you graduated from your basic nursing program?

Less than 1 year 1
1 - 5 years 2
6 - 10 years 3
11 - 15 years 4
16 - 20 years 5
Over 20 years 6

8

5. How long have you been employed full-time, as an R.N. since completing your basic nursing education?

Never 1
Less than 1 year 2
1 - 5 years 3
6 - 10 years 4
11 - 15 years 5
16 - 20 years 6
Over 20 years 7

9

6. How long have you been employed part-time, as an R.N. since completing your basic nursing education?

Never 1
Less than 1 year 2
1 - 5 years 3
6 - 10 years 4
11 - 15 years 5
16 - 20 years 6
Over 20 years 7

10

7. How long have you been employed (full-time, part-time and casual) in a small hospital setting?

Less than 1 year 1
1 - 5 years 2
6 - 10 years 3
11 - 15 years 4
16 - 20 years 5
Over 20 years 6

11

8. Check (✓) all facilities in which you have been employed as an R.N. for 3 months or longer.

Children's Hospital	___1	12
Convalescent/Reb. Hospital	___1	13
Education Facility	___1	14
Extended Care Hospital	___1	15
Health Unit	___1	16
Victorian Order of Nurses	___1	17
General Hospital (larger than 75 beds) .	___1	18
Mental Health/Community Care	___1	19
Physician's Office	___1	20
Psychiatric/Mental Hospital	___1	21
Private Duty	___1	22
Industry	___1	23
Nursing Home/Community Care	___1	24
Other (specify) _____	___1	25

9. If you answered General Hospital in question 8, please check (✓) all areas in which you have worked for at least 3 months or longer.

Medical Unit	___1	26
Surgical Unit	___1	27
Pediatrics	___1	28
Obstetrics/Maternity	___1	29
Psychiatry	___1	30
Emergency	___1	31
Central Supply	___1	32
I.V. Therapy	___1	33
Medical/Surgical Intensive Care	___1	34
Newborn Nursery	___1	35
Operating Room	___1	36
Recovery Room	___1	37
Out-Patient/Ambulatory Care	___1	38
Renal Dialysis	___1	39
Extended Care	___1	40
Other (Specify) _____	___1	41

10. In which regional hospital district are you presently employed?

G.V.R.D. includes:	Greater Vancouver	01
Capital includes:	Victoria	02
Fraser Valley includes:	Central Fraser Valley Dewdney-Alouette Fraser-Cheam	03
Okanagan includes:	Central Okanagan North Okanagan-Similkameen North Okanagan	04
South-East includes:	Central Kootenay Columbia-Shuswap East Kootenay Kootenay-Boundary	05
Island Coast includes:	Alberni-Clayoquot Central Coast Comox-Strathcona Cowichan Valley Mount Waddington Nanaimo Powell River Sunshine Coast Ocean Falls	06
Central includes:	Cariboo Squamish-Lilloeet Thompson-Nicola	07
North Central includes:	Bulkley-Nechako Fraser-Fort George Kitimat-Stikine Skeena-Queen Charlotte	08
North includes:	Peace River-Liard Stikine	09

42, 43

11. What is the acute bed capacity of the hospital in which you are presently employed?

1 to 10	1	
11 to 20	2	
21 to 30	3	44
31 to 40	4	
41 to 50	5	
51 to 75	6	

12. What is your age group?

Under 25	1	
25 - 34	2	
35 - 44	3	45
45 - 54	4	
Over 54	5	

13. What post basic nursing education have vou completed? (Check all that apply)

Degree(s) (Specify) _____	___1	46
Diploma/Certificate (Specify) _____	___1	47 48
Other (Specify) _____	___1	

* * * * * * * * * * * * * * * *

PLEASE CONTINUE TO PAGE 6

Each of the following statements was identified by preliminary survey and from nursing literature as components of knowledge, skill and attitudes needed by the registered nurse working in non-departmentalized hospitals in mental health, obstetrics and emergency at the post basic level. The statements are divided into four sections: Mental Health Nursing, Emergency Nursing, Obstetrical Nursing and Nursing Process/Professional/Supervisory.

This section of the questionnaire asks you to rate your level of preparation for practice in a small hospital setting in order to develop a post diploma program to meet the needs of nurses working in small hospitals in British Columbia.

On the following pages you will find a list of statements about a nurse's responsibilities. Each statement describes some aspect of a nurse's role. Please rate each item in three ways:

LEVEL OF IMPORTANCE:	How important do you think the item is in relation to your overall professional responsibilities in the small hospital setting?
LEVEL OF PREPARATION--THEORY OR PRINCIPLES:	How well do you understand the theories or principles involved? That is, how knowledgeable are you about nursing foundations, principles, theories, techniques?
LEVEL OF PREPARATION--PRACTICE:	How competent are you to practice the related skill in the clinical setting? Please base this on the experience you have already had and on any instruction you have received related to the way nursing tasks should or could be done.

Please use the following scale for each statement:

1 = Very low level

2 = Low level

3 = Moderate level

4 = High level

5 = Very high level

Please see the next page for an example.

RATE EACH STATEMENT THREE TIMES BY DRAWING A CIRCLE AROUND THE APPROPRIATE NUMBER IN EACH CATEGORY ACCORDING TO YOUR RATING OF THE ITEM'S IMPORTANCE, YOUR LEVEL OF KNOWLEDGE AND YOUR LEVEL OF CLINICAL SKILL.

Example:

	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE				
	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High
Organize recreational activities.	1	(2)	3	4	5	1	2	(3)	4	5	1	2	(3)	4	5

EXPLANATION: This R.N., working in a small hospital, thought that organizing recreational activities has a low level of importance. He or she understands the theory or principles in this area at a moderate level. He or she possesses a moderate level of skill in terms of practice.

SECTION A: MENTAL HEALTH NURSING

	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
1. Initiate, maintain and terminate therapeutic relationships.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	5-7 c. 2
2. Complete a psychiatric history.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	8-10
3. Identify the dynamics and phases of a helping relationship.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	11-13
4. Demonstrate observational and listening skills.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	14-16
5. Complete a mental status examination.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	17-19
6. Intervene with patients who are anxious.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	20-22
7. Demonstrate warmth, respect and empathy.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	23-25
8. Intervene with patients who are depressed.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	26-28
9. Assess the lethality of a suicide plan.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	29-31
10. Intervene with patients who are suicidal.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	32-34
11. Demonstrate self-awareness.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	35-37
12. Intervene with patients who are withdrawn from reality.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	38-40
13. Intervene with patients who are suspicious.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	41-43
14. Intervene with patients who are delusional.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	44-46
15. Demonstrate interpersonal skills in therapeutic relationships.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	47-49
16. Intervene with patients who are over-active.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	50-52
17. Complete a psychosocial assessment.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	53-55
18. Apply concepts of selected psychiatric theories.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	56-58
	IMPORTANCE					THEORY					PRACTICE					

	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
19. Intervene with patients who are physically or verbally aggressive.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	59-61
20. Apply principles and techniques of therapeutic communication.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	62-64
21. Intervene with patients who are dependent.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	65-67
22. Manage a therapeutic environment.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	68-70
23. Intervene with patients who are hysterical.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	71-73
24. Intervene with patients who are ritualistic.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	74-76
25. Demonstrate appropriate use of confrontation.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	77-79
26. Demonstrate genuineness, immediacy and self-disclosure.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	5-7 c. 3
27. Intervene with patients who are phobic.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	8-10
28. Intervene with patients who are addicted to alcohol.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	11-13
29. Intervene with patients who are dependent on drugs.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	14-16
30. Accurately identify the verbal and non-verbal content of interactions.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	17-19
31. Analyze verbal and non-verbal communication.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	20-22
32. Intervene with patients who have psychophysiological disorders (Asthma, Anorexia Nervosa, etc.).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	23-25
33. Intervene with patients who are confused.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	26-28
34. Demonstrate effective verbal and non-verbal communication.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	29-31
	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					

	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
35. Apply alternate approaches when interactions are ineffective.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	32-34
36. Identify counselling and assessment strategies when working with families.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	35-37
37. Analyze family interactions.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	38-40
38. Assess abuse and neglect in children.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	41-43
39. Intervene appropriately in the grief process.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	44-46
40. Complete a neurological assessment.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	47-49
41. Assess children with behavior problems.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	50-52
42. Assess patients with developmental delays.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	53-55
43. Assess functional and dysfunctional families.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	56-58
44. Identify issues and problems associated with nursing care of the adolescent patient.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	59-61
45. Assist with psychiatric somatic therapies.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	62-64
46. Assess the effects and side effects of the major psychotropic drugs.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	65-67
47. Participate in electroconvulsive therapy (ECT).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	68-70
48. Use selected therapies eg. Reality Therapy, Biofeedback, Transactional Analysis, etc.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	71-73
49. Counsel psychiatric patients over the telephone.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	74-76
50. Set limits on behavior in a therapeutic manner.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	77-79
	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					

	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
51. Apply crisis intervention techniques.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	5-7 c. 4
52. Conduct small therapeutic groups.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	8-10
53. Conduct small activity groups.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	11-13
54. Implement nursing orders for special and constant attention.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	14-16
55. Demonstrate awareness of local ethnic & cultural customs and beliefs when providing care.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	17-19

SECTION B: EMERGENCY NURSING

56. Provide immediate care for the patient with head injuries.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	20-22
57. Provide immediate care for the patient with chest injuries.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	23-25
58. Provide immediate care for the patient with multiple fractures.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	26-28
59. Provide immediate care for the patient with burns.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	29-31
60. Provide immediate care for the patient with spinal injuries.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	32-34
61. Provide immediate care for the patient with asthma.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	35-37
62. Provide immediate care for the patient with epistaxis.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	38-40
63. Provide immediate care for the patient with an eye injury.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	41-43
	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					

		LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
		Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
64.	Interpret lead 2 cardiac monitor tracing.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	44-46
65.	Administer xylocaine into intravenous drips.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	47-49
66.	Carry out initial physical assessments to identify problems.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	50-52
67.	Assist physician in performing peritoneal taps.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	53-55
68.	Assist physician in chest tube insertion.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	56-58
69.	Apply Thomas splints.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	59-61
70.	Apply Colles splints.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	62-64
71.	Initiate intravenous infusions.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	65-67
72.	Manage patients with xylocaine infusion.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	68-70
73.	Assist with local anaesthetics, including blocks.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	71-73
74.	Assist with general anaesthetics.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	74-76
75.	Administer commonly used emergency drugs.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	77-79
76.	Initiate and perform C.P.R.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	6-7 c. 5
77.	Conduct 12 lead electrocardiogram.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	8-10
78.	Manage patients with hypothermia.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	11-13
79.	Stabilize patients prior to transporting to other agencies.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	14-16
80.	Manage patients who are unconscious.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	17-19
81.	Provide immediate care for patients with serious medical problems (CVA, MI, GI, Coma NYD).	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	20-22
		IMPORTANCE					THEORY					PRACTICE					

		LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
		Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
82.	Provide immediate care for overdose patients.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	**5**	23-25
83.	Provide immediate care for patients who have ingested common poisons.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	26-28
84.	Use poison control protocol.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	29-31
85.	Follow appropriate procedures when providing care to victims of rape.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	32-34
86.	Use hard orthopedic devices eg. cervical collars.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	35-37
87.	Use soft orthopedic devices eg. clavicular straps.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	38-40
88.	Follow appropriate procedures when providing care to victims of assault.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	41-43
89.	Follow appropriate procedures when providing care to patients with venereal disease.	1	2	3	**4**	5	1	2	3	4	5	1	2	3	4	5	44-46
90.	Provide care to victims of near drowning.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	47-49
91.	Coordinate transfer and transport of patients.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	**5**	50-52
92.	Conduct rapid initial assessment of patients.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	53-55
93.	Make appropriate referral of patients to community agencies.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	56-58
94.	Provide care to patients with hyperthermia.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	59-61
		LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					

SECTION C: OBSTETRICAL NURSING

	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
95. Coordinate community resources for the childbearing family.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	62-64
96. Instruct patient and spouse throughout labor.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	65-67
97. Demonstrate awareness of trends in maternal care.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	68-70
98. Recognize the complications of labor and delivery.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	71-73
99. Assist physician with vaginal delivery.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	74-76
100. Assist physician during cesarean section.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	77-79
101. Conduct safe, efficient emergency delivery of newborn without supervision.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	5-7 c. 6
102. Palpate abdomen for fetal size and position.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	8-10
103. Perform vaginal examination for dilatation and fetal position.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	11-13
104. Assess high risk intrapartum patient.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	14-16
105. Establish and maintain external fetal monitors.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	17-19
106. Maintain internal fetal monitors.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	20-22
107. Interpret fetal monitor strips.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	23-25
108. Maintain environmental safety of O.R./Case Room.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	26-28
109. Prepare O.R./Case Room and equipment for vaginal and cesarean section delivery.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	29-31
	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					

		LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
		Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
110.	Instruct patient and spouse during a cesarean section delivery.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	32-34
111.	Establish and maintain I.V. fluids and medications during labor and delivery.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	35-37
112.	Recognize the need for transportation of high risk patients in labor.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	38-40
113.	Prepare for transport of patient in labor.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	41-43
114.	Provide care for a patient during transport.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	44-46
115.	Provide care for a patient with a prolapsed cord.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	47-49
116.	Assess and record bonding behaviors of the family.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	50-52
117.	Instruct family members in the parenting role.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	53-55
118.	Identify bleeding disorders antepartum.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	56-58
119.	Identify bleeding disorders postpartum.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	59-61
120.	Identify physical disorders which contribute to high risk pregnancy.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	62-64
121.	Identify psychosocial disorders which contribute to high risk pregnancy.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	65-67
122.	Identify appropriate support system for the childbearing family.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	68-70
123.	Differentiate between normal and abnormal labor.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	71-73
		LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					

	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
124. Demonstrate knowledge of drugs common to antepartum, intrapartum and postpartum care.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	74-76
125. Provide counselling to patient and/or family regarding genetics.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	77-79
126. Provide counselling to patient regarding family planning.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	5-7 c. 7
127. Demonstrate skill in discussing sexuality issues with patients.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	8-10
128. Identify physiological changes which occur in pregnancy, labor and delivery.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	11-13
129. Conduct prenatal assessment.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	14-16
130. Identify the variations in intrauterine growth patterns.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	17-19
131. Demonstrate knowledge of diagnostic tests used to identify high risk newborn.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	20-22
132. Assess the high risk newborn.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	23-25
133. Conduct physical and psychosocial appraisal of the newborn.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	26-28
134. Do gavage feedings on newborn.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	29-31
135. Do gastric lavage on newborn.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	32-34
136. Prepare the high risk newborn for transportation.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	35-37
	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					

	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
137. Prepare nursery equipment for care of the high risk newborn.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	38-40
138. Provide immediate care for the high risk newborn.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	41-43
139. Provide care for infants undergoing phototherapy.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	44-46
140. Start I.V. on newborn.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	47-49
141. Maintain I.V. on newborn.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	50-52

SECTION D:

THE FOLLOWING ITEMS ARE RELATED TO NURSING PROCESS, PROFESSIONAL AND SUPERVISORY SKILLS.

142. Use the problem solving approach to nursing care eg. assess, plan, impliment, evaluate.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	53-55
143. Develop individualized care plans for each patient.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	56-58
144. Formulate a nursing diagnosis.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	59-61
145. Develop goals in consultation with patient.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	62-64
146. Develop nursing actions related to identified goals.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	65-67
147. Able to state rationale for nursing actions.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	68-70
	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					

	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
148. Able to write goals which are observable, measurable and realistic.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	71-73
149. Use hospital format to record relevant data.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	74-76
150. Use appropriate terminology (nursing, medical, psychiatric) and abbreviations.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	77-79
151. Use problem oriented charting (POMR) in recording care.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	5-7 c. 8
152. Apply procedures for documenting medical-legal situations eg. rape, child abuse, etc.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	8-10
153. Assist patients with discharge plans.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	11-13
154. Modify goals/nursing actions according to patient's met or unmet needs.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	14-16
155. Participate in nursing audits.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	17-19
156. Apply principles of supervision and delegation.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	20-22
157. Assign duties and schedule staff.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	23-25
158. Set priorities on own work activities.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	26-28
159. Recognize own strengths and weaknesses.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	29-31
160. Instruct /teach patients/staff.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	32-34
161. Demonstrate knowledge of relevant legislation, policies and guidelines for practice setting.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	35-37
	LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					

		LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
		Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
162.	Make appropriate referrals.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	38-40
163.	Demonstrate knowledge of the B.C. health care system.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	41-43
164.	Use ICN Code to guide practice.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	44-46
165.	Use Standards of Practice to guide practice eg. CNA, RNABC Quality Assurance Program)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	47-49
166.	Interpret hospital policies to others.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	50-52
167.	Assess hospital's operational effectiveness.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	53-55
168.	Participate in the development of unit/hospital policy, procedures and guidelines.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	56-58
169.	Participate in hospital budgetary process.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	59-61
170.	Practice emergency/ evacuation procedures.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	62-64
171.	Facilitate positive staff relationships.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	65-67
172.	Demonstrate skill in resolving conflicts.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	68-70
173.	Evaluate hospital service to patients.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	71-73
174.	Evaluate own performance.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	74-76
175.	Work effectively as a member of a health care team.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	77-79
176.	Participate in the performance appraisal of others.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	5-7 c. 9
		LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					

If there are other competencies that you think should be included in the program, please write them as statements in the spaces provided. It would be useful if you would rate your items in each of the three categories.

		LEVEL OF IMPORTANCE					LEVEL OF THEORY					LEVEL OF PRACTICE					
		Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	Very Low	Low	Moderate	High	Very High	
177.	_____	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	8-10
178.	_____	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	11-13
179.	_____	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	14-16
180.	_____	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	17-19
181.	_____	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	20-22

PLEASE ADD ANY OTHER COMMENTS THAT YOU THINK WOULD HELP IN THE DEVELOPMENT OF THE PROGRAM.

PLEASE CONTINUE TO THE NEXT PAGE

This part-time post diploma program is in the planning stage. The goal is to make this course as well as subsequent post diploma courses available to nurses throughout the province. We wish to design the course to meet the specific education needs of nurses working in small hospitals. Therefore, we are asking your assistance in providing us with the following information.

1. Which type of post diploma program would BEST meet your specific needs? (Circle only one.)

   (a) a full-time 20 week course, Monday to Friday, 0900 hrs. to 1700 hrs. 1

   (b) a part-time course given over a longer period of time using evening and week-end classes 2

23 c. 9

If you answered FULL-TIME to question 1, please proceed to question 11.

If you answered PART-TIME to question 1, please answer questions 2 through 10 BEFORE proceeding to question 11.

2. Which of the following factors would influence you to choose a part-time course? (Check all that apply)

children/family responsibilities	___1	24
babysitting easier to arrange in the evening and on weekends	___1	25
able to continue career and study simultaneously	___1	26
more economical to attending evening/ weekend classes	___1	27
continue to hold a day-time job	___1	28
continue to hold a permanent shift job . . .	___1	29
need a longer period of time to study than allowed in full-time course	___1	30
other (specify) _____	___1	31

3. Would you be able to participate in a concentrated clinical experience, e.g., a two week block in the final weeks of the course?

Yes 1 32
No 2

If you answered NO above, please list reasons.

_____

_____

4. If you answered YES above, please indicate your preference of location.

Regional College 1 33
B.C.I.T. 2

5. How long would you expect the part-time course to be? (Approximately 6-8 hours weekly?)

Twenty weeks (1 term/semester over 4 months). . . 1
Thirty four weeks (2 terms/semesters over 9 months 2 34
Fifty weeks (3 terms/semesters over 15 months) . 3
Other (specify) _____ 4

6. How could you BEST meet the requirements for learning the theory component of the course? (Check all that apply)

attending classes at a regional college . . ___ 1 35
attending instructional and interactive television classes at a regional college . . ___ 1 36
via interactive television at home (KNOW). . ___ 1 37
via telephone conferences between participants and instructors (weekly) . . . . . ___ 1 38
using self-directed materials at home (printed materials, audio, video) . . . . . ___ 1 39
other (specify) . . . . . ___ 1 40

7. Which of the following times would BEST suit your needs? (Check all that apply)

FOR CLASSES

Weekdays	0900 hrs. to 1300 hrs.	___ 1	41
Weekdays	0900 hrs. to 1600 hrs.	___ 1	42
Weekdays	1600 hrs. to 1900 hrs.	___ 1	43
Weekdays	1900 hrs. to 2200 hrs.	___ 1	44
Saturdays	0900 hrs. to 1300 hrs.	___ 1	45
Saturdays	0900 hrs. to 1600 hrs.	___ 1	46
other (specify)	_____	___ 1	47

8. FOR LABS (Check all that apply)

Weekdays	0900 hrs. to 1300 hrs.	____ 1	48
Weekdays	0900 hrs. to 1600 hrs.	____ 1	49
Weekdays	1600 hrs. to 1900 hrs.	____ 1	50
Weekdays	1900 hrs. to 2200 hrs.	____ 1	51
Saturdays	0900 hrs. to 1300 hrs.	____ 1	52
Saturdays	0900 hrs. to 1600 hrs.	____ 1	53
Other (specify)	_____	____ 1	54

9. FOR CLINICAL PRACTICE (Check all that apply)

Weekdays	1700 hrs. to 2200 hrs.	____ 1	55
Saturdays	0700 hrs. to 1500 hrs.	____ 1	56
Saturdays	1500 hrs. to 2300 hrs.	____ 1	57
Other (specify)	_____	____ 1	58

10. If you reside in a geographic area outside the Lower Mainland how could you BEST complete the clinical and laboratory sessions? (Check all that apply)

Not applicable - I live in the Lower Mainland	____ 1	59
Travel to the Lower Mainland during the course for clinical experience . . .	____ 1	60
Use hospital facilities and resource people in my geographic area	____ 1	61
Use instructional and interactive television for demonstration and practice skills at my regional college .	____ 1	62
Other (specify) _____	____ 1	63

_____

_____

_____

_____

ALL RESPONDENTS PLEASE ANSWER THE FOLLOWING

_____

11. Should there be challenge exams to determine which classes you are required to attend/complete?

Yes	1	64
No	2	

12. Should there be assessment of nursing skills in a lab setting BEFORE beginning the course, both for remedial and advance credit purposes?

Yes 1 65
No 2

13. On the following scale rate your ability to study independently, i.e., with minimum supervision and direction?

Need supervision/direction 1
Need some supervision/direction 2 66
Can study independently 3

14. On the following scale rate your ability to evaluate your own progress in a learning situation?

Unable to evaluate progress 1
Need some assistance 2 67
Able to evaluate own progress 3

The following two questions will assist us in planning the post diploma course. A positive (Yes) response in no way commits you to participate in the program.

15. Are you interested in taking this post diploma course?

Yes 1 68
No 2

16. If you answered Yes to question 14, when might you anticipate taking such a course?

September 1982 1
January 1983 . . . . . 2 69
September 1983 3
January 1984 4
other (specify) _____ 5

ADDITIONAL COMMENTS

Please check to ensure that you have answered ALL questions on EACH page where applicable.

Your cooperation in completing and returning this questionnaire in the enclosed addressed and stamped envelope is greatly appreciated.

A copy of the study findings will be made available to you upon request to B.C.I.T.

THANK YOU!