

THE DEVELOPMENT AND EVALUATION OF A WORKSHOP  
TO ASSIST NURSING STUDENTS TO PREPARE  
FOR THE REGISTRATION EXAMINATION

by

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B.S.N., University of British Columbia, 1967

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF ARTS (EDUCATION)  
in the Faculty  
of  
Education

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SIMON FRASER UNIVERSITY

March 1986

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The Development and Evaluation of a Workshop to Assist Nursing

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## ABSTRACT

The purposes of this study were to develop and to evaluate a workshop to assist graduating nursing students to prepare for the registration examination.

The workshop consisted of a presentation, guidelines for self-study and a practise test. Based on Das, Kirby and Jarman's model of information integration, this workshop addressed motivating students, promoting the coding of information spatially or sequentially, and enhancing planning and decision making. The workshop included information about the registration examination and encouraged self-study based on a variety of cognitive strategies that were described. A practise test gave students opportunities to apply strategies to multiple-choice questions and provided feedback regarding strengths and weaknesses in various content areas.

The workshop was revised over a series of offerings to five consecutive graduating classes involving a total of 126 college nursing students. Data on 154 students in five preceding classes provided comparative information.

The evaluation of the workshop was designed according to Stake's model of antecedents, transactions and outcomes. The antecedent variables included age, Nelson-Denny Reading scores, Psychological Services Bureau Nursing School Aptitude Test scores and GPA. The transactions comprising the workshop were evaluated using qualitative methods. The outcome was students' scores on the registration examination. Treated and untreated groups were

compared first using ANCOVA to adjust for the GPA of students and second using adjusted effect sizes. To explore for potentially more positive effects of the workshop on low GPA students' performance on the registration examination, analyses involving an assessment of linearity and a comparison of residual scores were performed.

The results showed a significant improvement on the registration examination for only one of the five groups that participated in the workshop. Analyses of linearity and residual scores suggest the treatment variable was slightly associated with small increases in scores on the registration examination for low GPA students.

Findings were interpreted in light of the non-experimental design of this study. Recommendations were made to improve the workshop, focussing on low GPA students. In addition, further research was encouraged that investigates ways to promote the synthesis of theoretical content presented to nursing students.

## DEDICATION

This Thesis is Dedicated

to

Professor Margaret Campbell, PhD  
University of British Columbia School of Nursing,

whose teaching introduced me to  
the complexities, the challenges,  
the difficulties and the rewards  
that are integral parts of  
Nursing Education.

## QUOTATION

The only person who is educated is the one who has learned how to learn. . . . The one who has realized that no knowledge is secure, that only the process of seeking knowledge gives a basis for security. A reliance on the process rather than upon static knowledge is the only thing that makes sense as a goal for education. (Carl Rogers, Freedom to Learn)

## ACKNOWLEDGEMENTS

I wish to thank my supervisory committee, Dr. M. Wideen and Dr. P. Winne for all their assistance and support.

I am indebted to my colleagues and administration for giving me permission to carry out this study and to the nursing students who participated in the workshop.

And to B.C.I.T. General Nursing Program, Langara Nursing Program, V.G.H. School of Nursing, and the U.B.C. School of Nursing, I wish to express my appreciation for helping me obtain volunteers to write the practise test for the purpose of item analysis.

I thank Dr. Jupian Leung for all his patience in response to my almost constant requests for various computer analyses.

I give credit to P. Hinz and P. Yeung who developed the test analysis program that provided helpful feedback to students in relation to their strengths and weaknesses in nursing knowledge.

A special thank-you goes to Joanne Ballantyne who typed and made many revisions to each chapter. Without her diligent effort, commitment to correct format, helpful editorial suggestions and her computer, this thesis would not have been possible.

And, last but not least, I wish to say thank you to my family--my husband, John, and my children, Ruth, Danny, Timmy and Jeannene--for tolerating my total preoccupation with each phase of this study, and to my mother and father for their continued interest and understanding.



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## CHAPTER 1

### PURPOSE OF THE RESEARCH

#### OVERVIEW

Graduates from Canadian nursing education programs must pass a comprehensive registration examination to be admitted to the profession of nursing. This examination is highly significant from the perspective of these new graduates because the vast majority of health care agencies demand registration as a criterion for employment. The registration examination is also considered important by the professional association and by nursing educators. Both groups compare mean scores of individual programs to provincial and national means as one method of evaluating the quality of the nursing programs.

Many graduating nursing students encounter difficulty as they prepare for this comprehensive test, especially when little program time can be devoted specifically to assisting them in such preparation. This thesis describes the development and evaluation of a workshop for graduating nursing students to help them prepare for the registration examination.

#### BACKGROUND TO THE PROBLEM

The breadth and depth of the content included in nursing curricula contribute to the difficulty that graduating nursing students experience in preparing for the registration examination. Content in nursing curricula has become increasingly more complex and diverse over the past twenty years as numerous advances in medical science and technology have increased the scope and complexity of the nurses' role. Graduates must have at

least a conceptual understanding of new medical interventions, as well as a working knowledge of assessment procedures and treatments that were formerly carried out only in intensive care units. Nurses need sufficient knowledge to be able to explain new diagnostic tests that have become possible due to recent technological advances. In addition, new illnesses such as Acquired Immune Deficiency Syndrome (AIDS) require increased understanding of immunology, microbiology, drug therapy and care for the terminally ill. The focus for providing nursing care has broadened to include the role of the nurse as a patient advocate and to put more emphasis on patient teaching for the prevention of illness and the maintenance of optimum health.

Nursing educators have responded to the increased scope and complexity of the nurses' role by attempting to include an ever increasing amount of content in the nursing curriculum. Over time, this activity has increased considerably the amount of material for which graduating nursing students must be accountable. Monnig (1983) describes the situation that results from the increasing knowledge that nurses must acquire:

Knowledge on which the practice of the profession rests will continue to expand. The nursing profession, therefore, is concerned with encouraging research . . . and ensuring that its schools incorporate the newer knowledge in the instruction they provide. Professional education then constantly struggles with the necessity of incorporating the new knowledge . . .  
(p. 43)

A further reason that some nurses experience difficulty preparing for the registration examination can be attributed to the heterogeneity of the student population. As nursing has moved from hospital-based schools to college settings, students



with more diverse academic ability have entered nursing education programs. In contrast to the hospital-based schools, the philosophy of community colleges is to give educational opportunities to a broader segment of the community. Although nursing programs set criteria for entrance, once these criteria are met, student admission is frequently on a 'first come, first served' basis. Such a policy has the effect of admitting individuals with a very wide range of ability into nursing programs. Some students possess highly sophisticated and effective study and reading skills; other students, however, frequently appear to lack such skills.

As evidence of this lack of literacy in typical college populations, Roueche and Snow (1977) state that "verbal skills, so necessary in our culture, are deteriorating at an alarming rate. . . . Similar shortcomings in study skills are also evident" (p. 2). More recently, Robert McCabe, President of Miami-Dade Community College, stated in his presentation at the national conference of the American Association on Higher Education:

The colleges should assume responsibility to assist individuals to succeed, and an ordered curriculum should be instituted to deal with reading, writing and computational deficiencies . . . (1982, p. 5 as cited in Gaff, 1983, p. 51)

Locally, post-secondary students experience similar difficulty. In the fall of 1980, for example, Wilson (1981) reported that 46% of 3,500 first year students at the University of British Columbia failed an English composition examination.

Anderson, Reynolds, Schallert, and Goetz (1977) state "the interpretation people give to messages is influenced by their backgrounds" (p. 376). Students come to the nursing program with extremely diversified backgrounds, not only in terms of ability, but also in relation to age, previous experience and ethnic origin. It is, therefore, not unlikely that the teaching and evaluation strategy most suited for some students is a much less effective strategy for others. Because of the problems posed by students' heterogeneity, it seems reasonable to speculate that students graduating from nursing programs vary considerably in the extent to which they have originally learned and subsequently retained the content from each course. It also seems plausible that these students vary greatly in their ability to synthesize the content from all the courses included in the nursing curriculum.

#### THE PROBLEM DEFINED

The problem addressed in this study is the difficulty that graduating nursing students experience as they prepare for the registration examination. This problem probably affects a significant number of these students as a direct consequence of the complexity of curriculum, the vast amount of content required and the diversity of the student population. It is also likely that some graduating students experience considerable anxiety as they try to review for a comprehensive examination of important facts, concepts and processes taught over two years. It appears logical to consider that both the students' difficulty in synthesizing content and their anxiety level can contribute to

registration examination scores which underestimate the potential for some candidates.

Given the problem graduating nursing students encounter as they prepare for the registration examination, and in light of the context of heterogeneity that has been presented, the following research question is proposed:

**Can a workshop be developed for graduating nursing students that will assist them to prepare for the registration examination to the extent that their scores on the examination will increase?**

There were three specific objectives of this study. One was to develop a workshop for nursing students to assist them to perform at their potential on the registration examination. The second objective was to try out and improve the components that comprise this workshop with a series of five consecutive classes. The third objective was to evaluate the effectiveness of providing this additional assistance.

### RATIONALE

It is possible that graduating nursing students may benefit from some type of help in preparing for the registration examination. Thus, the solution to the problem identified in the previous section may be to include a workshop in the curriculum that would facilitate the review and study required.

A preliminary review of the literature was undertaken to identify the types of experiences applicable to college students that could facilitate this review and study process. The direction suggested was to assist students by means of cognitive strategies. Dansereau (1978) defines these strategies as basic

intellectual and affective skills that serve to improve subject mastery. There is growing evidence that college students can benefit from the inclusion of cognitive strategies in the curriculum. Hayes and Diehl (1981) suggest that:

students should be provided with opportunities to discover how they learn and should be shown a wide range of strategies and techniques that they can synthesize and modify for their own learning needs. The stress is on the process, not on the rote techniques of learning. (p. 659)

In reviewing research designed to improve students' academic performance, Brown, Campione and Day (1981) identify a "shift in emphasis from a concentration on instruction aimed at improving student performance per se to the current emphasis on instruction aimed at improving students' self-control and self-awareness of their own learning processes" (p. 14). Research conducted with college and university students suggests that strategies for learning are malleable, and that adaptive strategies can be taught and maladaptive ones dropped (Langley & Simon, 1981; Biggs & Rihn, 1984).

Thus this preliminary investigation of the literature provided the rationale for including cognitive strategies in the workshop to be developed. It was anticipated that if nursing students could be taught to apply strategies for learning that were well matched to their individual backgrounds, then they may be able to review the material more effectively, achieve a higher degree of synthesis of the content, and thus prepare for the registration examination with better results.

This thesis is organized into six chapters. Following this introduction, Chapter Two presents a review of related litera-

ture. A description of the development and implementation of the workshop is provided in Chapter Three. Chapter Four identifies the methods used for the evaluation of this curriculum change as it was successively implemented for five classes of final semester nursing students. Chapter Five reports and discusses the results of the evaluation in relation to antecedents, transactions and outcomes (Stake, 1967). Chapter Six identifies the conclusions reached and the recommendations that arise from this study.

## CHAPTER 2

### LITERATURE REVIEW

#### OVERVIEW

Four areas of literature are examined: selected curriculum attributes that affect performance on examinations; studies aimed to increase academic performance; intervening variables that influence academic achievement; and promotion of synthesis of learning using the model of information integration as proposed by Das, Kirby and Jarman (1975, 1979). This last section describes a variety of cognitive strategies used to promote synthesis and thus has been emphasized in this review. Each of these four areas was limited to those writings which pertain to the purpose of this study, which was to develop and evaluate a workshop to assist graduating nursing students to perform at their potential on the registration examination.

In order to maintain confidentiality with regard to the data on registration examination scores, the nursing program at which this study was conducted has been referred to as the MLB Nursing Program.

#### SELECTED CURRICULUM ATTRIBUTES THAT AFFECT PERFORMANCE ON EXAMINATIONS

One of the stated aims of all basic nursing programs in Canada, including the MLB Nursing Program, is to prepare nurses to write the registration examination. This study attempts to increase students' scores on this examination through a small but potentially significant change in the curriculum. The first part of this section identifies the major steps in the curriculum

development process that apply to both general and nursing education to establish the context for the present study. The second part of this section examines curricular elements that contribute toward synthesis of all learning experiences. The emphasis in this section is on the means of enhancing curricular integration to promote more effective learning.

### The Curriculum Development Process: The Context for the Present Study

Writers in general education, including Kelly (1982) and Taba (1962) as well as writers in nursing education (Bevis, 1978; Fawcett, 1983) use the term curriculum to refer to the total program of an education institution. The emphasis is on wholeness and not simply a collection of courses.

The curriculum development process, according to Tyler (1949), Lawrence and Lawrence (1983), Scales (1985) and Fawcett (1983), begins with an assessment of the needs of society and the formulation of a philosophy which expresses the faculty's beliefs in relation to key concepts. Upon this basis, the conceptual framework and overall curriculum design is evolved, along with statements expressing the terminal objectives for graduates of the program. Entry characteristics of potential learners are identified and learning experiences are planned to meet these objectives in a manner that provides for continuity, sequence and integration of learning. Evaluation of learner progress in the program as well as evaluation of the overall curriculum is then planned. These are essentially the steps that the MLB nursing faculty have taken in developing the curriculum for nursing

students. These major steps have been identified here to show the overall context of which the present study--an evaluation of a curriculum change--is a component part.

The evaluation component of the curriculum development process can be considered the first step in curriculum change. To accommodate advances in technology and respond to changing patterns of health care, as well as reflect changes in society, including the learner, curricula must respond in a dynamic way to maintain relevancy. The results of evaluation give curriculum planners information required to determine the need for changes in the curriculum (Oliver, 1977). Then, these changes can be made in a deliberate and planned fashion (National League for Nursing, 1983; Gordon and Anello, 1974). Planned change is purposeful, rewarding and directional (Torres & Stanton, 1982). In contrast, unplanned changes and alterations not based on evaluative data often lead to a patchwork effect on the curriculum, where various faculty groups engage in what Torres and Stanton (1982) refer to as "adding on, filling in, patching up--making do, without any way of making sure about what is actually happening" (p. 11). Taba (1962) describes this patchwork effect on the curriculum as 'piecemeal'.

The curriculum development process should involve a systematic approach to the development of organized areas of learning. This process is logical, sequential and dynamic and has the quality of giving direction to the educational program, as it has to the MLB Nursing Program, as well as to the workshop to prepare nursing students for the registration examination developed for



this study. The curriculum is constantly and continuously evolving while providing a firm foundation. The spiraling effect of the curriculum process suggests the notion of continuous reassessment and reevaluation (Torres & Stanton, 1982). While a sound curriculum development process, as identified, does not guarantee high examination scores, it should contribute to students achieving at their potential.

A previous curriculum study (Kruger & Yensen, 1981) conducted at the MLB Nursing Program included a recommendation for the appropriate channeling of resources to assist students who are identified as at risk to achieve low scores on the registration examination. The workshop that has been developed directly addresses this recommendation. Thus, the curriculum change developed for this study, and described in detail in Chapter Three, was a planned change in response to evaluative data.

### **Curriculum Elements that Contribute Toward Synthesis**

In this context, synthesis refers to what Bloom (1956) describes as the ability to put together elements and parts so as to form a whole. This process involves working with the elements, arranging them and combining them in such a way as to constitute a pattern or structure not clearly there before. A basic assumption in this study is that there is a positive relationship between the degree of synthesis of learning experiences achieved by nursing students at the end of the program and performance on the registration examination. Furthermore, it has

also been assumed that although synthesis occurs in the mind of the learner, it is a process that can be facilitated.

The main problem identified in Chapter One was the difficulty learners experience in attempting to synthesize the quantity of information they are expected to know for the registration examination. The literature identifies that the problem of having too much content to learn due to new discoveries, advances in technology and changes in society is neither new, nor peculiar to nursing education. Taba (1962) states that "there has always been more to learn than any student could learn in twice the time at his disposal. . . ." (p. 263).

One response to the problem of trying to incorporate more and more content in a curriculum is to increase curricular integration. Many authors have described the notion of curricular integration and its relevance to learning. E. C. Smith (1981), Clearage (1984), and Scales (1985) use this concept of integration to refer to the formation of a more complete, harmonious or coordinated entity, often by the addition or arrangement of parts or elements. Taba (1962) describes another meaning of the term 'integration'. Rather than considering the term to refer to a quality or organization of curricular elements, integration is also defined as a mental activity that happens within an individual. It refers to "seeing relationships between experiences or knowledge and achieving an organization of one's own" (p. 299). Such a concept of integration is similar to Bloom's (1956) idea of synthesis.

E. C. Smith (1981) is referring to this latter definition of integration when she claims that it is during the final phase of the curriculum that integration of all the skills and knowledge acquired earlier should take place--in other words, "from a developmental perspective, integration is the end product of the student's education" (p. 577).

It is during this final phase of the program that further enhancement of integration may be possible which would contribute to synthesis of the various curricular elements. An exploration of the writings that describe curriculum integration reveals four areas that need to be considered. Each may significantly increase students' ability to relate curricular concepts and promote synthesis of learning. These means for enhancing integration are the following: (1) the value of emphasizing processes as opposed to content, (2) the use of reinforcement, (3) the importance of establishing an atmosphere conducive to learning, and (4) the consideration of heterogeneity in learners.

#### The Value of Emphasizing Processes

For many years, curriculum writers have recognized the value of focussing teaching activities on essential processes for learning (Stenhouse, 1975; C. E. Smith, 1984). Dewey (1916, as cited in Murdock, 1983) proposes that the development of the ability to think is central to the educational process. Acquiring knowledge is always secondary to the act of enquiry. Parker and Rubin (1966) claim that "process is the nexus of curriculum design. Knowledge, static in itself, becomes dynamic only as it is hinged to the processes which humans use to carry

on their work" (p. 65). These authors also state that "processes are not merely vehicles to a destination, but are themselves a key destination (p. 54).

The process of thinking, although often taken for granted, is particularly significant in education today and de Bono (1983) claims should be deliberately encouraged. Generally, thinking involves more than simply remembering and repeating ideas; it entails inductive, deductive, and logical processes. De Bono recommends learning experiences be designed that encourage students to engage in active thinking and that provide opportunities for practise with feedback.

Recent nursing curricula, including the MLB Nursing Program, focus on teaching students to apply the logistical processes of assessing, planning, implementing and evaluating in relation to the care of all clients (de Tornyay & Thompson, 1982; Clearage, 1984). Typical teaching strategies include problem-solving, enquiry sessions, small group discussions and conceptual rather than factual development of content. Such strategies are essential to assist students to acquire the processes necessary to become a professional nurse. As a result of this part of the literature review and because the aim of the workshop was to increase the students' ability to integrate concepts presented over two years, the workshop emphasized processes as opposed to content.

### The Use of Reinforcement

Another aspect of the curriculum that can contribute to integration is the effective use of reinforcement. One major

reinforcing event for a student is knowledge of results of performance. Stiehl (1982) applies this principle of learning when she describes a diagnostic assessment program sponsored by the National Council of State Boards of Nursing. The intent of this assessment test is to provide candidates with knowledge of their strengths and weaknesses in such a way that areas requiring further study are identified.

In addition to knowledge of results, repetition of key concepts constitutes another major source of reinforcement for a student (Langley & Simon, 1981). Taba (1962) reminds us that there is no guarantee that anything learned at one time is acquired permanently, be it facts, ideas, skills or the power to think. Repetition and continued use are usually needed. The practise test developed for this workshop was viewed as a means of repeating selected content presented earlier in the program that may have been forgotten, and a way of providing knowledge of results of performance. Thus, the practise test attempted to promote integration through the use of reinforcement.

#### The Importance of an Atmosphere for Learning

Rogers (1962, 1969), and Smallegan (1982) claim that if the teacher can communicate an attitude of genuine positive regard toward learners and encourage an atmosphere which fosters growth and creativity, integration of learning can be promoted. In such an atmosphere, students are responded to as persons by a teacher who is also a person. Learners are not always given the answers to problems immediately, but are assisted and supported in developing the skills to arrive at tentative solutions. Rogers

(1969) recommends that the feelings of students toward any aspect of the learning situation--even so called 'negative' feelings of anger and frustration--should be accepted as part of the students' total response. This type of learning atmosphere in the classroom is theorized to foster student enquiry and integration: once students learn to trust, they can risk making mistakes because the fear of censure or ridicule for being wrong is absent. Students can take more responsibility for their own learning and can become more independent in learning.

An attitude of positive regard and acceptance was considered extremely important in assisting nursing students prepare for the registration examination. Therefore, sincere efforts were made to communicate such an attitude to the students participating in the workshop. Depending on the teacher's attitude, a workshop designed to assist students could be perceived as threatening, anxiety-producing and demoralizing or as challenging, stimulating and encouraging. Such perceptions of students would undoubtedly have an influence on their motivation to study, the degree of integration of content they achieve and would ultimately affect their examination scores.

#### The Consideration of Heterogeneity in Learners

The fourth and final way to be discussed that promotes integration is to select and plan learning experiences to meet the needs of learners who are heterogeneous in ability. Taba (1962) identifies that "not all individuals learn most effectively by the same method, by the same type of activity. . . .

Students need to acquire a tool chest of methods of learning . . ." (p. 307).

This 'tool chest' of methods has been interpreted as the deliberate use of a variety of learning strategies. In this study, assisting students to use such strategies effectively is viewed as one method to promote synthesis. The Student Manual, developed to assist students with self-study, explains and gives examples of a variety of learning strategies.

From this section of the literature review, several attributes of the curriculum that influence student performance on examinations, such as the quality of the curriculum development process and the significance of various means of promoting synthesis of learning, have been identified. The ideas on the value of processes for learning and the use of reinforcement that have been presented have formed the rationale for the development of a practise comprehensive examination for final semester nursing students. The knowledge gained has contributed to the development of the workshop to assist nursing students prepare for the registration examination.

#### **STUDIES AIMED TO INCREASE ACADEMIC PERFORMANCE**

To learn how other investigators have attempted to increase academic performance, research in three areas was reviewed: studies of programs attempting to increase standardized scores, studies identifying predictors of success in nursing and studies describing programs of special assistance for nurses to improve their performance.

## Studies Attempting to Increase Standardized Scores

Four examples of studies that related to the effectiveness of commercial test preparation for various standardized tests were examined (Alderman & Powers, 1980; Sesnowitz, Bernhardt, & Knain, 1982; Scott, Scott, Palmisano, Cunningham, Cannon, & Brown, 1980; Weber & Hamer, 1982). These were large-scale studies, each involving many hundreds of subjects. From this review, two main points emerged: (1) it is an extremely difficult task to influence scores on standardized tests by special programs, or coaching, and (2) in general, those training programs aimed to increase achievement are more likely to have some effect if the tasks used for training are highly similar to the criterion task. Several methodological points gained from this review were also important to consider in the present study. Not only is increasing standardized scores for a group a difficult task to accomplish, but it is even more difficult to show the effect of a program if a true experimental design is not possible, as was the case with the present study. Such factors as differences in motivation between non-randomly selected groups can make comparisons invalid. The interpretation of causation from correlation was identified as a common error. The importance of examining groups for pre-existing differences and removing that variance in the criterion score that can be explained by such differences was emphasized. This point prompted the next section of the literature review to identify variables of potential usefulness in this regard.



## Studies Identifying Predictors of Success in Nursing

The literature was reviewed for studies that identify significant predictors of success in nursing. National League for Nursing (NLN) Test scores have been reported as significant predictors of State Board Examination Scores for many years (Baldwin, Mobray, & Taylor, 1968; Mueller & Lyman, 1969; Deardorff, Denner & Miller, 1976; Shelley, Kennamer, & Raile, 1976). NLN examinations consist of five separate components: medical, surgical, obstetrical, pediatric and psychiatric nursing. Even though nursing curricula are now integrated and are no longer designed according to the medical model specialty areas, Melcolm, Venn, and Bausell (1981) claim the NLN tests continue to predict licensing examination scores. This finding was based on a study of 390 nursing graduates. The five forward stepwise multiple regressions produced five multiple Rs ranging from .71 to .75.

Several studies have shown that previous Grade Point Average (GPA) and overall nursing GPA are good predictors of achievement in nursing (Burgess & Duffey, 1969; Burgess, Duffey, & Temple, 1972; Stankovich, 1977; Richards, 1977; Washburn, 1980; Perez, 1977; Capoor, 1982). For example, Richards (1977) found the correlation between theory GPA in nursing and State Board Examination scores ranged between .51 and .61 in a study of 118 nursing graduates from an integrated college program. In a previous study of my own (Christie, 1984) the Pearson correlation between end-of-program GPA and the registration examination

scores was found to be .77, based on the records of 78 recent graduates of the MLB Nursing Program.

The use of various psychological and aptitude tests to predict future achievement in nursing has been reported with inconsistent results (Morman, Liddle, & Heywood, 1965; Mueller, 1968; Larkin, 1977; Capoor, 1982). For example, Morman et al. (1965) employed an instrument referred to as the TAV Selection System based on Horney's research. No correlations were significant. On the other hand, Mueller's research (1968) indicated that from 19 potential predictors, the multiple regression equation for psychiatric nursing included the following five variables: verbal ability, science ability, rank in high school graduating class, occupation of father, and a measure of respectfulness. The multiple correlation coefficient of .76 was reduced to .41 when applied to a subsequent class. The number of students in this study was not reported. Reading ability has been identified as a significant predictor of success in nursing (Burgess & Duffey, 1969; Larkin, 1977; Efurd, 1978; Donsky & Judge, 1981). The Efurd (1978) study, for example, showed that the Nelson-Denny reading tests of vocabulary and comprehension (but not reading rate) demonstrated that students with higher scores tended to achieve higher grades in nursing.

Information gained from these nursing studies provided rationale for selecting the following variables to use as potential covariates in the present study: overall GPA, Nelson-Denny reading test scores and Psychological Services Bureau

aptitude test scores which include academic aptitude, spelling, reading comprehension, natural science and vocational adjustment.

### Studies Describing Programs of Special Assistance to Nurses

Three studies describing programs that were designed to increase the performance of nurses on the registration examination were then examined. Overstreet (1983) studied the results of reinforcement courses on the licensing examination of 269 candidates. This author claims these review courses were beneficial because the scores for third time writers improved compared to previous scores. This study did not use a control group of similarly motivated nurses who had not taken such a course, nor did the author discuss how much of the increase in scores would be likely due to practise effects. Even with these methodological criticisms, however, the recommendation that some assistance be provided for individuals writing the licensure examination for the first time supports the present study.

McNally (1979) evaluates a program for assisting disadvantaged students to successfully complete a program in nursing and pass the licensure examination. The author identifies a point that has been considered in the present study: a specific program may appear effective when in actual fact its success can be attributed to attention or a sense of caring between the investigator and the subjects--in other words, the 'Hawthorne effect'.

McDonald, Collins, and Walker (1983) describe a study skills workshop to reduce attrition which included problem solving and stress management. The ideas emphasized--increasing nursing students' self-confidence and belief that they could achieve

satisfactory performance in the entire program--were approaches that were used in developing the workshop for this study.

These studies reviewed have provided guidance for the present study, particularly with the implementation and evaluation of the workshop. The practise test, as an example of a training task, is highly similar to the registration examination (criterion task). The variables suggested from the literature as being predictive of licensing examination results have been identified. Furthermore, some specific features of successful programs that contributed to passing scores on licensing examinations or reduced attrition from nursing programs have been incorporated into the workshop.

### **INTERVENING VARIABLES THAT INFLUENCE ACHIEVEMENT**

This section has three parts: the influence of motivation on learning, the intervention of test anxiety and an examination of the principles of test-wiseness.

#### **Influence of Motivation on Learning**

From a review of the literature on motivation, three points which are of interest in this study were evident. The importance of optimal motivation for learning was a predominant theme in all the writings. Two further ideas that had potential for application in this study included the relationship between motivation and students' selection of strategies and the interaction between motivation and effectiveness of strategies.

Optimally motivated learners usually achieve better test scores than similar learners with low motivation. Several

authors discuss the importance of motivation in learning (Sternberg, 1981; Biggs & Kirby, 1984; Gibbs, Morgan & Taylor, 1982; Das, 1984a). It is likely that students who have achieved top grades while in the nursing program are already optimally motivated. Other students, however,--those who are average and those who have made marginal grades each semester--may be able to improve achievement in the registration examination if their motivation to do so is increased. Thus, efforts were directed toward this goal in the workshop developed for this study.

Biggs (1984) and Biggs and Kirby (1984) distinguish three predominant kinds of motivation: instrumental, intrinsic and achievement. The purpose of learning and strategies for learning corresponding to these kinds of motivation as identified by Entwistle (1979), Schmeck (1983), Main (1980) and Biggs (1984) were ideas used in the development of one section of the Student Manual which was the component of the workshop that aimed to assist students with self-study.

One example of a study of the interaction of motivation and strategy use is the one conducted by Fass and Schumacher (1978). These researchers studied 160 college students to determine the effects of motivation, subject activity (underlining or not underlining) and readability on the retention of prose materials. The results revealed that the readability level was not as important in determining performance for highly motivated subjects as it was for those with low motivation and that underlining had greatest impact on highly motivated learners. This study gives some indication of the interactive influence of

motivation with strategy usage in relation to the learning of prose material.

From the review of the literature on motivation and learning, it seems that a degree of motivation appears to be necessary before strategies will be effective and also that optimal motivation may offset some of the factors which tend to make learning more difficult. There seems to be sufficient rationale in the literature to attempt to increase student motivation and also to broaden the type of motivation for nursing students preparing for the registration examination.

### **Reduction of Test-Taking Anxiety**

The negative effects of high test-taking anxiety on academic performance in both general and professional education in the health care field are well documented (Spielberger, Gonzalez, & Fletcher, 1979; Tryon, 1980; Kane, 1976; and Captain, 1984).

Liebert and Morris (1967, as cited in Meichenbaum, 1972) suggest that test anxiety is comprised of two major components: worry and emotionality. The worry component is described as cognitive concern over performance. Emotionality is the autonomic arousal aspect of anxiety. It appears to be the worry component which directly causes reduced performance.

Meichenbaum (1972) establishes the effectiveness of cognitive modification on test anxious college students by comparing cognitive treatment with group desensitization and a waiting list control group. Cognitive modification treatment procedures have two components in combination. First, a specific insight-oriented therapy attempts to increase the subjects'

awareness of anxiety-producing thoughts. Second, a modified desensitization procedure employs coping imagery designed to reduce anxiety by means of relaxation and task-relevant self-instructions. Other studies (Goldfried, Linehan, & Smith, 1978; Weibly, 1979; Leal, Baxter, Martin & Marx, 1981) have also demonstrated the effectiveness of cognitive modification.

Captain (1984) describes a program designed to teach graduate nurses to 'harness' State Board Test anxiety. Such anxiety is reduced using cognitive modification, and remaining anxiety is channelled into effective study practises, becoming a positive motivating force.

In addition to programs based on cognitive modification, another method recommended in the literature to reduce anxiety is to provide trial state board examinations. Kane (1976) identifies that with dental hygiene education graduates, the anxiety related to the state board examinations is largely a result of unknowns. At the Ohio State University, the trial state boards are viewed as an effective means of eliminating some of the anxiety and helping the student to increase performance. This study provided further rationale for the development of a practise test that simulated the actual registration examination in nursing.

The literature reviewed, for example the Captain and Kane studies, has provided insight into test anxiety and has given direction to the development of the chapter on coping with test-taking anxiety in the Student Manual that has been prepared for this study.

### Examination of the Principles of Test-Wiseness

Sarnacki (1979) defines test-wiseness as a subject's capacity to use characteristics and format of the test and/or the test-taking situation to achieve a high score. Millman, Bishop and Ebel (1965) noted that test-wiseness is logically independent of the examinee's knowledge of the subject matter which the test supposedly measures. Test-wiseness has been demonstrated to exist among some junior and senior high school students (Slakter, Koehler, & Hampton, 1970a), college students (Pryczak, 1973, as cited in Sarnacki, 1979) and adults (Bajtelsmit, 1975b, as cited in Sarnacki, 1979). This characteristic is possibly present in a significant proportion of registration examination candidates. Such test-wiseness represents systematic variance in the registration examination scores that is invalid because it is not based on the knowledge being measured.

It is obvious that success or failure on the registration examination should be determined by the candidate's ability to apply knowledge to the examination situations, and not to differential ability in test-wiseness. One may think that standardized tests would be relatively immune to test-wiseness, but research indicates this is not the case (Sarnacki, 1979). It is likely that performance on the registration examination is influenced by the number of test-wise behaviors candidates possess. In order to reduce the variance in the criterion measure (registration examination scores) that is due to differential test-taking ability, training in test-wiseness, therefore, can and should be carried out.



Research suggests that the ability to pick up test-wiseness cues may be demonstrated at all levels of intelligence when individuals receive instruction (Sarnacki, 1979). For example, Slakter, Koehler, and Hampton (1970b) and Langer, Wark and Johnson (1973, as cited in Sarnacki, 1979) have found that any type of instruction on item cues, be it lectures, programmed text, or merely reading a description of test-wiseness, resulted in higher test-wiseness scores than no training at all. Thus, test-wiseness training can be considered as providing necessary test-taking skills, helping to negate the handicap for low test-wise individuals.

One example of a study relating the principles of test-wiseness to nursing examinations is the Hyde (1981) study. This investigator found the strategies involving deductive reasoning to be most effective in increasing nursing test scores.

As a result of the review of the literature related to test-wiseness, one chapter in the Student Manual was devoted to assisting students to apply deductive reasoning and other principles of test-wiseness.

## **PROMOTION OF SYNTHESIS OF LEARNING**

### **Theoretical Model of Information Integration**

The model of information processing adopted in this study is one developed by Das, Kirby and Jarman (1975, 1979). These writers build upon Luria's ideas (1966, 1973) of the functional organization of the brain. The first part of this section describes the model and explores the relationship of the model to

achievement. Strategies to promote academic achievement, organized according to the major units of the model, are then examined, and selected studies evaluating the effectiveness of these strategies for learning have been reviewed. In summary, the ways in which the model has provided guidelines for meeting the purpose of this study--developing a workshop to promote students' achievement on the registration examination--are identified.

Luria (1966, 1973) conceptualizes three main functional divisions of the brain: the first controls arousal or attention; the second controls the coding of information; and the third is concerned with planning and decision making. While arousal is located in the subcortical area of the brain, both coding and planning functions are located in the cortex.

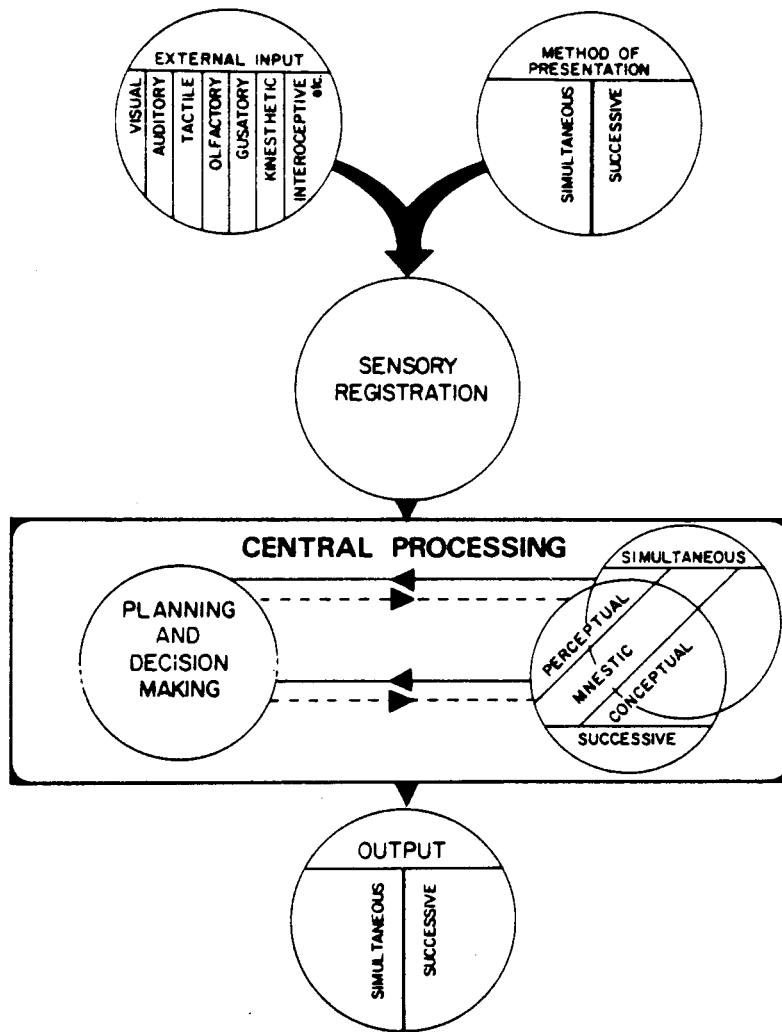
The first unit, arousal, is associated with motivation which plays an extremely important role in any performance. Motivation has already been discussed in the preceding section as one intervening variable that influences academic achievement.

The second unit controls the coding of information. Das et al. (1975) state: "In order for most complex activities to take place, there must be afferent synthesis of incoming information into whole, dynamic systems" (p. 89). Luria (1966) claims these syntheses are of two kinds, simultaneous and successive. Simultaneous synthesis refers to "the synthesis of separate elements into groups, these groups often taking on spatial overtones. The essential nature of this sort of processing is that any portion of the result is at once surveyable without dependence upon its

position in the whole" (Das et al., 1975, p. 89). Successive synthesis refers to "the processing of information in a serial order. . . . With this type of processing the system is not totally surveyable at any point in time. Rather, a system of cues consecutively activates the components" (Das et al., 1975, p. 89). Thus, Kirby and Das (1978) state that "both simultaneous and successive synthesis can be seen as forms of coding. In the case of simultaneous processing, the coding is superordinate or hierarchical. . . . With successive processing, the coding is sequential or associative and a temporally dependent series of codes is formed" (p. 65). Das and Dash (1983) explain "coding involves receiving information, analyzing and synthesizing information into simultaneous quasi-spatial arrays or into successively ordered sequences, and the retrieval of information thus arranged" (p. 27).

The third unit of the model is the planning and decision-making unit which uses the information integrated by the other two components. It is in the planning and decision-making area of the brain that the coded information is used in a purposive and organized way to fulfill a goal. Das and Dash (1983) explain that "planning entails a relatively distinct set of operations such as making plans, decisions, evaluations and judgements . . . and the systematic execution of programs" (p. 27).

**FIGURE 1: MODEL OF INFORMATION INTEGRATION**



Note. From "Simultaneous and successive synthesis: An alternate model for cognitive abilities" by J. P. Das and J. Kirby and R. F. Jarman, 1975, Psychological Bulletin, 82, p. 90. Copyright 1975 by the American Psychological Association. Reprinted by permission of the publisher and author.

Figure 1 identifies the main units of the model of information integration presented by Das et al. (1975). Information is

presented either simultaneously or successively and received by means of any type or combination of stimuli. Once the input enters the sensory register, the stimuli are then transmitted to the central processing area where they are coded either simultaneously or successively. In order to achieve synthesis, Luria (1966) proposes that there are three levels at which the cerebral cortex functions to process information: perceptual, mnestic and conceptual. At the perceptual level, the individual is selectively attentive to the stimulus input in the brain. The mnestic level refers to the organization of stimulus traces from either short-term or long-term memory required when the interpretation of present stimuli depends on the recollection of past learning. The conceptual level is used for all complex intellectual processes, for example, when analyzing the relationships among components. Consequently, Luria (1966) claims we can speak of perceptual, mnestic and conceptual levels of simultaneous and successive synthesis. Once coded, information is then passed on to the planning and decision-making area of the brain.

This model of information integration put forth by Das et al. (1975, 1979) is based on Luria's extensive study of normal individuals and those with neurologic damage in specific known areas of the brain. Details related to these investigations can be obtained elsewhere (Luria, 1966, 1973).

### Relationship of the Model to Achievement

All basic cognitive processes involve coding (simultaneous and successive) and making plans and decisions. Relative competence in the use of these processes can be determined by

tests that measure coding and planning behavior (Das et al., 1979, Das, 1980; Ashman, 1978). Various combinations of such tests have been carried out with subjects who have a wide range of intelligence from retarded (Das, 1984b) to gifted (Karnes & McCallum, 1983), and with those from different cultural (Krywaniuk, 1974, as cited in Das et al., 1979), socioeconomic (Malloy, 1973, as cited in Das et al., 1975) and age groups (Hunt & Randhawa, 1983; Merritt & McCallum, 1983; and McCallum & Merritt, 1983). Thus there is considerable evidence from these studies that supports the claim that Das et al. (1975) make that simultaneous and successive coding are relatively invariant processes.

According to this model of information integration, rote memory requires sequential processing, whereas reasoning usually needs simultaneous processing. Paivio (1976, as cited in Das et al., 1979) claims that when item order is unimportant, simultaneous processing is likely most effective; when item order is crucial, however, successive processing is better. Mathematics appears to be related to simultaneous processing, while any subject in which the retention of essentially unrelated information is required--for example, spelling, is more associated with successive processing.

Many aspects go together to determine intelligent behavior that is necessary for high academic achievement. As has been stated, simultaneous and successive processing are critical. It is, however, the use of the information obtained through these transformational procedures to plan and make decisions effec-

tively for goal attainment that, to a large extent, determines the level of achievement attained.

Several studies have been conducted investigating the application of this model of information integration to school achievement. Krywaniuk (1974, as cited in Das et al., 1979), Cummins and Das (1977, as cited in Das et al., 1979), McLeod (1978, as cited in Das et al., 1979), Snart (1978, as cited in Das & Jarman, 1981) and Kirby and Das (1977) give support to the usefulness of the model, and in general suggest that high levels of simultaneous and successive processing are both necessary, though neither by itself is sufficient for high achievement. Subjects that are high in either mode of processing, but low in the other, attain moderate levels of achievement.

Simultaneous and successive processing, and planning behavior may well be susceptible to improvement through training (Das & Kirby, 1977; Das et al., 1979; Das & Jarman, 1981). Such training, if successful, should increase the level of academic achievement. If students are low in either mode of processing, or in planning, training programs which involve the teaching of strategies could be designed to improve the weak area. Das et al. (1979) define strategies as "ways of selecting, storing, manipulating, managing and outputting information" (p. 159). The focus of the training could be on processing (simultaneous or successive) or on planning and decision making.

Although there are no known studies linking this model of information integration with achievement in the registration

examination in nursing, it seems logical to consider this examination as a specific example of academic achievement.

This model of information integration including the two types of processing, simultaneous and successive, as well as planning and decision making has been examined and appears to be useful in providing direction to the development of the workshop aimed to increase the performance of graduate nurses on the registration examination.

At this point, specific strategies that are associated with the two main units of the model--coding and making plans and decisions--are identified. These strategies have formed the basis for three of the chapters in the Student Manual.

### **Strategies Promoting Simultaneous and Successive Synthesis**

Included in the category of strategies that promote simultaneous synthesis are those which encourage the learner to conceptualize a situation or a phenomenon in its totality, rather than in fragmented segments. Networking, categorization and using imagery and schemata are examples of these strategies.

Strategies that promote successive synthesis are those which encourage the learner to link one idea or concept to another in a serial fashion. These consecutive associations can facilitate the recall of any information in which the components have a relationship that is primarily temporal with each other. Examples of such strategies include the use of mnemonics and other surface-feature associations, as well as the use of a serialist strategy.



## Strategies Promoting Simultaneous Synthesis

### Networking

Rumelhart (1977) describes a network as a

kind of graph that consists of a set of nodes and a set of arcs inter-relating them. The nodes represent concepts and the arcs connecting them represent relationships between and among concepts. Networks are useful for representing the semantic relationships among concepts in memory. (p. 285)

A number of studies (Dansereau, McDonald, Collins, Garland, Holley, Diekhoff, and Evans, 1979; and Holley & Dansereau, 1984) indicate that aspects of human memory can be functionally represented as networks. The networking strategy requires the student to identify important ideas or concepts in the material being studied and to determine their relationships in the form of a network map. This process emphasizes the identification of hierarchies, chains, and clusters.

An illustration of a network prepared for nursing students is available in Appendix B of the Student Manual. Holley and Dansereau (1984) suggest that it may be helpful for learners to prepare networks of concepts in the form of maps to aid in studying. Later, when the learner is faced with a retrieval task, the relationships between concepts can provide a systematic way of moving from one point in the memory system to another (J. R. Anderson, 1983).

Holley and Dansereau (1984) hypothesize that the transformation of prose into a network will assist the student in seeing the overall picture being presented by the author, since the network maps provide the student with a spatial organization of the information. It is on the basis of this hypothesis that this

strategy has been classified as one which may enhance simultaneous synthesis.

#### Categorization and chunking of material

Investigations of free recall have shown repeatedly that individuals systematically group words together during recall, even if the words were presented far apart in a list (Bower & Hilgard, 1981; Wessells, 1982). Subjects most often tend to group words on the basis of their semantic associations. Learning is enhanced by the effective organization of content into categories, many of which are hierarchical in nature. This strategy has been classified as one associated with simultaneous processing because the basis of the categorization is the meaning of the information. Furthermore, one term can be a cue for an entire concept.

#### Using imagery

The function of mental imagery is to put us in direct contact with how something looked, sounded, felt or smelled (Bower, 1972; Richardson, 1980). Mental imagery is one means of re-presenting the perception of past events that have been experienced.

Richardson (1980) claims that "mental imagery not only improves memory performance, but also makes the stored material less vulnerable to forgetting" (p. 72). Although many learners use mental imagery spontaneously, especially in the learning of concrete material, specific instruction to use mental imagery can effectively increase the frequency of such imagery. Bower (1972)

indicates that a significant component in the effectiveness of using imagery for increased learning is the interactive relationship between imagined objects.

A number of learning experiments indicate that imagined or pictorial representation of information usually facilitates memory by a factor of 1.5 to over 3. For example, Paivio (1971, as cited in Bower & Hilgard, 1981) has found that "the concreteness of a word's referent (or the vividness of the imagery it arouses) is the most powerful predictor of the word's memorability" (p. 440).

There appears to be sufficient evidence from the literature to suggest that the use of mental imagery could be encouraged to facilitate the recall of specific content for nursing students, and it may do so through promotion of simultaneous synthesis.

#### Using schemata

Rumelhart (1977) defines a schema as "an abstract cognitive representation of a generalized concept or situation" (p. 290). Tuinman (1980) explains that readers use schemata basically at two points. First, at the input (reading) stage, schemata help to chunk information in a meaningful way and alert the reader if unexpected information is present. Second, schemata are also useful when the reader is trying to remember what has been read.

Learners who have well-delineated schemata have good potential for comprehending associated information from texts. In order to gain such schemata, it would seem logical to encourage students to adopt a style of learning that Schmeck (1983) refers to as 'comprehension' learning. Schmeck describes

comprehension learners as those who "take a global approach to the task, liberally using anecdotes, illustrations, and analogies to arrive at an overall description. They . . . have a wider focus of attention, and try to first build up the 'big picture' before determining where any of the details fit" (p. 236). Schmeck distinguishes two methods by which comprehension learning takes place: deep processing and elaborate processing. He maintains that "one can establish meaning in two distinct ways, that is, by conceptually analyzing (deep processing) or by translating into personal experiences and images (elaborative processing)" (p. 271). Bradshaw and Anderson (1982) also discuss the importance of elaborative processing.

There are various metaphors that help to explain how schemata are helpful in comprehension. Anderson, Spiro and Anderson (1978) suggest that schemata provide 'ideational scaffolding' for text information. Similarly, Anderson et al, (1977) claim that schemata provide the 'interpretive framework' for comprehending discourse. Thus it seems clear that true comprehension involves not only reading the text, but linking what is being read with a selected schema in one's mind. Such a view of comprehension helps to explain research on schemata that shows to what considerable extent prior knowledge, biases and points of view influence what we comprehend (Tuinman, 1980).

In addition to viewing schemata as 'hooks' upon which to attach new information, Anderson et al. (1977) claim that schemata provide the basis for inferential elaboration. As Rumelhart (1977) explains, "if we understand something, our

interpretation is always much more than the comprehension of the sum of the words of the input sentences" (p. 167). A learner with accurate, highly developed schemata, therefore, can confidently go beyond the givens in a message, 'filling in the gaps', so to speak. Collins, Warnock, Aiello and Miller (1975) make the same point when they state "people can often extract what they do not know explicitly from some form of implicit knowledge by plausible but uncertain inference" (p. 414). In an examination situation, the usefulness of such a process for acquiring inferential knowledge through the activation of appropriate schemata is obvious.

Appropriate schemata are helpful in facilitating the retrieval of information. Bruner (1982) claims that "unless detail is placed into a structured pattern, it is rapidly forgotten" (p. 179). It is through the many separate and interlocking schemata in the mind that such detailed material can be conserved in memory, represented in a simplified way. Later, when retrieval of the information is desired, activating a particular schemata will permit its reconstruction (Anderson & Pichert, 1978).

Thus, it has been shown that plentiful, well-delineated and highly integrated schemata provide a framework not only for comprehending material to be learned today, but also for retrieving that knowledge in the future. Using schemata to enhance comprehension and retrieval has been categorized as a strategy contributing to simultaneous synthesis because the learner is encouraged to integrate new information with old, and to survey

all important components of a concept as an interrelated whole. Using schemata is not the simple association of one concept with another in serial fashion.

### Strategies Promoting Successive Synthesis

#### Mnemonic devices

Mnemonic devices are those memory aids which enable an individual to systematically retrieve the information that has been learned. This retrieval process is based on association, not with the meaning of the information necessarily, but usually with some surface-feature of the name of the item or concept. Examples include the use of rhymes ("I before E except after C . . .;") "Thirty days has September . . .") and the use of sentences in which the first letter acts as a cue ("On old Olympus' terraced tops a Finn a German vaulted so high": the first letter suggesting the names of each cranial nerve in sequence). An acronym is another example of a mnemonic device: 'ABC'--A (Airway), B (Breathing), C (Circulation) comprise the steps for cardiopulmonary resuscitation.

Bower and Hilgard (1981) describe a much more sophisticated mnemonic system based on pre-learned sets of pegwords that can be used as 'hooks' to aid in the retrieval of lists of terms, historical events, anatomy and so on. Recall is reported to be two to three times greater than normal (Bower & Hilgard, 1981) and in some instances with considerable practise, is phenomenal (G. Best of Memory Dynamics, personal communication, February, 1985).

Mnemonic devices are examples of surface approaches to learning. This approach implies skipping across the top, picking up the epiphenomena of the content rather than its latent or potential meaning (Biggs & Rihn, 1984). The appropriateness of the use of a surface approach depends on the task and whether or not it is combined with meaning-oriented strategies. Biggs and Rihn recommend such an approach should remain an option for selected learning tasks, rather than a characteristic style.

In nursing, even though there is no semantic relationship between the cue and the concept (ABC and cardiopulmonary resuscitation, for example), mnemonic devices can be extremely useful in real life situations as well as in examinations in which sequences, priorities and specific details are tested.

The use of mnemonic devices to aid in learning has been categorized as a strategy which promotes successive synthesis because of the consecutive nature of the retrieval cues and the presence of surface feature, rather than meaning-oriented associations.

#### Serialist strategy

Schmeck (1983) describes learners who use a serialist strategy as those who progress linearly from one topic to the next. He claims such learners are "routinely concerned with operational details and procedures, working step by step through a series of topics, attending carefully to sequential details" (p. 236). In nursing, there are many instances where this strategy can be applied, for example, in the learning of a specific sequential process, such as head to toe assessment. In

addition to using this serialist strategy, it is advisable for learners to also use analogies and build up an overall picture of the material being learned. Failure to do so can result in a situation that Schmeck describes as one in which the learner "sees the trees but misses the forest" (p. 236).

### Strategies Promoting Effective Planning and Decision Making

Strategies that strengthen the learner's planning and decision making processes include the activities that come under the general heading of 'metacognition' which Flavell (1978, as cited in Baker & Anderson, 1981) defines as "one's knowledge and control over his own cognitive processes" (p. 2). Such metacognitive strategies can be applied during reading, studying, and test taking.

Baker and Brown (1980) and Winograd and Johnston (1980) have shown that successful students evaluate their understanding as they read. If they encounter an inconsistency or something which is incongruent with background knowledge, they recognize the resulting confusion is a signal that comprehension is faltering. T. H. Anderson (1979) suggests, however, that mature readers need not devote constant attention to evaluating their understanding. He postulates the existence of an 'automated monitoring mechanism' which produces 'clicks' of comprehension and 'clunks' of comprehension failure.

Realizing that one has failed to understand is only a part of comprehension monitoring; one must also know what to do when comprehension fails. Baker and Brown (1980) state that intervention in such a situation involves a number of strategic



decisions, the first being whether or not remedial action is even necessary. If the reader decides not to take action, the confusion may be stored in memory as a pending question (T. H. Anderson, 1979). Alternatively, the reader may decide to take action immediately, which may involve re-reading, reading ahead in the text or consulting a resource.

When reading for remembering or studying, Baker and Brown (1980) state that "it is obviously helpful, if not absolutely essential, to understand the material one is studying" (p. 32). Failure to comprehend material would result in a reliance on difficult rote remembering techniques to attempt retention of the subject matter.

One way to facilitate studying from texts is for students to engage in self-questioning. André and Anderson (1978-1979) developed and tested a self-questioning study technique which facilitated learning better than passive strategies such as simply rereading the text. Other writers have found questioning to be an effective aid to learning (Rickards, 1980; T. H. Anderson, 1979; Anderson & Armbruster, 1982; Balajthy, 1983; Hayes & Diehl, 1981).

Since there is an enormous volume of literature related to study skills that is readily available (Day, 1980; Brown & Day, 1983; Main, 1980; Dyer, Riley & Yekovich, 1979; Hounsell, 1979; Entwistle, Hanley & Hounsell, 1979; Gibbs et al., 1982; Schmeck, 1983; T. H. Anderson, 1979; Brown, Smiley, & Lawton, 1978; Winne, 1983), this literature will not be specifically reviewed here.

In addition to using metacognitive strategies while reading and studying, it is particularly important for students to use effective planning and decision-making processes during test taking. Such processes, although flexible, generally constitute reading the question carefully to comprehend the intended meaning, picking out key words, reading each response critically and employing one or more deductive reasoning or cue-using strategies as the situation dictates. If students have gained sufficient practise in responding to multiple-choice questions, the process of analysis and response during the examination will become automatic, which allows all thinking to be directed toward the content of each question. Kirby (1984a) describes the value of automatized plans in terms of reducing the amount of selective attention that is required for planning, thus increasing that which can be focussed on knowledge acquisition or retrieval.

### **Evaluation of Strategy Training Programs**

Many studies have been carried out evaluating the effectiveness of various programs which have involved training in the use of strategies (Holley & Dansereau, 1984; Biggs & Rihn, 1984; Kaufman, 1978, as cited in Das et al., 1979; Reid, as cited in Das et al., 1979; Weinstein, 1978; Wittrock, 1979; Schmeck, 1983; Mayer, 1980; Weinstein, Underwood, Wicker, & Cubberly, 1979; and Dansereau et al., 1979). Most of these studies have shown some increase in achievement, provided the learners understand the strategies, obtain enough practise, and are convinced of the relevancy of the training.

## Direction the Model of Information Integration Provides for this Study

The purposes of this study are to develop and to evaluate a workshop to assist graduating nursing students to prepare for the registration examination.

The assumptions that have been made are that both kinds of synthesis and effective planning and decision making must be used appropriately in order for candidates to attain high scores on the registration examination. It has also been assumed that it is possible to promote achievement in a theoretical test of nursing through strategies that encourage simultaneous and successive synthesis and planning and decision making. If these assumptions are true, and if nursing-related activities can be devised to encourage these processes, then there may be potential for examination candidates to achieve higher scores. The workshop to assist graduating students to prepare for the registration examination developed for this study consisted of the following four components: a presentation, self-study guidelines, a practise test, and a review of the practise test.

This theory of information integration, therefore, gives direction to the task of developing the workshop. The theory suggests, first, to motivate students so that their attention is aroused. Then, it suggests to enhance students' simultaneous and successive processing of information, and finally to assist students to use information thus processed to make sound plans and decisions relative to studying and test-taking.

In regard to the first unit of the model, arousal, attempts were made to increase student interest in the registration

examination and to motivate students towards study. Because motivation was identified in the literature as highly significant in determining achievement in any academic task, all four components of the workshop attempted to increase student motivation.

In relation to the second unit of the model, the coding of information, nursing students were encouraged to use various strategies which have been conceptualized in this study as means to promote both kinds of coding: simultaneous synthesis (the arrangement of information in spatial arrays) and successive synthesis (arrangement of information into temporally-based, consecutive series). Examples of such strategies which have been described include the use of networks, imagery and mnemonic devices.

Finally, in association with the model's third unit, planning and decision making, students were encouraged to use retrieval, monitoring and test-taking strategies both during the study period and during the examination. The four components of the workshop all encouraged these strategies as a means of promoting students' planning and decision-making processes. For example, the presentation and Student Manual for self-study discussed planning in regard to a study schedule, and encouraged students to adopt workable and flexible retrieval plans. Furthermore, the practise test gave opportunities for active decision making in relation to choosing the best option, and the review of the practise test provided students with more information upon which to plan specific areas for further study. The

model of information integration has given direction to each of the four components of the workshop, which has been summarized in Table 2-1.

### **SUMMARY**

This chapter has examined the literature for recommendations to facilitate learning and reviewing that would be applicable for college-based nursing students preparing for the registration examination. In summary, the attempt has been to select and review a variety of relevant literature to provide evidence of a synthesis of knowledge upon which the workshop developed for this study has been based.

The next chapter describes the development and implementation of the workshop over a period of five semesters.

TABLE 2-1

**SUMMARY OF THE DIRECTION THAT THE MODEL OF INFORMATION INTEGRATION PROVIDES  
FOR THE WORKSHOP TO PREPARE STUDENTS FOR THE REGISTRATION EXAMINATION**

UNITS OF THE MODEL	COMPONENTS OF THE WORKSHOP			
	Presentation	Self-Study Guidelines	Practise Test	Review of Practise Test
Arousal	Arouse sufficient anxiety to stimulate studying.	Motivate to stimulate studying.	Create anxiety needed for study but reduce anxiety on actual exam.	Results reward good students and provide motivation for others to improve.
Simultaneous Synthesis	Encourage understanding of component parts in terms of whole concepts.	Encourage meaningful associated strategies.	Provide practise using strategies in a wide variety of situations, focussing on commonalities.	Encourage analysis in terms of overall situation, specific knowledge, and the nursing process.
Successive Synthesis	Encourage the selective use of mnemonic devices.	Encourage surface feature associated and serialist strategies.	Provide practise using strategies, focussing on each separate question in a series.	Provide breakdown of marks to help students study most strategically.
Planning and Decision Making	Explain exam blueprint and preparation of a study schedule; explain and practise process for responding to test questions.	Reduce excessive anxiety; explain strategies for studying, monitoring learning and test-taking.	Provide practise using and evaluating retrieval and test-taking strategies.	

## CHAPTER 3

### DEVELOPMENT AND IMPLEMENTATION OF THE WORKSHOP

#### OVERVIEW

This chapter introduces the context of the present study, discusses the aims and description of the workshop for the registration examination and explains the changes made to each component of this assistance over time.

This study was carried out at the Nursing Program within MLB Community College in British Columbia. In total, five classes of graduating nursing students participated in successively refined version of the workshop. The classes that received this preparation wrote the registration examination in June or October of 1984 or in January, June or August of 1985. The five previous classes who wrote the registration examination in August of 1982, January, June or October of 1983 or January of 1984 served as comparison groups. These ten consecutive classes of graduating nursing students have been numbered from 1 to 10. Thus, groups 1 to 5 served as a control while 6 to 10 participated in the workshop.

The literature described in Chapter Two has provided the basis for the development of the workshop to assist nursing students prepare for the registration examination. A major cause of difficulty students encounter when studying for this examination is their reduced ability to relate the content from the various nursing and support courses that comprise the nursing curriculum. Seeking ways of increasing the students' synthesis of relevant content, therefore, became a primary goal. As

described in Chapter Two, the model of information integration, with its units of arousal, coding, and planning and decision making, provides the direction in meeting this goal through the development of the following components of the workshop: a presentation, self-study guidelines, a practise test and a review of the practise test.

Because of the anticipated difficulty of increasing performance on this examination, the components of the workshop were conceptualized as complex learning activities that approached multiple goals and addressed the major causes for reduced performance. Each component of this workshop, therefore, took time to be developed in its final form. Development proceeded from a basic prototype of the activity that was desired to a more sophisticated version as the literature was reviewed and implementation was carried out. Table 3-1 summarizes the development of the workshop and outlines specific characteristics of each of the components for the nursing students in groups 6 to 10.

#### **AIMS AND DESCRIPTION OF THE WORKSHOP**

This section identifies the aims and briefly describes each of the following components of the workshop: the presentation, self-study guidelines, the practise test and the review of the practise test.



TABLE 3-1

SUMMARY OF DEVELOPMENT AND IMPLEMENTATION OF THE WORKSHOP

GRADUATING NURSING STUDENTS FROM MLB NURSING PROGRAM

COMPONENTS OF THE WORKSHOP	Group 6		Group 7		Group 8		Group 9		Group 10	
	1. Presentation	By writer		By writer		By other		Same as 8		By writer
2. Self-Study Guidelines	Handouts		Handouts		Handouts		Handouts		Manual	
3. Practise Test % of class writing Number of test items Time allotted from scheduled hours	Interim test 48 100 No	Same as 6 44 100 No	Original test 36 400 No	Revised test 82 400 Yes	Same as 9 96 400 Yes					
Reliability/St. error of measurement # of writers providing item analysis	.69 / 3.98 26		.85 / 8.48 27		.91 / 8.55 69					
4. Review of the Practise Test Feedback available	General	General	General	General	General	General	General	General	Printout	
Date of Program Completion	April 84	August 84	December 84	April 85	August 85	April 85	June 85	August 85		
Date of RN Examination Writing	June 84	October 84	January 85	June 85	August 85	June 85	August 85	August 85		

The presentation was viewed as a way to motivate students to study, to provide them with information about the examination and to encourage them to use strategies to increase retrieval of information and general test-taking skills. The content discussed included the following areas: the registration examination blueprint and weighting of content areas; strategies for responding to multiple-choice questions; strategies for studying and reviewing; and ways to make anxiety helpful. During the presentation, students were actively involved in responding to examples of test items that related to various components of the blueprint for the registration examination. Prepared overhead transparencies and printed examples of questions were used as teaching aids.

The purpose of the self-study guidelines was to provide students with a variety of suggestions for reviewing, studying effectively, and test-taking, from which they could select those ideas that were congruent with their learning style. The literature identifies clearly that one method of learning will not meet the needs of all individuals. It was therefore decided to develop a student manual in which the context of heterogeneity of learners described in Chapter One could be addressed. The recommendation from the literature that students need to acquire a tool chest of methods for learning provided the rationale for this Student Manual. The metaphor of the tool chest was intriguing. This chest (Student Manual) contains a variety of tools (ideas, suggestions, strategies for learning and test taking). If selected and if used appropriately, these tools

could possibly be a valuable aid to learning. The content in the manual is based on knowledge that increased as the literature was being reviewed. A copy of the Student Manual is available in Appendix A. As is indicated in Table 3-1, handouts were used for self-study while the manual was being developed. These are available in Appendix B.

The goal of the practise test was to assist students with the process of test taking. Because the registration examination is also comprised totally of multiple-choice items, it was anticipated that students would benefit from writing the practise test both through motivating further study in weak areas and also through reinforcing and relating content presented early in the program.

The problem of test-taking anxiety was identified in Chapter One as a potential cause of reduced performance on the registration examination. The practise test was intended to simulate the actual examination as a means of reducing anxiety that is higher than optimum. There was evidence from the literature discussed in Chapter Two that anxiety associated with an important test may be due to an element of the unknown. Thus, a simulation in the form of a practise test may help to reduce such anxiety. The practise examination was organized according to nursing care situations followed by a series of multiple-choice items. A copy of the final version of the test is available in Appendix C.

One goal of the review of the practise test was to give students a clear picture of their strengths and weaknesses in the

various aspects of nursing--in other words, to be a diagnostic assessment tool. There is evidence from the literature discussed in Chapter Two that knowledge of the results of performance can increase academic achievement.

What was envisioned was a computer program that produced a printout for each student based on the results of the practise test. For students in group 10, this program for test analysis had been developed, so that specific feedback in the form of a computer printout was available, a sample of which is provided in Appendix D. The other four groups of students received general feedback as a result of seeing their own test and identifying which areas seemed to cause most difficulty.

Another objective of the review of the practise test, this time from the affective domain, was to promote in students a positive feeling that the MLB Nursing Program had provided them with a sound curriculum and many strategies to assist them to review and study. It was hoped that students would feel encouraged by the knowledge of their strengths, motivated for further study through identification of weak areas and challenged to prepare themselves for the registration examination to the best of their ability.

## **CHANGES MADE TO THE WORKSHOP**

### **The Presentation**

Although precise attendance was not taken for each presentation, there was a turnout of approximately 90-100% of the students each time. The handouts to guide self-study were distributed during the latter portion of the presentation;

students were encouraged to ask questions and several points were clarified and elaborated upon.

As is shown in Table 3-1, the presentation was carried out by the writer for groups 6 and 7. Another faculty member of the MLB Nursing Program gave the presentation for groups 8 and 9. This individual, a colleague of the writer who had attended the session for group 6, used the same objectives, overhead transparencies, sample multiple-choice questions and handouts.

The writer conducted the presentation for group 10. Instruction for this group was slightly different than for the other four groups in that the manual had been developed and some time was spent describing to students how it could be useful. The networking strategy was demonstrated using familiar nursing content and reference was made to a different example of this strategy in the Student Manual. Group 10 was also unique in that there were only a few days between the end of the semester and the writing of the registration examination. Previously, this period of time had been about 6 to 10 weeks.

### **Self-Study Guidelines**

As has been shown in Table 3-1, during the time the manual was being developed, students received handouts containing suggestions for self-study and test taking. These handouts represented the beginning the Student Manual. The students in group 10 were encouraged to purchase a Student Manual, copies of which were made available at a cost of \$5.00. Altogether, 23 of the 25 students who subsequently wrote the registration examination bought a manual. The other students were planning to share.

### The Practise Test

Groups 6 and 7 received a practise test consisting of 100 multiple-choice items that aimed to test application of nursing knowledge. This test was assembled quickly with consideration given to content validity only in so far as to assure there were questions from each specialty area of nursing. For the purpose of this study, this examination has been referred to as the interim test that was used until a longer, more valid and reliable one could be developed.

A 400-item test, administered to group 8 students, was developed specifically for this workshop. This examination has been referred to as the original test. To obtain questions for this test, a table of specifications was used to select a representative number of items relating to clients of all age groups in situations of health and illness. This table also identified broad categories of health problems, classified as they are in the registration examination blueprint.

This original practise test was prepared in two parts, each with 200 items. A test of this length was desired to give the students considerable practise with multiple-choice items and to obtain a sufficient number of questions in particular content areas to provide accurate feedback to students. The questions that made up this practise test were adapted, with permission, from a variety of nursing review books (Lagerquist, 1982; McMorro & Malarkey, 1983; Saxton, 1984; S. F. Smith, 1982) and from the question banks of three nursing programs. The sources of the questions were acknowledged at the end of each section of

the test. Students wrote the first 200 items in the morning and the remaining 200 items in the afternoon following a break, which is similar to the procedure for the actual registration examination. Students were allowed 2 1/2 hours to write each section. In total, nine students from group 8 wrote both parts of this practise test. At this time, as indicated in Table 3-1, writing the practise test was considered an optional experience, to be written by students during their free time. Because so few student wrote the test, it was made available to 18 recent graduates from another basic diploma nursing program who were preparing for the registration examination. The aim was to have as many writers as possible in order to carry out meaningful item analysis. Altogether, 27 individuals wrote this original practise test.

After group 8 had written this original 400-item practise test, revisions were made based on several sources of data: item analysis, the textbook Measurement and Evaluation in Teaching by Gronlund (1981), and student and faculty input.

Item analysis for each question was performed by computing indices of item discrimination and difficulty. Items in which the correlations between students' results for a particular item and their results on the total test were negative discriminated in the wrong direction, and therefore were revised. Revisions were also made based on the question difficulty. The aim was for most of the items to have a difficulty index between 20 and 80 with the average about 50 in order to test the full range of student ability.

Each question was also assessed in relation to Gronlund's (1981) recommendations for well-constructed items. Changes were made to the wording of many of the item stems and to the format of each situation. Options were assessed for plausibility and parallel grammatical construction and changed as required.

Students made both written and verbal comments about the questions, which were used to evaluate and revise the items. Input from 10 faculty members, who were selected primarily on the basis of their subject matter expertise, was also solicited. They critiqued selected items according to the criteria available in Appendix E. Helpful suggestions for change were obtained from all of these individuals. Once these changes were made, the test was considered to be in its final version for the purpose of this study. This final version of the original test has been referred to as the revised test.

Because of the small number of students from group 8 who wrote the practise test, the test was made part of the mandatory curriculum for nursing students beginning with group 9. This change accounts for the increase in the percentage of the class writing the test, from 36% - 48% to 82% - 96%, as indicated in Table 3-1. In order to further increase the number writing to be able to carry out more meaningful item analysis and to obtain a reliability coefficient based on a larger number, the revised practise test was made available to graduating nursing students from other programs in the area. Altogether, 69 individuals wrote this examination, upon which the reliability of .91 is based.



### The Review of the Practise Test

These reviews were held a week after the students had written the practise test. Generally, students attended the review for 1/2 to 1 hour. Typically, however, a few students from each group stayed for 2 or 3 hours and took every advantage of the opportunity to both critique and challenge questions and seek clarification as to why the response designated as the best answer was better than their chosen option.

The review of the practise test for group 10 was carried out in a similar manner with the addition that a computer printout providing specific feedback to students was now available, as indicated in Table 3-1. This printout displayed each student's percentage of correct answers in various aspects of nursing based on the results of the practise test.

In September, 1984, the writer had submitted the idea of a test analysis program to the computer science department of MLB College as a suggestion for a student project. Subsequently, two students from this department undertook to develop such a program based on a systematic classification of each test item four different ways. The four separate classifications each contained a varying number of subscales. The first classification, based on content areas of nursing, included the following six subscales: nutrition, pharmacology, communication, growth and development, health teaching and prevention of illness, and legal and ethical issues. Questions were categorized according to the main content being tested into one of these subscales; those

items that did not pertain to any of these subscales were coded as 'others'.

In a similar manner, all 400 items were also categorized according to a second classification: the specialty area of nursing. Six subscales were identified: medical, surgical, obstetrical, pediatrics, psychiatry and general/community. Thus, questions were coded according to the specialty area with which the situation was most related.

The third classification was based on the phase of the nursing process used to give care to clients. Questions testing assessment and evaluation were used as one subscale; items relating to planning and implementing of nursing care were combined to form the other subscale. Questions measuring aspects of nursing that were not associated with the nursing process were categorized as 'others'.

The fourth and final classification addressed the level of the question according to Bloom's (1956) taxonomy. Three subscales were identified: knowledge, comprehension, and application. All 400 items were categorized according to the taxonomy level of the question.

The computer program that analyses students' answer sheets is based on essentially a simple principle: if the student's answer to an item matches the correct answer, then four counters are incremented, one in each of the separate classifications. The particular counter incremented would depend on the specific categorization of the item. If the student's answer is not correct, no counter is incremented for that item. All 400 items

are processed in this manner for each student. The results are then converted to percentages of the total number of items in that subscale and bar graphs produced.

The review of the practise test for students in group 10 was greatly facilitated by having specific feedback available for all students. An example of the manner in which the printout was useful was evident with students whose 'knowledge' graph was considerably higher than their 'application' graph. Such students were advised to concentrate on applying what they knew to situations, rather than focussing on increasing their knowledge of facts and specific details.

#### SUMMARY

This chapter has described the aims of the workshop for the registration examination and the changes in development of each of the components over time. The development and implementation phase of this study took place over 20 months, from January of 1984 to August of 1985.

The next chapter describes the methods used to evaluate the workshop in terms of promoting increased performance of MLB nursing graduates on the registration examination.

**CHAPTER 4**  
**EVALUATION METHODS**

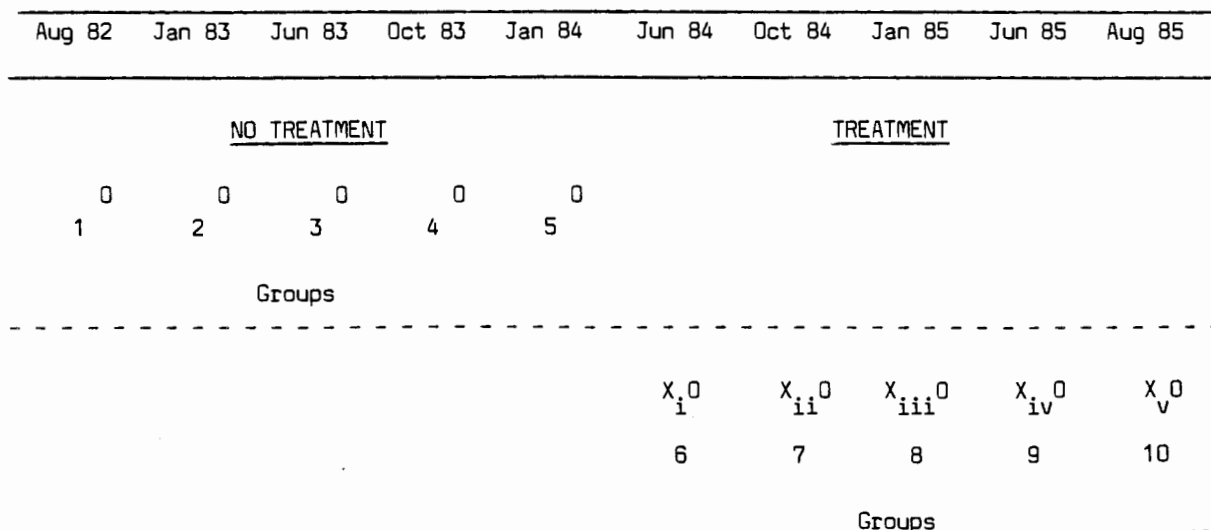
**OVERVIEW**

The research question addressed in this study was:

**Can a workshop be developed for graduating nursing students that will assist them to prepare for the registration examination to the extent that their scores on this examination will increase?**

Chapter Three has described the workshop that was developed for this study and implemented as a curriculum change for five classes of students graduating from the MLB Nursing Program. The purpose of this chapter is to describe the methods used to evaluate the effect of this curriculum change on students' registration examination scores. In order to carry out such an evaluation, control groups were needed. The records of students from the five classes immediately preceding the treatment groups provided comparison data and hence served as controls. This evaluation study with nonequivalent control groups can be diagrammed as follows.

**FIGURE 2: DESIGN OF THE STUDY**



With reference to Figure 2, the 'O', indicating observations, symbolizes the group mean of the registration examination scores of nursing graduates from MLB College over a three year period. The horizontal spacing represents the fact that the observations of groups 1 to 10 have not been simultaneously observed. The 'X' refers to the treatment, the subscript representing the change in development of 'X' over time. The broken line indicates that the treatment and control groups have not been formed randomly. The date that each group wrote the registration examination is shown.

The dependent variable is the registration examination scores for MLB nursing graduates from ten consecutive classes. These scores are standardized scores, with a mean on the norming group of 500 and a standard deviation of 100. The Canadian Nurses' Association Testing Service (CNATS) prepares and marks this examination that is used by all ten provinces to admit nurses into the profession. Thus, the same examination (with French and English versions) is used across Canada. This test has an acceptable reliability greater than .85. A precise statistic was obtained on the condition that it not be published (personal communication from Dr. Eric Parrott, Director of the Canadian Nurses' Association Testing Service).

The independent variable is the presence or absence of students' participation in the workshop that was developed. This workshop, comprised of a presentation, self-study guidelines, a practise test and a review of the practise test, has been referred to as 'treatment'.

In order to evaluate the effect of this treatment on students' registration examination scores (i.e., the outcome) using the design as pictured in Figure 2, it was essential that the treatment and control groups be examined for initial differences that could account for variation in the registration examination scores (Cook & Campbell, 1979). It was also essential that the specific components of the workshop be assessed to identify which aspects, if any, were perceived by students and by the writer as helpful in relation to the outcome and which could be improved.

The evaluation component of this study adapts Stake's (1967) model for educational evaluation, categorizing data from three areas: antecedents (specific variables and characteristics of student groups that may have been different prior to the workshop); transactions (processes that make up the treatment) and outcomes (scores on the registration examination).

For the purpose of this study, it was assumed that the five no-treatment groups could be combined to form a population of MLB nursing students that did not have any extra preparation for the registration examination. Such an assumption was necessary in order to have a large base group against which each of the five treatment groups could be compared. This large no-treatment group was comprised of the most recent nursing students graduating from MLB college who had not had any workshop experience, and has been referred to as the base group. One-way ANOVA was used with each antecedent variable that was examined to identify any

differences in the distributions of the scores for these variables among these five no-treatment groups.

Table 4-1 identifies each assessment focus, together with evaluation questions and an outline for the ways in which these questions have been addressed. The rest of this chapter describes the methods used for evaluating the workshop based on the organization set out in Table 4-1: an examination of antecedents, transactions and outcomes. The antecedents and outcomes have been assessed using quantitative methods, while the transactions were examined qualitatively.

#### ANTECEDENTS

The admission requirements and selection procedure for students in the base and treatment groups were assessed for differences.

Because it was recognized that any systematic difference between students from the base and treatment groups could lead to differences in the registration examination scores, it was considered important to collect and compare measures of student characteristics that might be relevant to success on this examination. The antecedent variables assessed were the following: age; reading ability, as measured by Nelson-Denny Reading Tests of vocabulary, comprehension and reading rate; and nursing aptitude measured by the Psychological Services Bureau (PSB) Nursing School Aptitude Examination scores. Data from each variable were examined to determine whether any one of the treatment groups differed in comparison to the base group. Each of these variables is described in the following paragraphs.

TABLE 4-1

OUTLINE FOR EVALUATION OF THE WORKSHOP

METHOD FOR EVALUATION

EVALUATION QUESTION

ASSESSMENT  
FOCUS

- ANTECEDENTS
1. To what extent were there initial differences between students from the base and Tx groups prior to entry into the nursing program?
  2. To what extent did students from the base & the Tx groups experience the same nursing curriculum prior to the workshop?

- 1a Compare admission requirements and selection procedure.
- 1b Compare measurements of selected antecedent variables.
- 2a Examine curriculum records for changes.
- 2b Compare selected characteristics of each group.

- TRANSACTIONS
1. What were the students' and the writer's evaluations of each component of the workshop?

- 1a Obtain responses to student questionnaire.
- 1b Evaluate each component and the process of development and implementation.

- OUTCOMES
1. What was the relative position of MLB nursing graduates from each group compared to provincial and national means on the registration examination?
  2. Were the RN scores for the Tx groups higher than those for the base group once that portion of variance explained by initial differences between the base & Tx students was removed?
  3. Did the Tx students with low GPAs contribute more to the effect associated with the Tx variable compared to high GPA students?

- 1 Compare mean RN scores of MLB graduates with provincial and national means for each group.
- 2a Compare mean RN scores, removing the variance explained by initial differences.
- 2b Compare effect size & percentile equivalents.
- 3a Assess for nonlinearity in the relationship between GPA and RN score.
- 3b Compare the mean residual scores of students from the Tx groups at low and high GPA levels.

Note: Tx = treatment.  
RN score = score achieved on Registered Nurses' Examination.



Because nursing students are typically quite diverse in age, this variable was considered important to assess, even though there was no expectation of a relationship with the dependent variable.

The main rationale for using the Nelson-Denny Reading Test scores was that evidence presented in Chapter Two showed that reading ability is associated with high achievement in nursing. In addition, the Nelson-Denny Reading Tests have respectable psychometric qualities of reliability and validity.

The reliability for the Nelson-Denny Reading Test, based on students in four college-grade levels is reported in the Test Examiner's Manual (Nelson & Denny, 1960) as the following (p. 26): Vocabulary, .93; Comprehension, .81; and Reading Rate, .93. Also reported are the types and geographic locations of educational institutions which participated in the standardization of these tests.

Forsyth (1978), in his review of the Nelson-Denny Reading Test, states:

. . . the Nelson-Denny Reading Test appears most useful at the college level. At this level, if local norms are developed, the test may serve the predictive, screening, and diagnostic purposes for which it was developed. (p. 1209)

The Nelson-Denny Reading Tests (Form A) had been used in the selection of students for the MLB Nursing Program. Grade 12 level was required throughout the time of the study.

The aptitude measures included in the Psychological Services Bureau Nursing School Aptitude Examination are: academic aptitude, spelling, reading comprehension, natural science and

vocational adjustment. These tests were administered to students upon entry to the program but had not been part of the admission criteria.

The PSB Nursing School Aptitude Examination is a standardized battery of tests. The norming sample consisted of the test scores for 2,170 applicants to nursing schools. The 64 schools of nursing that participated in the study were chosen so that there was proportionate representation from each of nine geographic divisions of the United States. Thus this norming sample is representative of nursing applicants and nursing graduates of American nursing programs. At the time the present study was conducted, the subjects participating in the workshop were students in a Canadian nursing program, which draws on a predominantly Canadian population. To the extent that there are similarities between American and Canadian nurses, the aptitude tests should be valid for the students in this study.

Table 4-2 reports the reliability coefficients for the PSB Nursing School Aptitude Examinations based on applicants to American nursing programs (Evans, Roumm & Stouffer, 1983, p. 33).

**TABLE 4-2**

**TEST-RETEST RELIABILITY COEFFICIENTS FOR THE  
PSB NURSING SCHOOL APTITUDE EXAMINATIONS FOR  
119 APPLICANTS TO AMERICAN NURSING PROGRAMS**

Variable	Reliability Coefficient
Academic aptitude	.98
Spelling	.97
Reading comprehension	.98
Information in natural sciences	.94
Vocational adjustment index	.92

Table 4-3 presents the correlation coefficients between the PSB Nursing School Aptitude Examination scores and Licensing Examination scores, based on 103 nursing graduates from American nursing programs (Evans et al., 1983, p. 38).

**TABLE 4-3**

**CORRELATION COEFFICIENTS BETWEEN PSB NURSING SCHOOL APTITUDE EXAMINATION SCORES AND LICENSING EXAMINATION SCORES FOR 103 GRADUATES FROM AMERICAN NURSING PROGRAMS**

Variable	Correlation with Scores on Licensing Examination (r)
Academic aptitude	.93
Spelling	.72
Reading comprehension	.86
Information in natural science	.91
Vocational adjustment index	.77

The results of the comparisons of the full set of these antecedent variables provide data to answer the first evaluation question:

*To what extent were there initial differences between students from the base and the treatment groups prior to entry to the nursing program?*

This question can not be answered completely because there are undoubtedly additional characteristics (motivation level, for example), for which measurements are not available.

The curriculum records were then examined for changes. Even though all ten groups of nursing students progressed through the same nursing program, the curriculum can be expected to change over time and other events occur which could lead to differences in registration examination scores. If such changes coincided with the introduction of the workshop, then effects could be

mistakenly attributed to the treatment when, in fact, they reflect other causes.

Included in this section was an assessment not only of specific changes in the content and learning experiences of the nursing curriculum, but also a comparison of selected group characteristics, including group size, attrition, and students' GPA. Each of these factors was thought to potentially influence a student's score on the registration examination. For example, a student from a large class in which the mean GPA is low would without doubt experience a different curriculum than the same student in a small class in which the mean GPA is high.

The assessment of these factors addresses the second evaluation question.

To what extent did students from the base and the treatment groups experience the same nursing curriculum prior to the workshop?

To summarize this section on antecedents, the goal is to collect and compare data in areas that are likely related to performance in the registration examination for students in the base and the treatment groups. The results of comparisons were used in interpreting the findings and in adjusting for differences in the outcome measure.

## **TRANSACTIONS**

The evaluation question addressed in this section on transactions was:

What were the students' and the writer's evaluations of each component of the workshop?

These assessments were important to the study for two main reasons. One was to provide formative data upon which to revise

the components of the workshop. The other was to give evidence of the extent to which students and the writer perceived the workshop was helpful in terms of assisting students to prepare for the registration examination.

The tool used for gathering this data from students was a questionnaire which, along with a letter of explanation, is provided in Appendix F. This questionnaire requested feedback from students in group 10 only, because it was at this point that the development of the workshop was considered completed.

The writer evaluated each component of the workshop under the headings of major strengths and areas of weakness, using the guidelines for evaluation available in Appendix G.

## OUTCOMES

The first evaluation question in this section on outcomes examined whether there had been any change in mean registration examination scores of MLB nursing graduates relative to provincial and national means during the time period of this study.

*What was the relative position of MLB nursing graduates from each group compared to provincial and national means on the registration examination?*

To address this question, the mean scores on the registration examination of graduates from MLB Nursing Program, from British Columbia and from Canada were obtained and compared over the time period considered in this study.

The second evaluation question in this section assessed whether there were any significant overall effects of the treatment on the registration examination scores.

*Were the registration examination scores for students from the treatment groups higher than those for students from the base group once that portion of variance explained by any significant initial differences was removed?*

To answer this question, the initial differences that related to the registration examination results were identified. The aim was to find, from the available variables, those which singly or in combination explained the greatest proportion of variance in the registration score. The more variance that can be explained, the smaller the residual variance will be. A test of significance of a treatment effect will, therefore, be more powerful.

In order to identify variables that may be useful in predicting the registration examination scores, a preliminary step involved computing the Pearson correlations of the available variable means with the mean registration examination scores for all 10 groups.

A more specific assessment of the relationship between the value of each variable and the individual registration examination scores followed. Pearson correlation coefficients for all students from the base group were computed for each variable with the registration examination score. Two multiple regression analyses were carried out to identify a covariate for subsequent analyses of covariance. One used the three variables most highly correlated with scores on the registration examination as predictors and the registration examination score as the dependent variable. The second used only GPA with the registration examination scores because the literature identified that GPA was a good predictor.

Analysis of covariance was then used to compare the registration examination scores of each treatment group with those of the base group. Subsequently, effect sizes comparing each treatment group's score to the base group's score were computed by subtracting the base group's adjusted mean score, as output from the analysis of covariance, from the treatment group's adjusted mean. The difference obtained was then divided by the square root of the residual mean square available from the analysis of covariance. These transformations produced scores normalized to a scale with a mean of zero and a standard deviation of one. Then, each effect size was converted to a percentile equivalent. The purpose of this conversion is to permit comparisons across the various analyses of treatment effects (Lyman, 1978).

The third and final question related to outcomes was an extension of the second question, to focus specifically on low GPA level students.

*Did the treatment students with low GPAs contribute more to the effect associated with the treatment variable compared to high GPA students?*

To assess whether the low GPA students' performance on the registration examination increased more than that of the high GPA students, a test for deviation from linearity of the relationship between the registration examination scores and the covariates selected for regression analysis was computed for all groups and each result compared to that of the base group.

To further address this question, treatment students were divided into two categories based on GPA level. High GPA

students were defined as those students with GPAs of 2.80 or more. Low GPA students were defined as those with GPAs of 2.79 and less. Next, the registration examination scores for all treatment students were predicted, using the equation obtained from the regression analysis involving the scores of students from the base group. The predicted registration examination scores were then subtracted from the actual scores to compute a residual score for each treatment student. If the regression equation used for prediction expressed a relationship that were truly linear, then the error in predicting the scores of treatment students would be random. Residual scores, therefore, would be equally likely to be positive as negative, unless there were another systematic source of variance. These residual scores were added and averaged separately for low and high GPA students in each treatment group to identify the source of any effect associated with the treatment variable. If the treatment variable were correlated with increased scores for low GPA students only, the average of the residual scores would be positive for low GPA students and close to zero for high GPA students. For each group, the mean residual scores for high and low GPA students were compared to determine which GPA level of students contributed most to the treatment effect. Five t-tests were computed to test for significant differences in these pairs of means.

### **SUMMARY**

This chapter has described the methods used to evaluate the workshop for the registration examination developed for use in



this study. This workshop, which has been added to the curriculum for graduating nursing students from a community college program, has been implemented at various stages of development to five consecutive classes. With the five preceding classes serving as control groups, the methods for evaluation consisted of comparing each treatment group to the base group with respect to antecedent variables, assessing the transactions (the components that comprised the workshop) and examining the outcomes (registration examination scores). This latter process involved considering the amount of variance in the registration examination scores that could be explained by antecedent variables, assessing the regression lines for deviation from linearity and identifying the source of any effect associated with the treatment variable in terms of GPA level of students.

## CHAPTER 5

### EVALUATION RESULTS

This chapter has two sections. The first reports the results of the evaluation of the workshop for the registration examination, organized according to the evaluation questions identified in Chapter Four. These questions focus, in turn, on antecedents, transactions and outcomes. The second section is a discussion of the results as they related to the overall purpose of this study.

#### REPORT OF THE RESULTS

##### Antecedents

This first evaluation question was:

*To what extent were there initial differences between students from the base and the treatment groups prior to entry to the nursing program?*

The findings reported in this section consisted of the assessment for difference among the five no-treatment groups and the comparisons between the base and treatment groups in relation to admission requirements and selection procedure, age, reading ability, and aptitude for nursing.

##### Assessments for Differences in No-Treatment Groups

Prior to combining the five no-treatment groups into one large base group, one-way analyses of variance were performed to assess for any differences in antecedent variables. The results of these analyses are reported in Table 5-1.

TABLE 5-1

**RESULTS OF ANALYSIS OF VARIANCE COMPARING THE MEANS OF EACH ANTECEDENT VARIABLE FOR STUDENTS FROM ALL NO-TREATMENT GROUPS**

Variable	F-Ratio	Significance of F
Age	2.07	.09
Nelson-Denny Comprehension	1.91	.13
Nelson-Denny Vocabulary	2.54	.06
Nelson-Denny Reading Rate	.63	.60
PSB-1 (academic aptitude)	.95	.44
PSB-2 (spelling)	2.98	.02
PSB-3 (reading comprehension)	.15	.96
PSB-4 (natural science)	7.29	.00
PSB-5 (vocational adjustment)	1.27	.28
GPA	.55	.70

The results of post hoc Scheffé multiple range tests revealed that groups 1 and 4 were significantly different in relation to the variable PSB-2 (spelling) and groups 1 and 4, 1 and 5, 2 and 4, and 2 and 5 were significantly different for the variable PSB-4 (natural science). Although there were differences in the means of these two variables, there were no differences for eight variables. Moreover, the statistically significant differences did not reveal an interpretable pattern. Thus the five groups were combined to form one comparison group called the base group. Ideally, only students from groups in which the means of all variables are not different should be combined. In this study, however, a large comparison group of recent MLB graduates who had not participated in the treatment, but who were comparable in other respects, was required. To the extent that the differences that existed, particularly with natural science and also with spelling, indicate these students from the five

groups were from different populations, the findings based on combining these students will be in error.

The subsequent analyses of antecedent variables compare the students from each treatment group to those from the base group, for each variable that was assessed.

#### Comparison of Admission Requirements and Selection Procedure

An assessment of the admission requirements over the time period of this study revealed no differences between the base and treatment groups. With the selection procedure, however, there has been a trend towards increasing involvement of nursing faculty with personnel from Student Services of MLB College in admission interviews of eligible applicants. The role of the nursing faculty has been primarily to assess applicants' perceptions of nursing and to present a realistic view as required.

#### Comparison of Age

Table 5-2 reports the means, standard deviations and range in age for students from the base and treatment groups.

**TABLE 5-2**

**MEANS, STANDARD DEVIATIONS AND RANGE IN AGE  
FOR STUDENTS FROM THE BASE AND TREATMENT GROUPS**

Group	n	Mean Age	Standard Deviation	Range in Age
base	154	24.39	6.31	17-49
6	25	23.80	5.07	17-37
7	29	27.17	5.87	18-41
8	25	24.04	4.97	18-33
9	22	25.14	5.28	21-41
10	25	21.32	3.60	17-31

The mean ages for each group were compared using one-way analysis of variance (ANOVA), which revealed no significant difference ( $F = 1.38, p = .23$ ).

#### Comparison of Reading Ability

Table 5-3 reports the means and standard deviation of three Nelson-Denny Reading Tests for students from the base and treatment groups.

**TABLE 5-3**

**MEANS AND STANDARD DEVIATIONS FOR NELSON-DENNY READING TESTS  
FOR STUDENTS FROM THE BASE AND TREATMENT GROUPS**

Group	Vocabulary		Comprehension		Reading Rate	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
base	41.95	13.81	43.15	10.61	308.14	78.18
6	43.45	19.04	46.30	15.08	292.39	89.33
7	41.58	15.68	45.08	14.49	323.50	128.44
8	43.59	10.85	42.18	11.14	297.19	94.39
9	38.53	11.00	43.77	11.27	294.71	64.14
10	44.48	11.82	44.88	10.12	311.13	66.78

The mean scores for vocabulary, comprehension and reading rate for each group were compared using one-way ANOVA and no significant differences were found. The following F-ratios and levels of significance were obtained: vocabulary ( $F = .45, p = .81$ ); comprehension ( $F = .42, p = .84$ ); reading rate ( $F = .47, p = .80$ ).

#### Comparison of Variables Measuring Aptitude for Nursing

Table 5-4 reports the means and the standard deviations on five Psychological Services Aptitude Tests for Nurses for students from the base and the treatment groups.

TABLE 5-4

MEANS AND STANDARD DEVIATIONS FOR PSYCHOLOGICAL SERVICES BUREAU  
 APTITUDE TESTS FOR NURSING FOR STUDENTS FROM THE BASE AND TREATMENT GROUPS

Group	Academic Aptitude		Spelling		Reading Comprehension		Natural Science		Vocational Adjustment	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
base	49.40	15.05	33.77	9.60	30.69	4.32	74.64	12.72	84.09	11.07
6	48.52	13.32	33.26	9.62	30.57	4.54	72.61	14.34	88.04	10.59
7	46.14	14.08	32.28	10.03	29.93	4.65	66.90	13.61	83.86	11.29
8	51.28	11.71	35.04	7.87	30.44	3.03	67.44	12.35	84.68	10.72
9	43.40	11.14	30.75	11.68	29.10	5.34	74.30	11.90	82.95	11.92
10	48.20	11.58	32.60	10.52	31.60	3.97	71.16	11.80	83.24	12.29

These mean aptitude scores for each group were compared using one-way ANOVA. Whenever the F-ratio was significant, a Scheffé multiple range test was also carried out to identify which pairs of means were significantly different. The following F-ratios and levels of significance were obtained: academic aptitude ( $F = 1.02$ ,  $p = .41$ ); spelling ( $F = .59$ ,  $p = .71$ ); reading comprehension ( $F = 1.76$ ,  $p = .12$ ); natural science ( $F = 2.86$ ,  $p = .02$ ); vocational adjustment ( $F = .64$ ,  $p = .67$ ). Although the F-ratio for natural science was significant, the Scheffé post hoc contrast did not reveal any significant differences at the 0.10 level, likely because the Scheffé procedure is highly conservative.

In summary of this section, there appears to be no difference between students from the base and treatment groups in the variables measured upon entry to the nursing program.

### An Examination of the Nursing Curriculum

The second evaluation question was:

*To what extent did students from the base and the treatment groups experience the same nursing curriculum prior to the workshop?*

The findings reported in this section consist of an assessment for curriculum changes, and a comparison of the characteristics of the base and treatment groups in relation to group size, attrition, and students' GPA.

#### Assessment for Curriculum Changes

An assessment of the nursing curriculum for changes during the time this study was carried out revealed one major change: the separation of maternity and psychiatric content into two

courses which was first implemented in January, 1984. This change allowed students from groups 9 and 10 to receive concurrent theory and clinical experiences in these particular specialty areas of nursing. No other changes were evident. The same major textbook was used throughout the time of the study, for all 10 groups. A variety of hospitals served as clinical resources for students from both the base and treatment groups.

There was a difference, however, in faculty stability. From reports of long-term faculty members, nursing faculty have been much more stable recently compared to three or four years ago. In addition, over the past several semesters there has also been a concerted faculty effort toward preparing examinations that demonstrate a high level of reliability and validity. These factors would likely contribute to better teaching and evaluation of students and hence to better registration examination scores, other factors being equal.

Following the assessment of the curriculum for changes, selected group characteristics were compared. The findings reported in this section consist of the comparison of the base and treatment groups in relation to size, attrition, and students' GPA.

#### Group Size and Attrition

Attrition refers to the loss of students from a class due to a variety of reasons, for example, failure to meet program requirements, illness, dislike of the program, financial problems or personal reasons. For the purpose of this study, attrition



from a class includes both students who permanently withdraw and those who join a subsequent class.

Table 5-5 reports the number of students who entered each original class, who left prior to graduation, who entered from previous semesters, who graduated in six semesters and the total number who graduated from the base and treatment groups.

Graph 5-1 represents the information from Table 5-5 by displaying the composition of the average class from the base group and the average class from the treatment groups, in terms of the proportion graduating in six semesters, the proportion joining the class from a previous semester (replacing losses) and the proportion not replaced.

**TABLE 5-5**

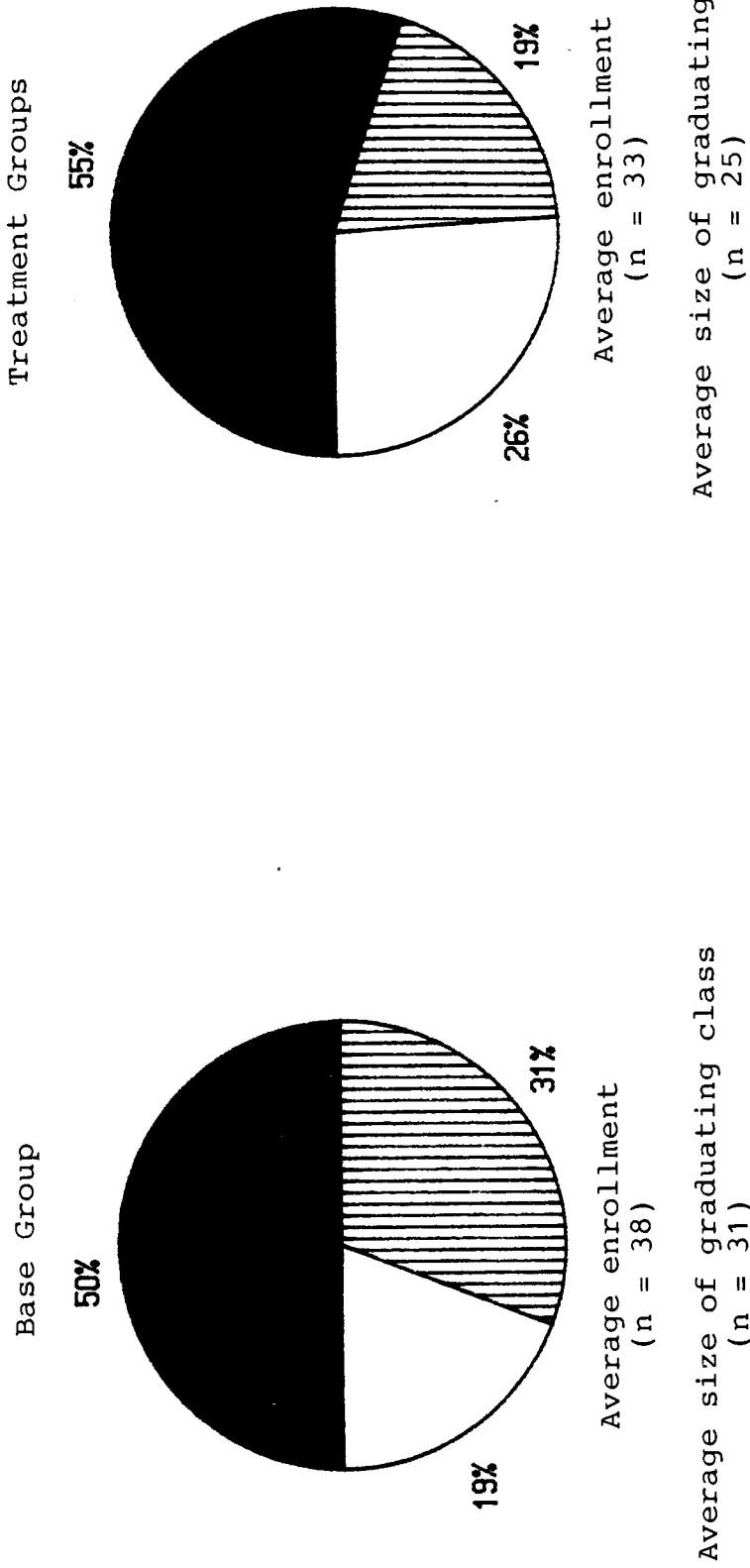
**NUMBERS OF STUDENTS WHO ENROLLED INITIALLY, LEFT PRIOR TO GRADUATION, ENTERED FROM A PREVIOUS SEMESTER, GRADUATED IN 6 SEMESTERS AND GRADUATED IN TOTAL, FOR BASE AND TREATMENT GROUPS**

Enrolled initially	Left prior to graduation	Entered from previous semester *	Graduated in 6 semesters	Graduated (total)
<u>BASE GROUP</u>				
188	93	59	95	154
Mean 38	19	12	19	31
<u>TREATMENT GROUPS</u>				
37	18	6	19	25
35	15	9	20	29
29	11	7	18	25
29	15	9	14	22
36	15	4	21	25
Mean 33	15	7	18	25

\* These figures do not include students who entered and also left.

GRAPH 5-1

COMPOSITION OF AVERAGE OF THE BASE GROUP AND TREATMENT GROUPS IN TERMS OF PROPORTION GRADUATING IN 6 SEMESTERS, PROPORTION JOINING FROM PREVIOUS SEMESTERS (REPLACING LOSSES) AND PROPORTION NOT REPLACED



- Proportion graduating in 6 semesters.
- ▨ Proportion joining class from previous semesters (replacing losses).
- Proportion not replaced.

(All proportions based on initial enrollment.)

Graph 5-1 shows that typically not only are the graduating classes smaller for the treatment groups, but the proportion of students entering from previous semesters is less than that for the base group. A common reason for students to enter from a previous class is failure to meet program requirements. This finding of a difference in proportion of students entering the groups suggests there may also be a difference in the mean GPA of students from the base and treatment groups.

#### GPA

Table 5-6 reports the mean GPA for the base and treatment groups.

**TABLE 5-6**

**NUMBER OF STUDENTS (n), MEAN GRADE POINT AVERAGES, AND STANDARD DEVIATIONS FOR STUDENTS FROM THE BASE AND TREATMENT GROUPS**

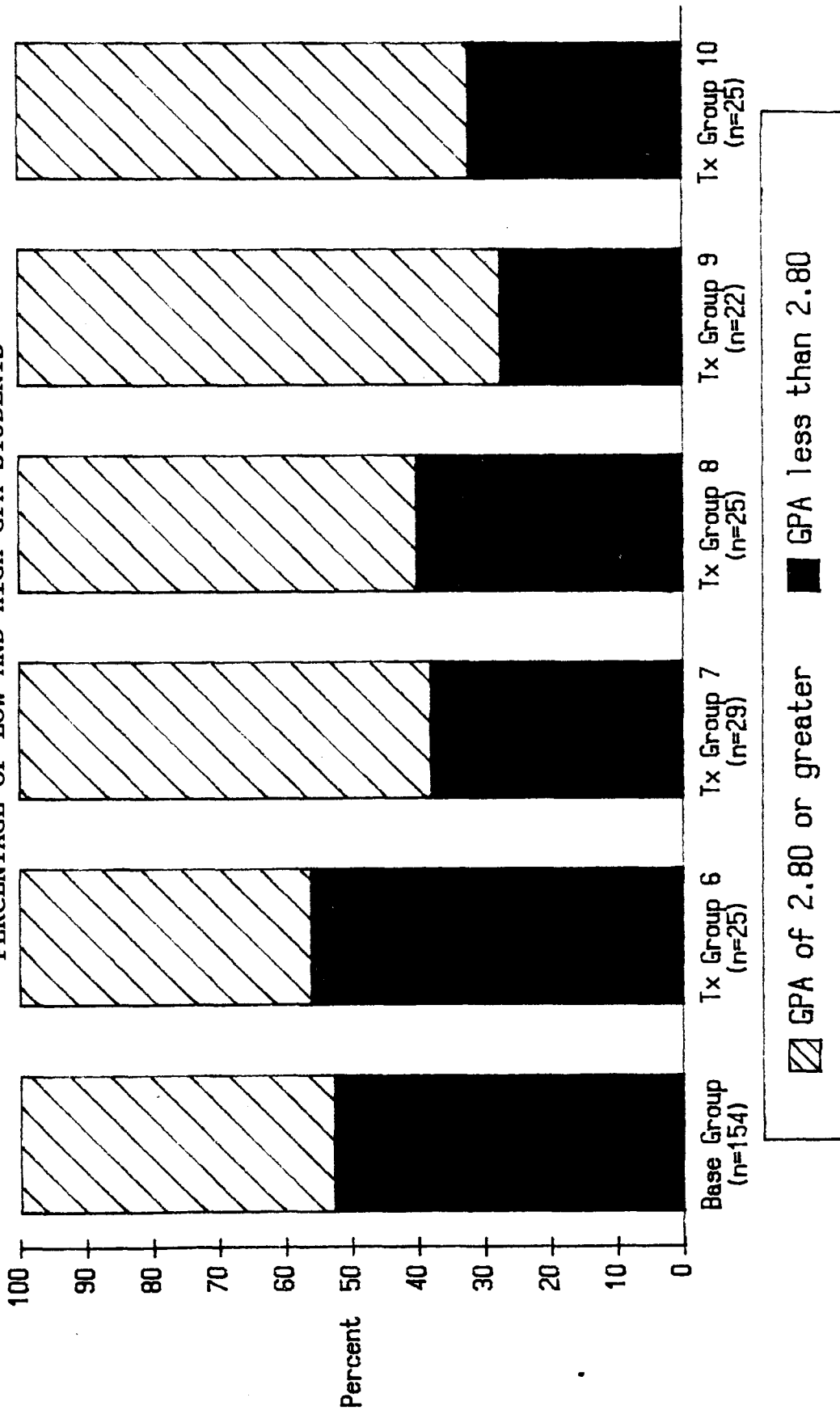
Group	n	Mean GPA	Standard Deviation
base	154	2.80	0.50
6	25	2.87	0.60
7	29	2.97	0.45
8	25	2.97	0.53
9	22	3.11	0.58
10	25	3.01	0.44

On inspection of this table, one can observe the mean GPA is somewhat higher for the treatment groups. Using one-way ANOVA, the difference in the means is statistically significant ( $F = 2.30$ ,  $p = .05$ ). The Scheffé multiple range test revealed, however, that no two groups were significantly different at the 0.10 level.

Graph 5-2 portrays the composition of the groups according to percentage of students of high and low GPA.

GRAPH 5-2

COMPOSITION OF BASE AND TREATMENT GROUPS ACCORDING TO PERCENTAGE OF LOW AND HIGH GPA STUDENTS



Note: Tx = treatment.

Low GPA students were defined as those whose GPA was less than 2.80. High GPA students were defined as those whose GPA was 2.80 or above. It can be noted that the proportion of low GPA students has generally decreased over the time period of this study.

In summary of this section on antecedents, and in response to the evaluation questions being considered, the findings suggest that there may be slight differences in the nursing curriculum experienced by students in the treatment groups compared to that of the base group. It is not that the major content and learning experiences have substantially changed, but rather that the faculty have become more stable, classes included fewer repeaters and class size has reduced. This reduction in size possibly reflected an intake of students with a more realistic perception of nursing and the withdrawal of students who did not meet program requirements as determined through effective evaluation methods. These differences might contribute to higher registration examination scores.

The next section focusses on an evaluation of transactions which in this study refer to each component of the workshop that has been developed.

### **Transactions**

The evaluation question addressed was:

*What were the students' and the writer's evaluations of each component of the workshop?*

This section reports the student's evaluation of the workshop based on the responses to the questionnaire and the writer's evaluation of the materials developed and processes used.

### Students' Evaluation

Of the twenty-five questionnaires that were mailed out, twelve were returned within the time period allotted, and a telephone reminder yielded another six. A further reminder brought one more to bring the total to 19 or 76% of the total.

Table 5-7 reports the means and standard deviations of students' responses to the workshop evaluation questionnaire, based on a 5 point scale. Students' responses to Section II B and students' general comments and suggestions for improvement are available in Appendix H. (The questionnaire can be found in Appendix F.)

**TABLE 5-7**

**MEANS AND STANDARD DEVIATIONS OF STUDENTS' RESPONSES TO THE WORKSHOP EVALUATION QUESTIONNAIRE, BASED ON A 5 POINT SCALE**

Question	Mean Response	Standard Deviation
Section I		
B	3.05	.71
C	3.13	.72
Section II		
C	3.07	.88
Section III		
B	3.17	.99
C	3.44	.98
Section IV		
B	4.06	.94
C	3.16	1.20

### Writer's Evaluation

This part of the evaluation, reported according to areas of strength and weakness, is based on students' written and verbal comments, faculty input, as well as on personal reflection of the process, using the guidelines for evaluation available in Appendix G.

## Areas of strength

Of the four components of the workshop, the computer printout based on the results of the practise test was rated most highly by students and by the writer. There was some evidence that this printout helped students to focus their studying. For example, one student stated, "it [the printout] did help me to centre a big part of my study time on areas I hadn't done well on." Even students who felt aware of their strengths and weaknesses seemed to appreciate verification of what they knew. "I liked the computer printout. . . . For me it proved what I essentially knew already."

Another positively rated feature of the workshop was the practise test. There were many comments that indicate this test met its aims. For example, one individual said, "The practise test was excellent . . . it helped me get used to the idea of how the RN exam would be written." It seemed that students readily perceived the value of writing a practise test in preparing for the actual registration examination.

The writer evaluated several of the processes used during the development and implementation of the workshop as areas of strength. For example, the manner in which the practise test was developed, although slow, was assessed as effective. This process included student and faculty input and was based on the principles of effective test construction.

The process of developing the components of the workshop was assessed as a strength. The development proceeded on the basis of an overall goal in incremental fashion, each implementation

coming closer to the goal. At each step there was formative evaluation that guided the on-going development. This process led to a workshop that has become an integral part of the curriculum for semester VI students.

In addition, the writer's interactional process with students was believed to be positive, although to what extent students' motivation level increased is not possible to evaluate. From student comments, a wide variety of attitudes are expressed, some of which are positive and others of which are negative:

Thanks very much for your time involved in preparing us for the RN exam. Without your class, book and exam I'm sure my stress [level] would have been too high and therefore counterproductive.

No matter how much you study, the chance of studying the right thing is slim so you do the same as if you hadn't.

I'm afraid for someone like myself the class was not particularly interesting. . . . Being quite lazy, a class is not enough to make me study.

#### Areas of Weakness

The most significant area of weakness related to the workshop was the timing of information on learning strategies and the lack of sufficient guided practise in their use. These strategies were presented as a way of reviewing previous content in preparation for the registration examination. It would have been more useful if students received information about learning strategies at the beginning of the nursing program.

The Student Manual was not used in the manner that the writer intended. Students were asked to read one chapter a week, complete questions at the end and submit them to the writer



anonymously. The purpose of the questions was to assess whether the material was being read and understood. No one submitted the completed question pages. Several students explained they did not want to tear pages out of their manual. Furthermore, students said they were too busy with the clinical requirements of the program to spend much time studying the manual during the semester and they wrote the registration examination a few days after the semester ended.

Another weakness of the workshop was the reliability of the feedback given to students based on the results of the practise test. The overall reliability of the test as a whole was good (.91). The reliability of some of the subscales upon which the computer printout is based, however, was not as high as anticipated. Table 5-8 reports the reliability coefficient for each subscale and the total number of items included. It can be noted that the subscales comprised of relatively few items, typically have low reliability.

**TABLE 5-8**

**SUBSCALES COMPRISING THE PRACTISE TEST, NUMBER OF ITEMS AND RELIABILITY COEFFICIENTS, BASED ON 69 WRITERS**

Subscale Name	Number of items	Reliability Coefficient (alpha)
-----		
<u>Content</u>		
1. Nutrition	29	.54
2. Pharmacology	54	.53
3. Communication	51	.62
4. Growth and Development	35	.40
5. Legal and Ethical	20	.13
6. Health Teaching and Prevention	28	.44
7. Other	183	.83
Total	400	

Specialty Areas

1. Medical	97	.74
2. Surgical	57	.66
3. Obstetrical	70	.61
4. Pediatrics	70	.62
5. Psychiatric	40	.41
6. General and Community	<u>66</u>	.55
Total	400	

Nursing Process

1. Assessing and Evaluating	159	.81
2. Planning & Implementing	198	.81
3. Other	<u>43</u>	.43
Total	400	

Taxonomy Level

1. Knowledge	40	.54
2. Comprehension	68	.68
3. Application and Higher	<u>292</u>	.86
Total	400	

-----

The item analysis based on 69 writers revealed that some of the items discriminated negatively and need further revision. In addition, the test proved to be quite difficult: the mean was 255 out of 400, with a standard deviation of 28. The highest score was 320 and lowest was 196.

A further weakness of the workshop was the manner in which the review of the practise test was carried out. Many students stated they wished they had more time for review. The major problem was that the review was scheduled on one afternoon, due to the writer's other commitments. Students found it too tiring to review so many questions at one sitting. On the other hand, several students stated they did not benefit from examination reviews.

The final weakness to be identified in relation to the workshop was that the computer printout, although evaluated positively as an end result, was not easily obtained. The directions for the test analysis program were difficult to follow and presumed a user had a basic level of programming skills. This difficulty was overcome for the workshop offered to group 10 because there was considerable motivation and assistance to make the program work. Such difficulty, however, would limit the use of the program on an on-going basis.

In summary of this section, each of the components of the workshop has been assessed and the strengths and areas of weakness reported. The implications of this evaluation of transactions for the outcomes of this study are discussed later in this chapter.

### Outcomes

The first evaluation question in this section on outcomes was:

*What was the relative position of MLB nursing graduates from each group compared to provincial and national means on the registration examination?*

### Comparison of Registration Examination Means

Table 5-9 reports the means and standard deviations for registration examination scores for nursing graduates from MLB College, from British Columbia and from Canada.

**TABLE 5-9**

**MEANS AND STANDARD DEVIATIONS FOR REGISTRATION EXAMINATION  
SCORES FOR NURSING GRADUATES FROM MLB COLLEGE,  
FROM BRITISH COLUMBIA AND FROM CANADA**

Group	MLB Program		Date	British Columbia		Canada	
	$\bar{X}$ RN Score	S.D.		$\bar{X}$ RN Score	S.D.	$\bar{X}$ RN Score	S.D.
-----							
No-Tx Groups							
1	488.12	110.08	Aug 82	541.90	97.95	537.13	93.13
2	514.09	141.59	Jan 83	524.94	94.82	497.61	103.94
3	493.27	97.70	Jun 83	531.83	95.66	510.67	97.16
4	505.37	120.53	Oct 83	523.91	94.39	492.61	98.21
5	472.61	120.96	Jan 84	525.15	102.27	486.29	102.64
-----							
Tx Groups							
6	540.76	119.27	Jun 84	529.49	89.67	500.14	95.69
7	550.62	110.82	Oct 84	543.50	93.35	497.13	102.75
8	540.36	101.00	Jan 85	538.24	94.80	506.43	105.44
9	558.91	116.62	Jun 85	526.11	93.74	497.28	102.91
10	535.88	83.17	Aug 85	521.81	93.55	499.83	100.20
-----							

Note:  $\bar{X}$  RN Score = group mean registration examination score.  
Tx = treatment.

Graph 5-3 displays the data related to the mean registration scores from Table 5-9. This graph portrays the relative change in the mean registration examination scores for MLB Nursing Program compared to the provincial and Canadian means during the time period between August, 1982 and August, 1985. Prior to the introduction of the workshop, the mean scores of MLB graduates were typically lower than both the provincial and national means, whereas, during the time the workshop was being offered, this position changed.

GRAPH 5-3

A COMPARISON OF MEAN REGISTRATION EXAMINATION SCORES FOR NURSING GRADUATES FROM MLB COLLEGE, FROM B.C. AND FROM CANADA FOR NO-TREATMENT AND TREATMENT GROUPS

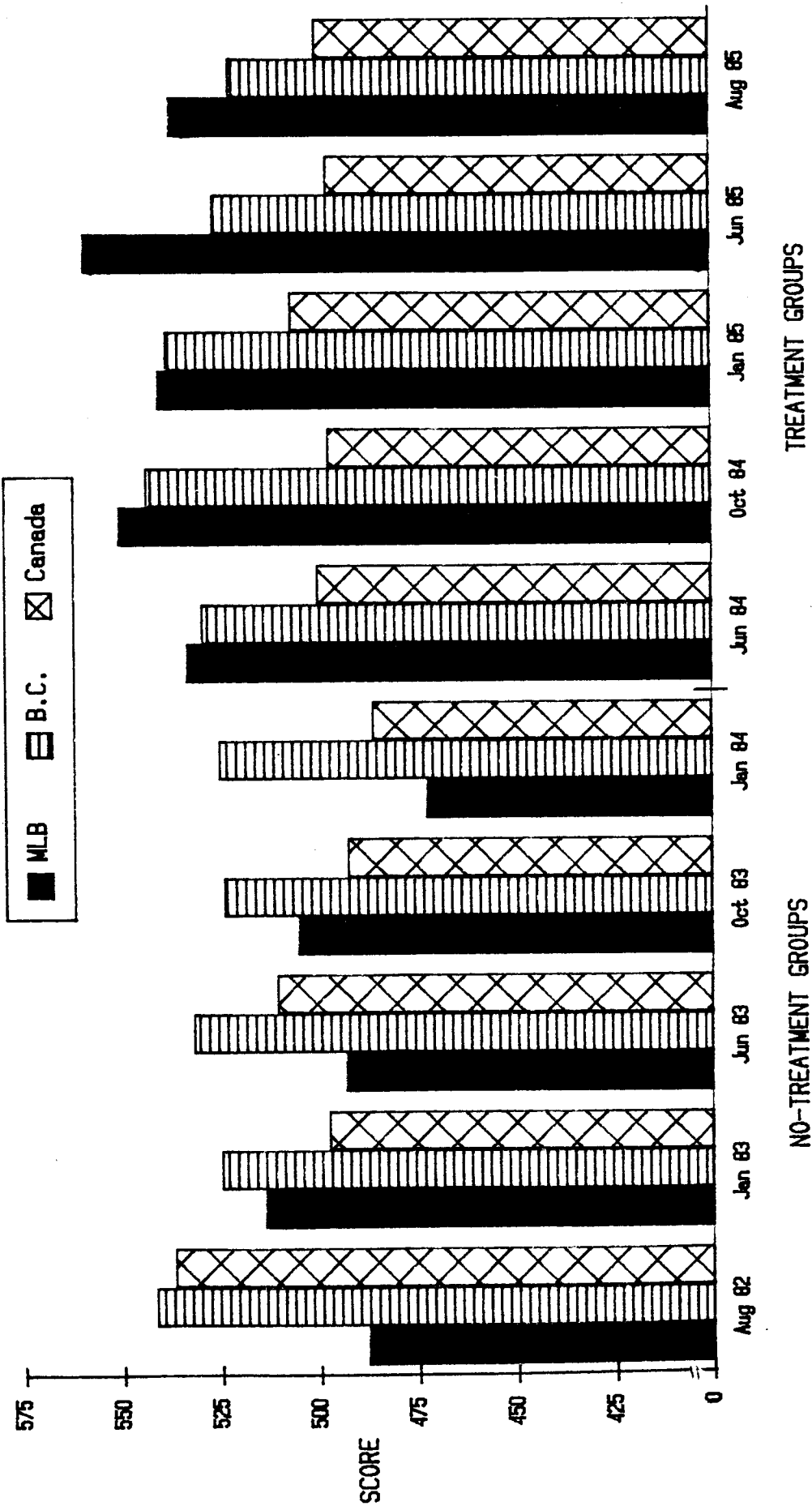


Table 5-9 and Graph 5-3 have presented the data on mean registration examination scores for all ten groups of students included in the study to show the relative position of MLB graduates over time. In this study, the no-treatment groups have been combined to form one large base group. The mean registration examination score for this base group was 492.67 and the standard deviation was 116.53. The corresponding unweighted provincial and national means were 529.55 and 504.86, respectively. Because the total number of nursing graduates from British Columbia and from Canada for the various writings were not known, weighted means and standard deviations could not be computed.

Graph 5-4 displays the same data as the previous graph (5-3) with the exception that the separate no-treatment groups have been shown combined into the base group that has been used in this study as a control group. The corresponding provincial and national means averaged over this time period are shown for comparison.



The second evaluation question was:

*Were the registration examination scores for students from the treatment groups higher than those for students from the base group once that portion of variance explained by any significant initial differences was removed?*

Assessments of Relationships Between Antecedent Variables and the Registration Examination Scores

The Pearson correlation coefficients computed using the antecedent variable means with the registration examination means for the 10 groups resulted in only one correlation significantly different from zero: the mean GPA and mean registration examination score, which was .91. Graph 5-5 displays the relationship of mean registration examination scores and mean GPA for no-treatment and treatment groups.

Table 5-10 reports the Pearson correlation coefficients between the individual antecedent variables for students from the base group and the corresponding individual registration examination scores.

**TABLE 5-10**

**PEARSON CORRELATION COEFFICIENTS BETWEEN ANTECEDENT VARIABLES AND REGISTRATION EXAMINATION SCORES, FOR STUDENTS FROM THE BASE GROUP**

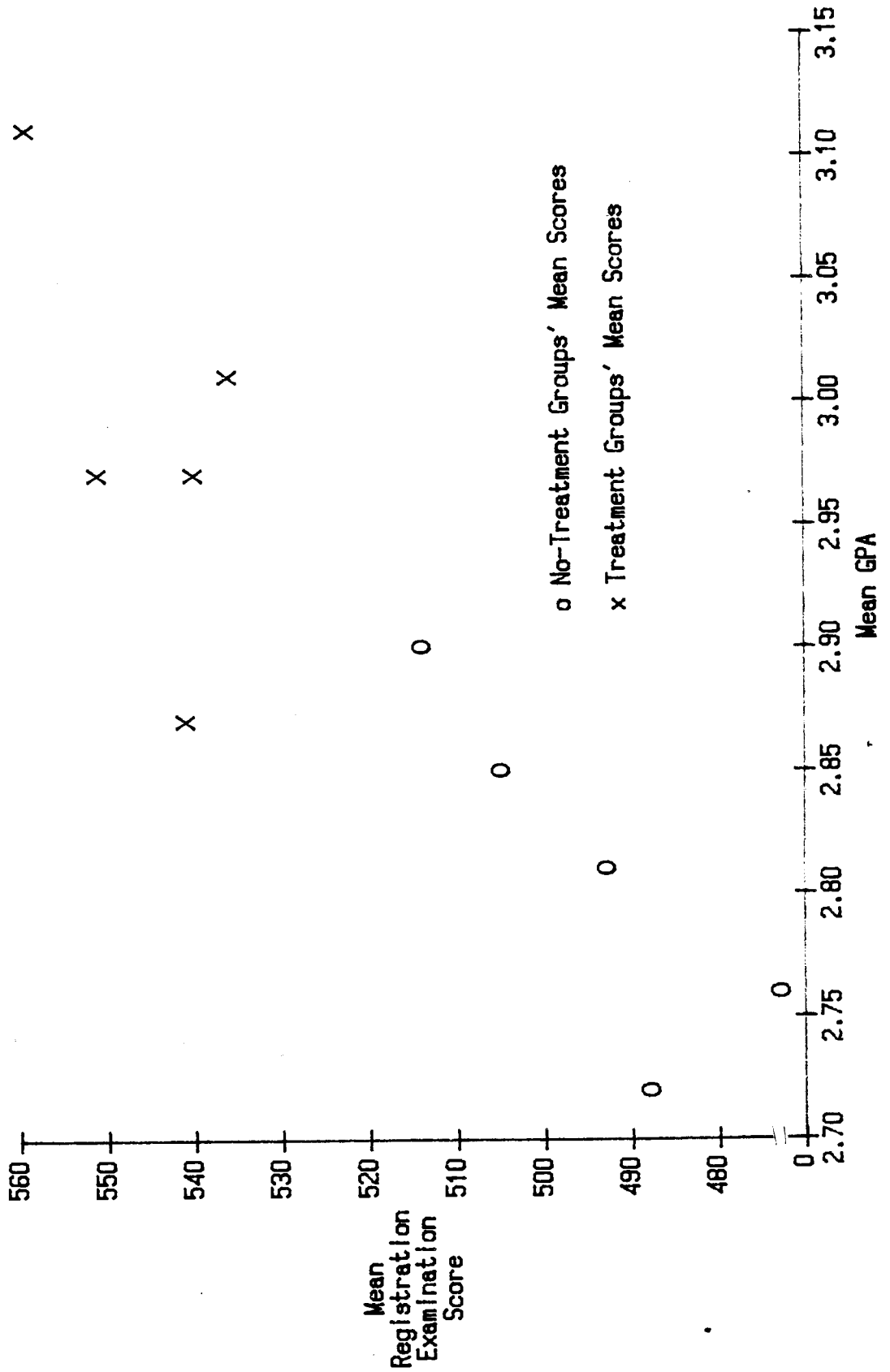
Antecedent Variable	Pearson Correlation with RN Score
Age	.16
Nelson-Denny Comprehension	.24
Nelson-Denny Vocabulary	.51
Nelson-Denny Reading Rate	.01
PSB-1 (academic aptitude)	.39
PSB-2 (spelling)	.37
PSB-3 (reading comprehension)	.48
PSB-4 (natural science)	.41
PSB-5 (vocational adjustment)	.17
GPA	.80

Note: RN Score = score achieved on the Registered Nurses' examination.



GRAPH 5-5

SCATTERPLOT OF MEAN REGISTRATION EXAMINATION SCORES AND MEAN GPA  
FOR NO-TREATMENT AND TREATMENT GROUPS



### Determination of Covariates

The three antecedent variables having the highest correlation with the registration examination score were GPA, Nelson-Denny vocabulary and PSB-3 (reading comprehension). Multiple regression analysis using these three variables with the dependent variable, the registration examination score, yielded a multiple R of .81 ( $R^2 = .66$ ). This compares to the R of .80 ( $R^2 = .64$ ) with GPA alone. The decision was made to use GPA as the covariate without any of the other variables because the increase in the  $R^2$  was not large enough to justify the added complexity of using more than the one variable.

### Assessment for Effect Associated with the Treatment Variable

Table 5-11 reports the results of the five analyses of covariance comparing each treatment group with the base group.

**TABLE 5-11**

**ANALYSIS OF COVARIANCE FOR TREATMENT GROUPS 6 TO 10  
WITH THE BASE GROUP, USING GPA AS A COVARIATE**

#### Group 6

Source of Variation	Sums of Squares	Df	Mean Square	F	Significance of F
-----					
Covariates:					
GPA	1566666.005	1	1566666.005	314.982	0.000
Main Effect:					
Group	26788.124	1	26788.124	5.386	0.021
Explained	1593454.129	2	796727.065	160.184	0.0
Residual	875394.273	176	4973.831		
TOTAL	2468848.402	178	13869.935		

**Group 7**

Source of Variation	Sums of Squares	Df	Mean Square	F	Significance of F
Covariates:					
GPA	1530489.967	1	1530489.967	288.396	0.000
Main Effect:					
Group	17835.437	1	17835.437	3.361	0.068
Explained	1548325.404	2	774162.898	145.879	0.0
Residual	955241.612	180	5306.898		
TOTAL	2503567.016	182	13755.863		

**Group 8**

Source of Variation	Sums of Squares	Df	Mean Square	F	Significance of F
Covariates:					
GPA	1530462.392	1	1530462.392	322.539	0.000
Main Effect:					
Group	5889.917	1	5889.917	1.241	0.267
Explained	1536342.309	2	768176.154	161.890	0.0
Residual	835129.244	176	4745.053		
TOTAL	2371481.553	178	13322.930		

**Group 9**

Source of Variation	Sums of Squares	Df	Mean Square	F	Significance of F
Covariates:					
GPA	1615513.331	1	1615513.331	336.531	0.000
Main Effect:					
Group	1771.540	1	1771.540	0.369	0.544
Explained	1617284.871	2	808642.435	168.450	0.0
Residual	830483.669	173	4800.848		
TOTAL	2447768.540	175	13987.249		

**Group 10**

Source of Variation	Sums of Squares	Df	Mean Square	F	Significance of F
Covariates:					
GPA	1421667.000	1	1421667.000	290.394	0.000
Main Effect:					
Group	592.377	1	592.377	0.121	0.728
Explained	1422259.377	2	711129.688	145.258	0.0
Residual	861633.930	176	4895.647		
TOTAL	2283893.307	178	12830.861		

It can be seen from this table (5-11) that group 6 ( $F = 5.39$ ,  $p = .02$ ) was the only group in which the main effect (attributed to 'group') reached the level of significance when alpha is set at .05. Group 7 ( $F = 3.36$ ,  $p = .07$ ) approached, but did not reach this level of significance.

Table 5-12 reports the adjusted mean registration examination scores of the base and treatment groups, and the effect associated with the treatment variable.

**TABLE 5-12**

**ADJUSTED MEANS OF THE REGISTRATION EXAMINATION SCORES  
FOR STUDENTS FROM THE BASE AND TREATMENT GROUPS,  
AND THE EFFECT ASSOCIATED WITH THE TREATMENT VARIABLE**

Treatment Group	Adjusted Mean of Treatment Group	Adjusted Mean of Base Group	Effect Associated with Treatment Variable
6	529.79	494.46	35.33
7	524.78	497.53	27.25
8	513.67	497.00	16.67
9	509.51	499.73	9.78
10	503.27	497.96	5.31

Table 5-13 reports the effect associated with the treatment variable for each group, expressed as effect size and percentile equivalent.

**TABLE 5-13**

**EFFECT ASSOCIATED WITH THE TREATMENT VARIABLE EXPRESSED AS  
EFFECT SIZE AND PERCENTILE EQUIVALENTS, BY TREATMENT GROUP**

Group	Effect Size	Percentile Equivalent
6	0.50	69.15
7	0.37	64.43
8	0.24	59.48
9	0.14	55.57
10	0.08	53.19

Thus the second evaluation question can be answered by stating that once the effects of GPA were removed, the mean score on the registration examination that group 6 achieved was statistically significantly higher than that of the base group. The other four treatment groups also achieved higher mean scores, but not high enough to reach statistical significance.

The third evaluation question was:

*Did the treatment students with low GPAs contribute more to the effect associated with the treatment variable compared to high GPA students?*

#### Assessment for Nonlinearity

Table 5-14 reports the eta coefficient, the F-ratio associated with deviation from linearity and the significance of F, for the base and treatment groups.

**TABLE 5-14**

**ETA COEFFICIENT, F-RATIO ASSOCIATED WITH DEVIATION FROM LINEARITY AND THE SIGNIFICANCE OF F, FOR BASE AND TREATMENT GROUPS**

Group	n	Eta coefficient	F-ratio associated with deviation from linearity	Significance of F
base	154	.78	.83	.51
6	25	.86	.97	.45
7	29	.79	2.96	.04
8	25	.85	.57	.69
9	22	.85	.43	.79
10	25	.76	.57	.69

This assessment for nonlinearity indicated that the regression analysis of registration examination scores on GPA demonstrated a statistically significant degree of nonlinearity for group 7, whereas this corresponding analysis associated with the base group was linear.

### Comparison of Treatment Effect of Low and High GPA Students

The equation determined from the regression analysis of the base students' registration examination scores on GPA was  $Y' = -25.79298 + 1.85126X$ . This equation was used to predict scores for all treatment students. These predicted scores were then subtracted from the actual scores to obtain the residual scores. The sum of all the residual scores, averaged over the number of students in the group, represented the total treatment effect for the entire group. This effect, within rounding error, is the same as the difference between adjusted means obtained through the analysis of covariance. To identify whether low GPA students contributed more to the total treatment effect compared to high GPA students, the residual scores were averaged separately for low and high GPA students. Because the equation used to predict the scores for the treatment students was demonstrated to be based on linear data, any difference in mean residual scores between high and low GPA students would suggest another source of variance was exerting a differential effect on students at high and low GPA levels. Table 5-15 reports the effect associated with the treatment variable (as identified previously from Table 5-12) and the source of that effect showing the separate contributions of low and high GPA students for each group. The difference between each pair of mean residual scores was then tested for significance using a t-test. The t-value and level of significance associated with each group is also reported.

TABLE 5-15

**EFFECT ASSOCIATED WITH THE TREATMENT VARIABLE AND SOURCE OF EFFECT  
(LOW OR HIGH GPA STUDENTS), T-VALUE AND LEVEL OF SIGNIFICANCE FOR TREATMENT GROUPS**

Treatment Group	Effect Associated with the Treatment Variable	SOURCE OF THE EFFECT						t-value	P
		Low GPA Students		High GPA Students		n	S.D.		
		$\bar{X}$ Res Scores	S.D.	$\bar{X}$ Res Scores	S.D.				
6	35.33	11	55.13	94.02	14	19.22	41.34	1.29	0.21
7	27.25	11	60.29	58.23	18	5.98	92.19	1.75	0.09
8	16.67	10	51.34	45.51	15	-7.50	52.61	2.89	0.01
9	9.78	6	23.78	61.55	16	3.87	59.43	0.66	0.52
10	5.31	8	40.17	55.75	17	-13.02	65.37	1.98	0.06

Note:  $\bar{X}$  Res Scores = mean residual scores.

P = level of significance.

It can be seen from the data in Table 5-15 that for each group, the low GPA students contributed more to the observed increase in mean registration examination scores than the high GPA students. In only one group, however, group 8, was the difference sufficient to reach statistical significance.

The third evaluation question related to outcome can be answered by stating that the treatment variable was associated with greater increases in registration examination scores for low GPA students compared to high GPA students.

### DISCUSSION OF THE RESULTS

The overall purposes of this study have been to develop and to evaluate a workshop to assist graduating nursing students to prepare for the registration examination. This section identifies the constraints under which this study was carried out that were related to the design of the study as well as to the development and implementation of the workshop. This section also discusses the outcomes in relation to the antecedents, the transactions and a possible interaction between one antecedent variable, GPA, and the transactions.

#### Constraints Related to This Study

The original proposal for this study to assist in the preparation of nursing students for the registration examination required the formation of two groups to which students were to be assigned randomly. One group was to receive the workshop and the other would serve as a control. Nursing faculty agreed in principle with this proposal but were concerned that such an



experimental study would not maintain the rights of all students to participate in learning activities that may prove to be beneficial. Faculty, therefore, stipulated that the workshop should be offered to all students, rather than to a randomly selected subset. Subsequently, the workshop was incorporated into the curriculum for semester VI students. Thus, a true experimental design to evaluate the effectiveness of the workshop was not possible. The design that was used in this study, in which all control groups preceded all treatment groups, complied with these constraints; it also, however, limited the interpretation of findings largely because a curriculum can be expected to change over time. Any changes may lead to differences in registration examination scores.

The other constraint related to this study was that the development and implementation processes had to be compatible with a full-time teaching schedule each semester. This constraint led to slow, incremental development with changes made semester by semester which later caused difficulties with evaluation.

### **The Outcome in Relation to Antecedents**

The end of program cumulative GPA (determined at the end of semester V) has been demonstrated without any doubt as the best single predictor of registration examination scores. The correlation of .80 for GPA and registration examination scores explained approximately 64% of the variance. This study illustrates the importance of examining the effects of antecedent variables on the outcome. Even when the relative position of

mean registration examination scores for MLB graduates changed compared to provincial and national means in association with the treatment variable, a large portion of the increase could be explained by the difference in GPA.

Because all students in the base group proceeded through the program prior to all treatment groups, a factor that correlates with the treatment variable is recency. Thus, students who have been exposed to the treatment, have also graduated more recently than students who have not had such treatment. With the given design, it was not possible to separate the effect of the treatment from the accumulated effects of immeasurable differences in the nursing program that have occurred over time. The evaluation that has been carried out, therefore, must be interpreted as the net result of any of these curriculum changes, including the workshop, that have occurred.

For this study, the difference between statistical and practical significance of results has been demonstrated. For example, there were no statistically significant differences in any combination of pairs of GPA means, yet the difference that existed was highly useful in terms of predicting registration examination scores. Another example could be made of group 7, whose mean registration examination score, adjusted on the basis of the antecedent variable GPA, was 27.27 points higher than predicted. It is likely that most nursing programs would regard such an increase as practically important even though this amount does not reach statistical significance.

### The Outcome in Relation to Transactions

The transactions comprising the workshop consisted of a presentation, guidelines for self-study based on learning strategies, a practise test and review of the practise test.

As has been reported, the timing of the information about learning strategies was not optimal. Prior to the study, the writer recognized it would be more logical to present this information early in the nursing program to assist with the initial learning of the content, rather than during the final semester. As one student aptly stated, "One idea would be to introduce the strategies at the beginning of the program. Then maybe people can use them for the class exams therefore so they would automatically use them for the RN exam."

From the comments on students' evaluation of the workshop, some students appear resistant to trying to use new methods for learning. For example, one student commented: "By now I have found out what study habits work for me and had no intentions of trying new strategies, when the old ones worked fine."

From Chapter Three, which describes the development of the workshop, it can be seen that considerable effort was made to improve each component over the five semesters. The work in development did not have the desired effect in terms of increasing the outcome. The effect size progressively became smaller over the time of development from group 6 to group 10 (.50, .37, .24, .14, .08). Concomitant with this decrease was a general trend towards smaller proportions of the class that were defined as low GPA students (44%, 37.9%, 40%, 27.3%, 32%) over this same

time period. It appears that the student population is changing over time so that fewer students require the type of preparation offered in the workshop. This change in the student population is a possible explanation for the evaluation of the workshop by students that was less positive than anticipated based on the informal comments over the period of five semesters. Only those in group 10 were asked to formally evaluate the workshop and these students may not have been representative of all students in the treatment groups.

A potentially negative, unintended outcome to consider in relation to the transactions is whether the omission of the content that the workshop replaced in the curriculum had any detrimental effect on the students' overall learning. One of the topics formerly included in class time was leadership in nursing care conferences. Since the introduction of the workshop, this topic has been discussed with students in the clinical area. The other class now omitted was a review of the principles of teaching and learning with emphasis on the application to patient-teaching situations. Because this content was not new and because students have been expected to demonstrate their ability to carry out patient-teaching for the past several semesters, there should be minimal negative outcomes in this regard. With consideration to the goal of preparing students for the registration examination, it appears that the addition of the workshop has made a positive contribution to the curriculum, and the loss of the content replaced ought to have minimal effect in terms of nursing practice.

### Interaction Between GPA and the Transactions

The analysis of residual scores revealed that low GPA students tended to contribute more to the effect associated with the treatment variable compared to high GPA students. For group 8, this difference reached a statistically significant level. Even though this difference in effect between low and high GPA students was not at a statistically significant level for four groups out of five, it is in the direction predicted on the basis of the model of information integration (Das, Kirby & Jarman, 1975, 1979). It seems reasonable to speculate that the high GPA students likely include those who are already motivated, who are able to synthesize incoming information in a meaningful way and who make effective plans and decisions related to their reviewing and studying. A workshop presenting concepts which high GPA students already carry out cannot be expected to bring about increased scores for this group. On the other hand, the low GPA students may possibly increase their performance on the registration examination as a result of attempts to motivate, to facilitate synthesis of content and to promote effective planning and decision making. Thus, the lack of significant results for four groups out of five does not negate the potentially helpful direction this model provides. The overall effect of the workshop appears to have been diluted by offering it to classes which include a high proportion of students who do not need it.

The difference in the effect associated with the treatment variable between low and high GPA students can be further explained by considering the relative difficulty of increasing

the scores of students who achieve 700 (two standard deviations above the mean) compared to those who achieve a score of 500. The former students would require a much more powerful treatment than the latter and it may be that no matter what treatment or assistance is provided, the scores of these high-achieving students cannot be improved.

A further point of discussion in relation to the workshop presented to group 10 is to consider that these particular students had only a few days between the end of the program and writing the registration examination. The workshop was never intended as a substitute for self-study, but as a guide and motivator for a systematic effort of review. Groups 6 to 9 had between six and ten weeks after the end of the program in which to carry out such a review, whereas group 10 did not. The comparison of low and high GPA students in terms of their relative contribution to the overall effect associated with the treatment variable indicates the low GPA students achieved scores that were, on the average, higher than predicted; the high GPA students, however, received scores that were considerably lower than predicted for group 10. The net result shows up as a very small positive effect. These differences between scores of high and low GPA students may simply represent errors in measurement, or possibly regression to the mean. On the other hand, if the high GPA students actually performed worse than predicted in association with the treatment variable, would this assumption indicate that the workshop was harmful to these students from group 10? Such a possibility exists. The alternative interpre-

tation being proposed, however, is that the lowered scores for this group are a consequence of the short time for review. For high GPA students to reach or exceed the registration examination score predicted on the basis of their GPA, a long study time may be required. This interpretation is extended to explain how low GPA students from group 10 achieved scores that were higher than predicted, in spite of a short study time. Perhaps low GPA students typically do not use a lengthy time after the end of the program for study. Based on this premise, the prediction of scores should have the same degree of accuracy whether the study time is long or short (unless it were so long that forgetting occurred). The mean residual scores for low GPA students are all positive and do not appear to have any relationship with length of study time, an observation which supports this premise. Thus, for low GPA students from group 10, the workshop may have helped them make effective use of the time that was available during and after the semester, leading to the observed increase in registration examination scores.

### SUMMARY

This chapter has reported the findings related to each of the six evaluation questions identified in Chapter Four. These findings have been discussed first with respect to the constraints influencing this study, and then the outcomes have been examined in relation to the antecedent variables, the transactions and the interaction between GPA and the transactions. A summary of the results is provided in Table 5-16.

TABLE 5-16

A SUMMARY OF RESULTS OF THE EVALUATION OF THE WORKSHOP

ASSESSMENT FOCUS	EVALUATION QUESTION	SUMMARY OF RESULTS
ANTECEDENTS	<p>1. To what extent were there initial differences between students from the base &amp; Tx groups prior to entry into the Nursing Program?</p> <p>2. To what extent did students from the base &amp; the Tx groups experience the same nursing curriculum prior to the workshop?</p>	<p>1a No difference in admission requirements; more faculty input in selection for Tx groups.</p> <p>1b No significant differences in antecedent variables measured.</p> <p>2a Minimum curriculum changes, but greater faculty stability; more emphasis on reliable and valid exams.</p> <p>2b Tx groups smaller &amp; more homogenous.</p>
TRANSACTIONS	<p>1. What were the students' and the writer's evaluations of each component of the workshop?</p>	<p>1a Practise test &amp; printout evaluated highly; manual not used sufficiently to evaluate. Timing of content on learning strategies not optimum.</p> <p>1b Processes of development &amp; implementation evaluated positively.</p>
OUTCOMES	<p>1. What was the relative position of MLB nursing graduates from each group compared to provincial and national means on the registration examination?</p> <p>2. Were the RN scores for Tx groups higher than those for the base group once that portion of variance explained by initial differences between the base &amp; Tx students was removed?</p> <p>3. Did the Tx students with low GPAs contribute more to the effect associated with the Tx variable compared to high GPA students?</p>	<p>1 Mean RN scores for MLB graduates were lower than provincial and national means for base group and higher for Tx groups.</p> <p>2a The differences in adjusted means for groups 6 to 10 were: 35.33, 27.25, 16.67, 9.78 &amp; 5.31.</p> <p>2b The effect sizes were: .50, .37, .24, .14, &amp; .08. The percentile equivalents were: 69.15, 64.43, 59.48, 55.57 and 53.19.</p> <p>3a Significant nonlinearity in the relationship between GPA &amp; RN score for group 7.</p> <p>3b Low GPA students contributed more to treatment effect than high GPA students.</p>

Note: Tx = treatment.

RN score = score on the Registered Nurses Examination.



## CHAPTER 6

### CONCLUSIONS AND RECOMMENDATIONS

#### OVERVIEW

The purposes of this study were to develop and to evaluate a workshop to assist graduating nursing students to prepare for the registration examination.

The purpose related to development, described in detail in Chapter Three, has been met. The purpose related to evaluation has been carried out to the extent possible given the constraints associated with the design. The methods used for evaluation have been described in Chapter Four. The results have been reported and discussed in Chapter Five.

This chapter identifies the conclusions reached and states the recommendations that arise from this study. Conclusions in four areas are discussed. The first three areas identify conclusions categorized according to antecedents, transactions and outcomes. The final area gives general conclusions that relate to the overall design of the study and the processes of development, implementation and evaluation.

#### CONCLUSIONS RELATED TO ANTECEDENTS

The antecedent variable that is most predictive of registration examination scores at the MLB Nursing Program is GPA. It accounted for 64% of the variance in the registration examination scores for students from the base group. The class characteristics associated with highest mean registration examination scores include high mean GPA, small size, and greater homogeneity compared to other classes. The Psychological Services Bureau

Nursing School Aptitude Examination Test scores did not add significantly to the accuracy of the prediction of registration examination scores for MLB nursing graduates. Although there was a significant positive correlation between both the Nelson-Denny vocabulary and the PSB reading comprehension scores with the registration examination scores, approximately the same variance was found to be explained by the variable GPA. Thus, students who are better readers do achieve higher registration examination scores compared to those who are poor readers, but they also have performed better throughout the program, which has resulted in a higher GPA. It is of interest to note that there was no significant relationship between Nelson-Denny reading rate and the registration examination scores, which is consistent with the findings reviewed in the literature.

Over the period of time of this study, several changes have taken place which may have had an influence on registration examination scores. Examples of such changes included participation of nursing faculty in student selection, increased faculty stability, and greater emphasis of faculty in preparing reliable and valid examinations.

#### **CONCLUSIONS RELATED TO THE TRANSACTIONS**

The transactions in this study refer to the components of the workshop--the presentation, self-study guidelines, the practise test and the review of the practise test. Following Das, Kirby and Jarman's (1975, 1976) model of information integration, each of these aspects of the workshop attempted to motivate students, to promote the coding of information sequen-

tially or spatially and to encourage planning and decision making. This model was an effective way to structure the concepts included in the workshop. The extent to which this workshop actually met its aim in terms of increasing the quantity and quality of self-study is not possible to determine. As has been identified in Chapter One, college students are extremely heterogeneous. On the basis of this heterogeneity, it is reasonable to expect that some students will perceive particular content or teaching methods as useful whereas others will not. Such were the results of the evaluation of the workshop by students. There was general agreement, however, that both the practise test and the printout identifying test results in particular areas of nursing helped students to review for the registration examination. There also was a consensus among students from group 10 that the use of strategies for learning have potential value to increase their learning of nursing content. The majority of students responding to the evaluation questionnaire stated they thought learning strategies should be presented to students in semester I.

The overall conclusion related to the workshop developed is that it has merit, particularly for students whose GPA is less than 2.80. Once revised as recommended, this workshop should be better able to help students to prepare effectively for the registration examination.

#### **CONCLUSIONS RELATED TO OUTCOMES**

Given the considerable effort that went into the development and implementation of the workshop, the results in terms of

increased registration examination scores can only be described as modest. In addition, the fact that the workshop competes for this modest increase in scores with curriculum changes could be interpreted as making the outcome even smaller. On the other hand, however, from the literature reviewed in Chapter Two, there is great difficulty in increasing scores on standardized tests. For example, a program of special coaching for the Scholastic Achievement Test (Verbal) resulted in an overall increase of 8 points on a scale of 200-800 points (Aldermen and Powers, 1980). As has been reported in Chapter Five, in the present study the mean registration examination scores have increased by between 5 and 35 points on a scale similar to that of the SAT-V, once the variance explained by GPA has been removed. Furthermore, the basic objective of this study is to assist students to prepare so that the registration examination scores accurately reflect students' potential in terms of nursing knowledge. There is no way of knowing whether this degree of achievement being aimed for with students from the treatment groups is statistically higher than the scores predicted on the basis of their GPA. To look only for statistically significant results is perhaps inappropriate given the purposes of this study and the small numbers of students in each treatment group. Thus one conclusion regarding outcomes is that all groups had some increase beyond that predicted, with one group reaching statistical significance.

The second conclusion related to outcomes is based on the data which show diminishing increases in effect sizes over time and a concomitant reduction of the proportion of students who

benefit most from the workshop (the low GPA students). It appears that the workshop was unknowingly offered to students who may not have needed the extra preparation. No conclusion regarding the relative effectiveness of the various stages of development of the workshop, therefore, can be reached.

**CONCLUSIONS RELATED TO THE DESIGN OF THE STUDY  
AND THE PROCESSES OF DEVELOPMENT, IMPLEMENTATION AND EVALUATION**

In this study, the fact that all control groups preceded the treatment groups had both positive and negative consequences. The positive effects included the incorporation of the workshop into the curriculum for semester VI, which simplified the implementation. The most significant negative aspect was the resulting inability to evaluate the workshop separately from the other factors which may have had a systematic effect on registration examination scores. The conclusion adopted for this study is that the positives outweigh the negatives. From the perspective of the nursing program, the evaluation that has been carried out was adequate. Given the constraints, therefore, the design was practical and permitted an assessment of 10 consecutive graduating classes over time.

Similar conclusions can be stated concerning the processes of development, implementation and evaluation. These three processes were practical ways to carry out a study in an institutional setting. The feature of the development that led to difficulties with evaluation was the changing nature of the workshop each semester. Yet it was this very feature--incremental, progressive development, semester by semester, that made this

study possible to be carried out together with concurrent teaching responsibilities.

Thus, this study has been conducted using practical methodology in an attempt to answer a research question which is essentially a practical question:

**Can a workshop be developed for graduating nursing students that will assist them to prepare for the registration examination to the extent that their scores on this examination will increase?**

Considering all the data, the best response to this question is a qualified yes. The qualifications are in three areas. First, the workshop is associated with, but cannot be said to cause, increases in registration examination scores. Second, it is primarily the scores of low GPA students that increase. Third, the increases in scores tend to be small.

The concluding section identifies the recommendations that have been made in relation to this study.

### **RECOMMENDATIONS**

The following recommendations arise from this study:

1. that the material on strategies for learning presented in the manual together with opportunities for practise be made available to nursing students early in the nursing program.
2. that the manual for students be revised to pertain directly to reviewing for the registration examination.
3. that the practise test be revised on the basis of the indices of difficulty and discrimination in an attempt to prepare a less difficult test containing all items which have positive indices of discrimination.

4. that the practise test be revised using consultation with experts to attempt to increase the reliability of the subscales.
5. that the review of the practise test be modified to permit students supervised access to the answers and rationales for test questions over a period of several on-campus days.
6. that the test analysis program based on the results of the practise test be modified to be easier to use and to change as the practise test is altered over time.
7. that two separate prediction equations be computed, one for low GPA students and one for high GPA students, based on the relationship between the treatment students' GPA and registration examination scores.
8. that students entering semester VI be monitored for risk of low performance on the registration examination using the appropriate new prediction equation and that consultation in relation to their preparation for the examination be made available as required.
9. that the potential long-term value to the MLB Nursing Program of conclusions reached through experimentally designed research be assessed with future research proposals and that the means to conduct such research while maintaining student rights be explored.
10. that the possibility of carrying out a project to determine if the practise test measures distinct areas of knowledge be investigated using factor analysis of the responses of a large number of writers.

11. that the possibility of carrying out a project to study the attributes of successful nursing students in terms of Das, Kirby and Jarman's (1975, 1979) model of information integration (successive synthesis, simultaneous synthesis and planning and decision making) be investigated.
12. that further research that investigates ways to promote the synthesis of nursing content presented to nursing students be encouraged.



**APPENDIX A**

**STUDENT MANUAL**

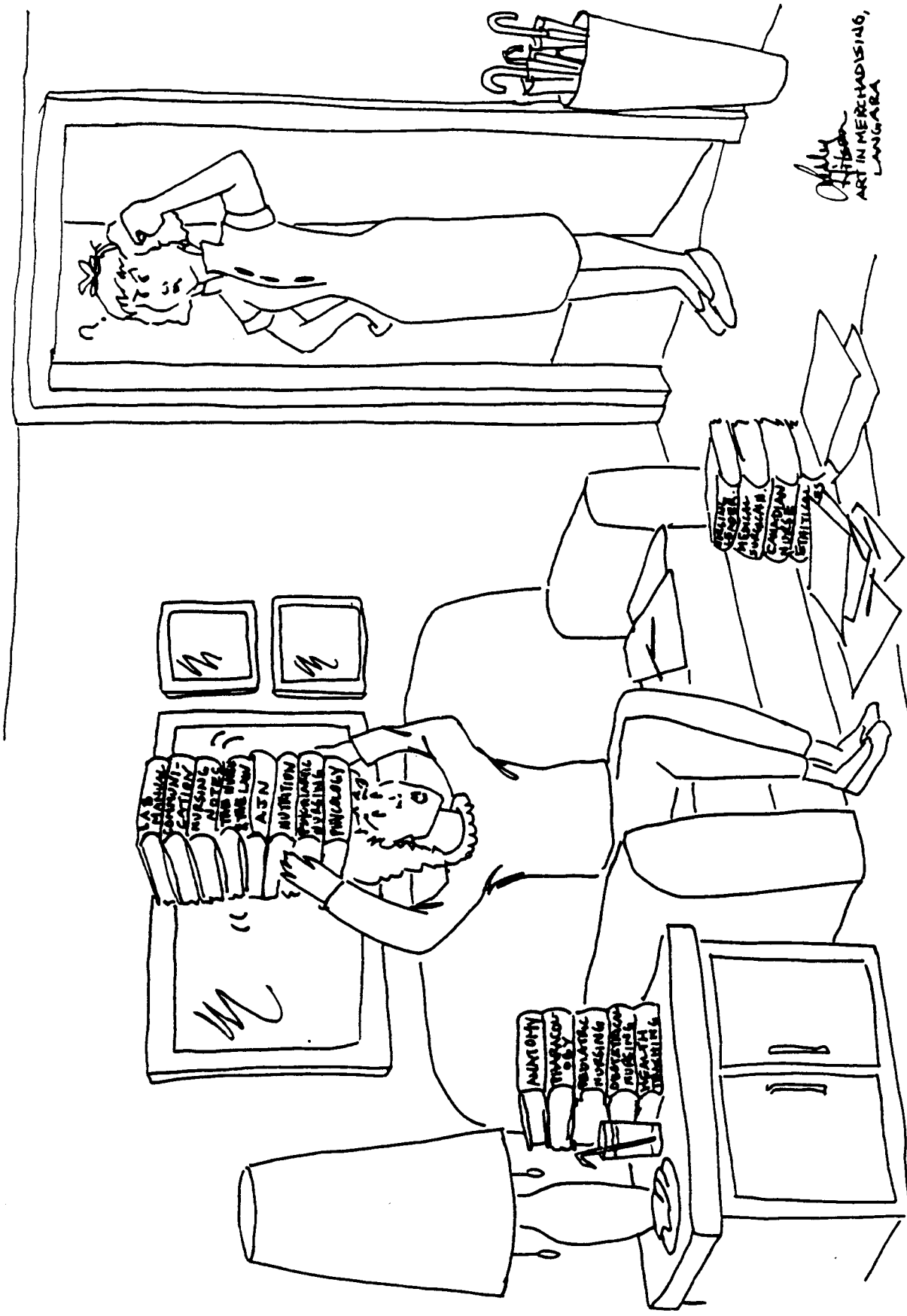
**PREPARATION  
FOR THE  
RN  
EXAMINATION:**

**A MANUAL  
FOR  
STUDENTS**

PREPARATION  
FOR THE  
REGISTERED NURSES' EXAMINATION:  
A MANUAL FOR STUDENTS

May, 1985

by  
Lynda Christie



"I'm studying for my RN Exams. I don't know how to review all this, so I'm trying to let it sink in by Osmosis!"

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## CHAPTER 1

### INTRODUCTION

#### PURPOSE

This manual has been written for those nursing students who recognize there must be a better way than using osmosis to review and study for the Registered Nurses' examination.

THE OVERALL PURPOSE OF THIS MANUAL IS TO HELP  
YOU TO PREPARE TO THE BEST OF YOUR ABILITY  
FOR THE R.N. EXAMINATION.

Hayes and Diehl (1981) suggest that students should be provided opportunities to discover how they learn and should be shown a wide range of strategies and techniques that they can synthesize and modify for their own learning needs. The stress should be on the process, not on the rote techniques of learning.

Students in nursing vary a great deal--in basic intelligence, general background knowledge, knowledge of nursing, experience, reading ability, anxiety level and so on. How can one manual be helpful for students with such uniqueness? . . . . By offering a "cafeteria approach" of suggestions. You can read through and select ideas you think would help you in specific review tasks. Then, try them out as you study. Discard ones you don't find useful, and practice using the rest, modifying them as you wish.

It is not only the difference in intelligence that leads to variation in R.N. exam scores, but differences in the ability to make use of one's knowledge.

Edward de Bono (1983), an expert on teaching thinking as a skill, states that the relationship between intelligence and thinking is similar to the relationship between a car and its driver. Engineering determines the innate potential of the car, but the skill with which the car is driven must be learned and practiced in order to be at an optimum level. This manual attempts to 'tune up' your thinking.

The aim of this manual is to help you learn to select and use strategies that suit the particular learning task and that are congruent with your learning preferences. It is hoped that the ideas in this manual will develop your skill and flexibility in learning and in coping with an evaluation situation.

#### MOTIVATION AND ATTITUDES

"To review or not to review, that is the question."

Writers in education have identified that what the student intends to get out of his or her learning, in large part,

determines the student's approach to learning and that, in turn, determines the level of outcome (Biggs and Rihn, 1984). Thus, for a nursing student, if the motive is merely to pass the registration examination, likely only a minimal effort will go into review and study. If, however, the intent is to perform well, increased time and effort will be devoted to the task, usually with good results. The outcome, of course, also depends on how much has gone into learning during the past two years, and what achievement has been attained.

It's best if you have a balance of different kinds of motivation as you review and study for the R.N. exam. One very important kind is that which is derived from satisfaction from the learning process itself and from meaningful interaction with the content. This is 'learning for learning's sake'. Another type, likely most common in nursing, is that based on seeing the usefulness, or the instrumental value, in particular knowledge. You may realize that without specific facts and concepts, you would not be a safe nurse. The third type of motivation is achievement-oriented; it's that motivation which can inspire you to try to achieve the highest score you can. Perceiving the learning task in achievement terms directs you to spend more time studying and reviewing content areas which will most likely lead to your best possible score.

Some people are challenged by events such as writing a standardized test, and they use the testing experience as an opportunity to achieve to their highest academic potential. Personal satisfaction and an increased confidence in one's ability can come through knowing one has studied and reviewed thoroughly and a good score results.

Fear of failure also can be a motivating force, but often this fear causes anxiety and lowered self-esteem, both of which can inhibit learning.

Your attitude toward study very much influences not only how much (the quantity) of study you do, but also how well you learn (the quality). If you find many excuses for avoiding studying, continually do other things while you are 'studying' and resent the time you spend studying, you likely won't benefit much from this or any other manual on preparation for the R.N. examination.

On the other hand, if you find the material you are reviewing is interesting and you basically can see the value of learning the content for nursing practice, as well as for the exam, then you have a much better chance of being successful.

Some learners have the attitude that nothing they do will make any difference in the outcome. They feel like pawns on a chessboard. When such learners write an exam, they view the resulting score as a matter of luck or fate. Other learners do not deny that some things are beyond their control, but have the basic attitude that their thinking and behavior determine



educational outcomes in very significant ways. Since these learners believe what they do makes a difference, they usually prepare for an exam to the best of their ability, and tend to score higher as a result. Educational psychologists refer to the first group of students as having an "external locus of control" and the second group as having an "internal locus of control" (Wittrock, 1979).

No one can motivate you to prepare for the R.N. exam but you. This manual will be of most benefit to those who are motivated, who have a positive attitude towards studying and who have an internal locus of control.

## BACKGROUND

In order to understand the ideas presented in this manual, a few basic definitions of terms are required.

1. A strategy is a way or means of doing something. For example, to find one's way around in an unfamiliar city, one could memorize all the streets. Or, one could buy a map. Both memorizing and using the map could be called strategies.
2. Learning strategies are methods that learners use to increase or facilitate learning. Rehearsal, or repeating something over and over, would be one strategy for learning a phone number. Putting signs and symptoms into related categories would be a strategy for learning specific nursing content that typically goes together.
3. Retrieval strategies are methods that learners use to help locate specific information that is stored in memory. For example, in order to retrieve specific signs and symptoms, you could think of the category you put them in when you learned them, and that should "trigger" the information you want. Using a sentence with the first letter of each word to remind you of each cranial nerve is another retrieval strategy.
4. Monitoring strategies are ways of letting yourself know, or 'signaling' yourself, how well you are performing some activity. In relation to learning, it is common to monitor reading comprehension, and responding to multiple choice questions. One strategy for monitoring reading is the practice of actively recalling the main ideas after you finish a particular section of text.
5. Test-taking strategies are methods that test takers use to select an answer when the best answer is not obvious to them. Random guessing is one test-taking strategy. Eliminating the least desirable distractor prior to guessing is another strategy for test-taking.

From the brief definitions and examples given, you can see that strategies vary in many ways. Some are used spontaneously when you are faced with a learning task, others you can learn to adopt. Some strategies are based on the sound or initial letter of a word, whereas others are based on the meaning of the concept. The ease with which you can transfer a strategy to a similar learning task varies from learner to learner, and from one strategy to another. Perhaps the most important way strategies vary, though, is that some are much more effective than others in helping you learn in any particular situation.

This manual will give you some ideas of different strategies you may want to try as you prepare for the R.N. exam.

### PRELIMINARY QUESTIONS

Before you actually start, there are some questions learners commonly ask.

#### Question 1

*I know, as an adult learner, I have developed a particular learning style over the years. What will be the good of reading about different ways to learn?*

#### Response

This manual is not necessarily aiming to change what you do, if your present method of study and review is working well. It does, however, aim to heighten your awareness of your own thinking capabilities, and give you options from which to choose. Research using college and university students has indicated that strategies are malleable (Langley and Simon, 1981) and that adaptive strategies can be taught and maladaptive ones dropped (Biggs and Rihn, 1984).

#### Question 2

*It seems as if all this discussion about strategies for learning is going to take time away from learning the important content I need to know. I don't have enough time to review as it is.*

#### Response

The dilemma in nursing is that the field is so broad that there would never be enough time to learn all the information that could be asked of you. The idea of using strategies is that they will help you to increase your efficiency of learning, to retrieve information when required and to reason out answers when you don't have 'the answer' stored in your memory. Educational research is showing that it is not more knowledge of content that students need, but more understanding of how to enhance their own knowledge (i.e., activities that promote 'learning to learn').

There is a current emphasis to increase students' self-control and self-awareness of their own learning processes (Brown et al., 1981). As de Bono reminds us, information is no substitute for thinking, and thinking is no substitute for information. You need both.

### Question 3

*I can't see where all these strategies in my head are going to help me answer multiple choice questions on the R.N. exam. It would take too long to sit there and contemplate which strategy would be best.*

### Response

For questions where the answer is obvious, you won't need any special strategy, so you won't take any longer. For questions on which you need to reason out the best answer, you may be slightly slower, but your increased chance of getting the correct answer will more than make up for the decrease in speed. Also, if you practice using a variety of strategies, they will become almost automatic (Gagne & Dick, 1983). Think back to when you first learned to make a bed in nursing; you had to think out each step and you couldn't talk to the patient at the same time. Now that you've made many beds, you can carry out that function while focussing on the patient. In a similar way, during the exam, you want to concentrate your effort on the question, allowing the strategies you've practiced to operate at the same time.

### Question 4

*What effect do these strategies have on achievement? Do you really think they make any difference?*

### Response

There are many people carrying out research in general education who have demonstrated that using learning strategies can increase achievement (Dansereau et al., 1979; Weinstein et al., 1979; Kirby, 1984; Brown et al., 1981). Obviously, sufficient time is required for the use of strategies to have any measurable effect. I am confident that learning strategies can be applied to nursing with a positive effect on achievement, but I don't see them as any guarantee to a passing score. If the real problem is insufficient and/or inaccurate knowledge, principles and concepts basic to nursing, then you need much more than good strategies to become prepared for the registration exam. If you can think back to the earlier analogy of the car (intelligence) and driving skill (how well you use your intelligence), then you can readily see that all the driving skill in the world won't help you get anywhere unless you have a functioning car to drive.

## ORGANIZATION

The first section deals with information about the R.N. exam. You can use this information to help you plan your study time. In addition, this section may decrease anxiety related to the 'unknown' (Kane, 1976). The better you understand the educational task that is required of you, the more you are able to prepare yourself specifically for that task, and often the better the outcome (Anderson & Armbruster, 1982.)

The next five chapters focus on particular strategies that you may find helpful in preparing for the R.N. exam. Each chapter is printed in a different colour for easy reference.

**CHAPTER 3--REVIEW AND RETRIEVAL STRATEGIES:** (GREEN) This section gives you many suggestions for ways to review nursing content that will increase the probability of your being able to recall information you require.

**CHAPTER 4--TEST-TAKING STRATEGIES:** (IVORY) The next chapter deals with test-taking strategies you can apply during the review period and during the actual R.N. exam. To gain the most from this section, it should be read after the ideas from the previous section have been practiced.

**CHAPTER 5--STUDY SKILLS:** (PINK) This chapter highlights some of the information available about study skills. Students whose study skills need improvement may benefit, but for those who have had poor study skills for years, other references that focus exclusively and more exhaustively on the topic would likely be more beneficial.

**CHAPTER 6--COPING WITH TEST-TAKING ANXIETY:** (YELLOW) Many students have a good knowledge level, but experience anxiety during tests that decreased their test score. This next section gives some suggestions for minimizing and coping with this type of anxiety.

**CHAPTER 7--MONITORING STRATEGIES:** (BLUE) The concluding chapter explores a variety of monitoring strategies and explains how you can benefit from being more aware of the effectiveness of your studying and reviewing.

Each of these sections has a potential for assisting nursing students to be better prepared for the registration examination. Simply reading the manual over, however, will not likely make any impact. The ideas need to be understood, thought about and practiced over a period of time, using nursing content and sample multiple choice questions.

Questions for ReviewCHAPTER 1

Student I.D. \_\_\_\_\_

Please take about 5 minutes to respond to the following questions related to the content of this chapter. I will be using the responses to assist me in making revisions of this manual, not to assess your learning. Please tear the review pages out of the manual and submit them to me, along with any general comments or suggestions for change, if you wish. I'd like all review questions by July 5, prior to the practice test.

*L. Christie*Aim for May 31 for questions on Chapter 1

1. In addition to differences in intelligence, what else leads to differences in R.N. scores? \_\_\_\_\_  
\_\_\_\_\_
2. Briefly describe three kinds of motivation that could be helpful to you in preparing for the R.N. exam.
  - a) \_\_\_\_\_
  - b) \_\_\_\_\_
  - c) \_\_\_\_\_
3. Identify one force that could hinder learning. \_\_\_\_\_
4. Give one example of a retrieval strategy that you have used (e.g., for nursing content or for postal codes, license numbers, etc.). \_\_\_\_\_  
\_\_\_\_\_
5. If you practice using learning strategies, what desirable outcome may occur? \_\_\_\_\_
6. In your own words, identify what you will need to do in order for this manual to have any effect on your studying or your R.N. score.
  - a) \_\_\_\_\_
  - b) \_\_\_\_\_
  - c) \_\_\_\_\_
7. Why is it helpful to have some information about the R.N. exam? \_\_\_\_\_

## CHAPTER 2

### THE REGISTERED NURSES' EXAMINATION

#### CONTENT

The R.N. examination is a comprehensive exam designed with the purpose of admitting graduate nurses into the profession of nursing.

The exam is comprehensive, which means it includes important aspects of medical-surgical, obstetrical, pediatric and psychiatric nursing. It tests phases of the nursing process, developmental stages and common unanticipated events. A significant percentage of the questions are related to health teaching and the prevention of health problems. For more information about the content breakdown of the R.N. exam, see the R.N. exam blueprint that is available in Appendix A.

#### FORMAT

The R.N. examination is comprised totally of multiple choice questions. There are no essay or short answer questions. Although more than one distractor may be correct, each question has one and only one best answer. You will be expected to select the best answer in relation to specific situations that are given to you.

There are relatively few questions that are straight recall of facts; most questions involve comprehension, application or analysis of data. This means you will need to reason out the best answer while writing the exam, rather than simply recalling the answer from a specific page of your notes or textbook.

The exam consists of four parts, each of about 125 questions. It is written in four sittings, the morning and afternoon on two consecutive days. Each of the four parts of the exam is testing nursing content that is integrated. This means the various specialty areas of nursing (medical-surgical nursing, pediatric nursing, etc.) and various aspects of nursing (physiological, psychological, social, etc.) and the many content sub-areas of nursing (nutrition, pharmacology, communication, legal and ethical issues, etc.) are combined in each test.

You will be required to identify the response you choose by marking a computer answer sheet. Make certain you understand the directions fully in respect to completing your answer sheet. It is of utmost importance that your I.D. number is on each sheet, and that you consistently check that the number of the response you've made on your answer sheet corresponds to the number of the question. For example, you must put your response to question No. 123 in the space beside No. 123 on the answer sheet. The computer scoring your answer sheet has no way of knowing if you happened to get your responses in the wrong place.

## MARKING SCHEME

Even though you write the R.N. exam in four parts, the mark you receive is based on the number of questions you answered correctly of the total test. Each multiple choice question is worth one mark; there are no partial marks. The number of items you get correct is called your 'raw score', which will not be given to you. You will also not be able to determine the total number of questions, since some of the items are presented for analysis and are not used to calculate your score.

The score you receive is a standardized score, which is derived from your raw score. A standardized score is obtained through the following procedure, which has been simplified somewhat. For more detailed information, see any basic statistics textbook.

1. All of the hundreds of exams that are written at one time in all of Canada are scored and put in order from highest to lowest.
2. The average score is obtained.
3. The standard deviation is computed. This is a measure of how "spread out" the scores are. If the standard deviation is large, it means the raw scores are very spread out. If the standard deviation is small, it means the raw scores are all clumped together close to the average mark.
4. Those people with a raw score on the mean are given a standard score of 500. This does not have any relationship to the number of items correct or the percentage of correct items. A standardized score of 500 is whatever the mean happens to be; it could be 60% or 75% or whatever.
5. Each standard deviation from the mean score is set arbitrarily at 100.
6. The passing score is established by each provincial association. For British Columbia and most provinces, this is set at 1.5 standard deviations below the mean, which is a standardized score of 350. You will not be able to equate this passing score to a specific percentage of correct items.
7. Every candidate's standardized score is computed, based on where each raw score falls on the 'bell curve.'

With this method of scoring, there will always be people who fail, no matter how well they do, since there will always be some people who are lowest. About 7% of the exam writers fail the R.N. exam on the first attempt. Put in a positive way, 93% of the writers will pass. So you can see your chances of passing are quite good.

You need to remember, however, with this method of scoring the exam, it is not simply a matter of how well you do that counts. It's how well you do relative to other exam writers that gives you your score. For a small group, this method would be unfair, since people with 80% would fail if they happened to write with a bright group who all scored over 80%. But since many hundreds of people write at each sitting, those who fail the R.N. exam are those whose raw scores are quite low, which likely reflects low knowledge and application of nursing content.



Questions for ReviewCHAPTER 2

Student I.D. \_\_\_\_\_

Please take about 5 minutes to respond to the following questions related to the content of this chapter. I will be using the responses to assist me in making revisions of this manual, not to assess your learning. Please tear the review pages out of the manual and submit them to me, along with any general comments or suggestions for change, if you wish. I'd like all review questions by July 5, prior to the practice test.

*L. Christie*Aim for May 31 for questions on Chapter 2

1. The R.N. exam is a comprehensive exam. What does 'comprehensive' mean? \_\_\_\_\_  
\_\_\_\_\_
2. The R.N. exam is comprised of integrated content. What does 'integrated' mean? \_\_\_\_\_  
\_\_\_\_\_
3. What levels of questions are emphasized? \_\_\_\_\_
4. If you scored exactly the average mark, your standardized score would be: \_\_\_\_\_
5. The passing score is \_\_\_\_\_ which is \_\_\_\_\_ below the mean.
6. If your standardized score happened to be 600, how would you interpret this? \_\_\_\_\_  
Would you be able to determine what percentage this score represents in raw score points? \_\_\_\_\_
7. In addition to the number of correct answers you obtain, what else determines your standardized score on the R.N. exam?  
\_\_\_\_\_

## CHAPTER 3

### REVIEW AND RETRIEVAL STRATEGIES

#### OVERVIEW

From psychology, you may recall that the human memory is made up of two major components:

1. Short-term memory (STM)--the part of memory you are attending to or the part that is 'activated' at one particular time. Your memory is like a vast array of tiny light bulbs, each light representing a unit of stored information. Imagine that you have a limited energy source so that you can cause only a few of these bulbs to be lit at one time. These light bulbs represent that information in memory to which you are currently attending--the activated memory. As new information enters, your attention is drawn to it and a new set of lights becomes lit, but as your attention wanders others become lit (Rumelhart, 1977).
2. Long-term memory (LTM)--the part of memory where your more permanent knowledge and skills are stored. LTM can be considered a storehouse for information. In order for learning to take place, information that is in STM needs to be transferred to LTM. The storage of information poses no problem (apparently, there is ample 'room' in LTM); it's the retrieval of information, once stored, that may cause difficulties (Rumelhart, 1977). If retrieval is to be assured, the information must be carefully stored according to some systematic scheme.

Information stored in LTM is somewhat like books kept in a library. If new books were added simply by putting them on the shelf, soon no one would be able to find a particular book; no one would know whether the book was there or not. The library would be useless, even though it could be filled with books.

At this stage in your professional career, you have a vast amount of information about nursing in your LTM. When you are faced with a test of your knowledge, such as the R.N. exam, you don't want to be like the library full of uncataloged books. You need to think of strategies that will help you retrieve the information you need at the time. You want to be able to have ready access to the stored knowledge, i.e., to be able to 'activate' it when required.

#### REVIEW PROCESS

If you systematically review the most important aspects of the content that the exam tests, you will greatly increase your chances of retrieving information. The first step of the review process consists of 'looking up' what is in LTM--this is similar

to a 'stock-taking' procedure. Then you use appropriate resources to supplement, correct, rearrange or update what is in your LTM. You also may want to 'weed out' information you no longer need.

### Assessing Long-Term Memory

For many students, this first step--going into LTM to assess what is there--is very difficult. For many it is frightening since it is done so seldom, it's like a journey into the unknown. Perhaps this fear explains why some students never do any review.

If, however, you have decided to examine your LTM, be prepared. Often there is considerable dust on the filing cabinets in your mind, and many file drawers don't open easily after being closed for so long. You may find files in the wrong place, files with no name, and empty files. Even though it may be upsetting to discover such disarray, it is much better to find out the true state of your LTM. You want to know what you know, and know what you don't know. This knowledge is essential in order to correct problems. This knowledge will also help you on the exam; you won't waste time trying to retrieve information that isn't there. If someone asked you what Florence Nightingale's phone number is, how long would you take to realize you don't have that information? . . . Not likely very long. In a similar way, you want to be able to determine if there is any use in searching your LTM for specific information. If you realize it isn't there, you can try reasoning out the best answer in other ways.

### Taking Action

Once you have completed this phase of the review, you will then need to take action on the problem areas you find. The emphasis here is to truly comprehend the material you are responsible for knowing. This may involve totally relearning some of the concepts, or it could mean only slight revision. If relearning is found to be necessary, Dansereau et al. (1979) recommend the following steps:

1. Mood setting--establish the mood for study.
2. Understanding--aim to understand the reading (mark important and difficult ideas). Relate this knowledge to what you already know.
3. Recalling the material--try to recall the material in your own words without referring to the text. Then check that you have the main ideas.
4. 'Digesting' the material--think about the material, amplifying and storing the material in a way that makes sense.
5. Expanding knowledge--ask yourself questions on the material.
6. Reviewing mistakes--learn from tests.

The first letter of the above steps to promote comprehension and retention form the acronym 'MURDER' which Dansereau uses to assist students to remember.

You may have forgotten information that you now realize you need. Forgetting may result from the passage of time through a process of gradual 'decay'. In addition, forgetting may result from interference, which can occur when similar concepts or ideas are being learned (Wessells, 1982). When reviewing concepts that have some commonalities, you must take special care to discriminate them in your mind (i.e., write out in what ways the concepts are similar, and in what ways they are different). Examples of such content from nursing would be: placenta previa and abruptio placenta; diabetic coma, insulin shock; adult and fetal circulation; neuroses, psychoses.

### Identifying Principles

Once you have reviewed each section, it's a good idea to identify the main principles. What can happen when you are learning material that may be complex and detailed is that, in the process of learning the complexity and the details, you can miss the overall concept. This is similar to 'not seeing the forest for the trees'. You may identify main principles about ethical issues, legal aspects of nursing, communication, professional attitudes, medication administering, asepsis, etc. One advantage of being thoroughly familiar with these principles, in an exam situation, is that you can apply them to various settings. Thus, if a question includes a setting that is unfamiliar to you--a health clinic, the home, the school, etc.--just identify the principle being tested and then apply the principle to the situation specified.

### Processing Information Actively

If you follow the suggestions for review as outlined, you will be actively processing information as opposed to passively rereading your notes and texts. Depending on the content, you will carry out information processing at various depths and at various degrees of elaboration (Schmeck, 1983). Deep processing is recommended for content that you need to understand very thoroughly. Examples could be 'Planning of Nursing Care' or a common health problem such as diabetes. The types of activities you would engage in as you carry out deep processing are identifying underlying concepts, analyzing and categorizing information, critically evaluating your categorization, comparing and contrasting ideas, etc.

In contrast, sometimes a shallow approach can be most expedient in terms of R.N. exam preparation. For example, if you were reviewing head injuries and spinal cord injuries, rather than trying to understand all the neurology involved, for most students, it's best to concentrate on the basics. Then focus your attention more deeply on the nursing care that is related.

You are not expected to know very much about the medical aspects of care for patients that have complex nursing problems.

The amount of elaboration you use in processing information will also influence how well you can retrieve the specific information you need. Processing 'elaboratively' means that you search for practical applications of what you are reviewing; you try to make abstract ideas more concrete and personalized. You may do this by translating important sections of your text into your own words and relating the ideas to your own life experiences. Content that you may find useful to process elaboratively includes those health concerns involving a change in body image (e.g., congenital anomalies, amputations, burns, paralysis, blindness) or problems involving emotional, social or occupational considerations (e.g., mental illness, drug and alcohol abuse, mental retardation).

Bradshaw and Anderson (1982) have found that highly elaborated memory traces were better recalled than unelaborated memory traces.

Reviewing is essential to prevent forgetting. If you carry out a thorough, systematic and active review aimed at comprehension of important nursing content, you will be preparing yourself for nursing practice as well as for the R.N. exam.

### PLANNING FOR RETRIEVAL

Most people have had the experience of knowing something and having it on the 'tip of the tongue', yet being, at least temporarily, unable to recall the specific bit of information. This inability to retrieve needed information, unfortunately, occurs more often when there is some pressure, such as that perceived during exams, to remember. This section describes various strategies for retrieval of information and emphasizes the need to plan ahead for retrieval during the learning process.

The process of retrieval appears to consist of two aspects: first, getting to the relevant location in memory; and, second, constructing an appropriate output from the sketchy information found. Memories are not stored as entire units (as books are in a library) but fragments of what is to be recalled (Rumelhart, 1977). The process of retrieval, then must be considered as a reconstruction.

The following strategies are methods used to enhance your ability to retrieve information. The first four are based on an understanding of the meaning of the material you are trying to remember. These strategies are sequenced from simple to complex. The last strategy is based on surface features of a concept.

### Using Association and Categorization

To assist you to remember specific information, you want to associate, or link, knowledge in your mind and put it in categories. For example, it may be helpful to associate Erikson's growth and development stages with the ages and typical behaviors. Later, when you are asked a question about growth and development, if you recall the category you will then most likely be able to locate this concept in your LTM.

Although this strategy can be used effectively for complex nursing concepts, using association and categorization is particularly effective when you need to know only two or three points about each topic. For example, in a category that you label 'Deficiency diseases', you could associate the specific nutrient lack with the resulting disease and the prevention (e.g., vitamin C--scurvy--citrus fruits, and so on). Other examples of content that association and categorization would likely be effective are: growth and development of the fetus, common communicable diseases, diagnostic tests, stages of death and dying, stages of labor, foods that are high in particular substances such as potassium, sodium, protein, etc.

### Using Imagery

Some aspects of knowledge lend themselves very well to retrieval from LTM by means of imagery (Richardson, 1980). Examples of nursing concepts in which visual imagery could be used include: echymosis, petechiae, ascites, edema, substernal and intercostal retractions, epistaxis. When you read these terms (and others that you could think of) practice creating a mental image. With 'echymosis', for instance, you want to picture, as clearly and as vividly as you can, a patient with large, darkly-coloured echymoses. Then, when you are faced with a question that uses this term, you will be better able to respond correctly, as you have the image of the situation in your mind.

Auditory images can also be used to enhance remembering. For example, think of normal breath sounds--vessicular, broncho-vessicular and bronchial--and where they are heard. Associate the name, location and sound in your mind. Then consider the abnormal sounds you may hear as you listen to a person's chest: rales, rhonchi, wheezes and pleural friction rub. Associate the name, brief description and the actual sound in your mind.

Like other strategies, using imagery takes practice. Get into the habit of consistently linking the learning experiences you have had (i.e., caring for patients, viewing a film, even seeing pictures in books, etc.) with the theory that is related.

## Asking Meaningful Questions

Many authors in education have discussed the value of self-questioning techniques (Rickards, 1980; Anderson, 1979; Anderson and Armbruster, 1982; Balajthy, 1983; André and Anderson, 1978-1979).

During your review, self-questioning can be beneficial both before reading and after. Write down your questions before studying. Then, follow up the questions you ask by responding to them and checking your responses for accuracy. The questions you generate after your review should be at a higher level than simple recall of facts. Questions that appear to enhance learning and facilitate retrieval the most are those that help you to analyze, interrelate, synthesize and evaluate various concepts. Examples of such questions include: How can this patient's behavior be analyzed in terms of the grief response? In which ways do physical and emotional factors interact to cause an ulcer? How can data from the patient's history, from nursing assessment, and from the results of tests be put together to give me direction for nursing care? Which nursing intervention would be best in terms of patient safety and comfort, as well as therapeutic value?

Studies have been done to determine the effectiveness of training students to use questioning to aid in learning. The results have indicated that the training procedure helped more low and middle verbal ability students, yet did not greatly influence those subjects with high verbal ability. It seems as if high verbal ability students already know how to generate good questions (André and Anderson, 1978-1979).

## Having a Framework for Knowledge

The next retrieval strategy to be presented is one based on using relevant prior knowledge as a 'framework' (often called 'schema' in educational literature) upon which to anchor new knowledge. Thus, as you review important facts and principles of nursing content, it is essential to have in your mind some overall scheme of what it is you are learning. Having such a framework will help you to see how various concepts relate and how ideas fit together. This framework provides necessary structure that plays an important role in your ability to remember. You will use this structure to facilitate recall (Rumelhart, 1977).

In your mind, you likely have a large number of different schema. Some schema are extremely large and encompassing (such as the 'nursing process') and others are much more specific (such as nursing care for anxious patients). Many times different schema overlap. For example, your schema for caring for preoperative patients would likely include much of what is in the schema for caring for anxious patients. Of course, you also have schema

in your mind about other aspects of life--e.g., going to a restaurant, attending college, etc.

How can your awareness of the various schema in your mind increase your ability to remember? . . . Basically in three ways: 'chunking' information, facilitating transfer of ideas throughout and between schemata by means of networks, and allowing you to make inferences, or guesses, when you are not sure of specific information. Each of these ways is discussed briefly.

1. Chunking information refers to the grouping of elementary units into a smaller number of richer, more densely packed units (Bower and Hilgard, 1981). A smaller number of units of information is more easily remembered than a large number. When you are reviewing, it is helpful to relate the current material to the framework in your mind. Then, on the basis of the structure the framework provides, group similar ideas and think of them as an entity. These ideas could be typical signs and symptoms, nursing assessments, nursing interventions and so on. When you are required to retrieve some specific information, for instance, whether dehydration is a sign of diabetes, first think of the appropriate schema. In this case it would be your schema for 'caring for diabetics'. Then identify the appropriate 'chunk' of information that is stored in your memory. Thus you would focus your attention on the 'chunk' called 'signs and symptoms'. If you actively 'put' the information there during your review, you will most likely be able to retrieve it when needed.
2. A network is a kind of graph that consists of a set of nodes and a set of arcs interrelating them. The nodes represent concepts and the arcs connecting them represent relationships between concepts. Networks are useful for representing the relationships among concepts in memory (Rumelhart, 1977). The frameworks of knowledge, or schema, in your mind are comprised of many such 'networks'.

For example, in the schema for caring for a postoperative patient, you likely have the following networks of information: principles of intravenous management, nursing care of a patient in pain, procedures for changing the dressing, the assessments you would make to detect complications, etc. When you are required to retrieve a specific unit of information, again, think of the appropriate schema, and then allow your attention to 'travel' extremely rapidly from one concept to another, and even from one network to another, by means of the relationships. The more thoroughly you review and make explicit the relationships between concepts, the more likely you will be able to retrieve information that you need. An example of a network developed using nursing content is available in Appendix B.



You may find it helpful to draw out on paper networks of concepts in your mind to aid in learning. Later, when faced with a retrieval task, you can use the named links (relationships) as a language for exploring your memory systems. For example, is the information I am looking for embedded in a leads to chain? Is this part of a larger concept? Is it an example of a more general notion. This language provides a systematic way of moving from one point in the memory system to another (Dansereau, et al., 1979).

3. Thinking of the schema in your mind can assist you to make inferences, or predictions even when you don't know the exact information required. In other words, the schema will help you to reconstruct the concept from the information you retrieve from memory. The schema, based as it is on prior learning, makes it possible for you to "fill in the gaps" (Gagné and Dick, 1983) which can be very helpful during examination time. You will be able to greatly increase the accuracy of your response over guessing randomly. It is as if, once you know most of the specifics in a situation, you can accept the default information from your general schema for the rest of the knowledge you need (Collins et al., 1975). A word of caution, here. Make sure you select the correct schema. There are types of situations in which you could have two quite different schemata in your mind. Think for example of how you interact with obnoxious people: you easily could have both a personal and a professional way of coping with such a situation. In an exam testing nursing, select the professional schema.

### Using Surface-feature Associations

In nursing there are some facts and concepts that are difficult to remember or to differentiate since there really isn't any logic behind the name of the concept. For example, drugs that dilate the pupil are mydriatics, whereas those which constrict the pupil are called miotics. It's helpful to try to think of a personal way to remember which is which. One way is to think of the 'd' in dilate and the 'd' in mydriatic. Or you could think of the small 'o' in miotic as a small pupil. The length of the word can be used as a cue: here the longest word is the widest pupil.

Some people use short rhymes to aid in memory. Think of how effective are rhymes such as "Thirty days has September . . ." and "I before E except after C . . ." etc. Making a sentence using the first letter to cue you to terms you need to know can be very effective. For example, if you have difficulty recalling the fat soluble vitamins, think of this sentence "All Dogs Eat Kennelration." As you review and find there are some concepts you simply cannot associate logically, then using these methods, referred to as 'mnemonic devices', may help you to remember.

Some people become very sophisticated with using surface-related features. Studies have been done to show that if you can visualize two objects in your mind interacting in some way (even if it is foolish) you will be able to recall the objects more readily (Richardson, 1980). Using this principle, if you have a difficult sequence of terms to remember, you can use the furniture in a room of your house as 'hooks' upon which to base associations. A room in your home is suggested since its structure and furnishings would be readily available in your memory. Thus, if you were trying to recall the specific details of fetal circulation, for example, you could visualize the foramen ovale as the window above your sink, the ductus arteriosus hanging from your light fixture, and the ductus venosa sitting on your fridge, etc.

Numbers can be recalled, using a similar system. Certain 'peg words' for numbers are memorized (such as: one--bun, two--shoe, three--tree, four--door, and so on). These peg words are rote learned so that they can be recalled instantly. Then you can use these words instead of trying to recall a number. For example, if you wanted to remember that 12 grams is a normal hemoglobin level, you could imagine a cartoon-type hemoglobin molecule with a bun (1) on one foot and a shoe (2) on the other foot. When you visualize the bun and the shoe side by side, you should recall the numbers "1" and "2" which, in sequence, make "12". The combining of images in your mind can help you to retrieve the information you want (Bower, 1981).

The type of content that is most suitable for surface-feature association is that in which the logic of the concept is not important or not necessary to know. It is best to use this method rather sparingly, and direct your energy and attention to trying to understand the meaning of the concepts if meaning is important. Using mnemonic devices for retrieval can be very efficient for details that you tend to mix up. For example, 'O.S.' is the abbreviation for left eye, and 'O.D.' is the abbreviation for right eye. I recall this because I associate D with dexterous and I am most dexterous with my right hand. (Obviously, a left handed person would have to choose a different retrieval strategy.) In nursing, this type of approach for retrieval is most suitable for concepts that you don't need to know much about. For example, I don't know much about beriberi, except that it is caused by a lack of thiamine. I can recall this because the initials (Ithiamine-Beriberi) are 'IB' which is my retrieval cue.

Some of these surface-feature associations may seem ridiculous to you. There is certainly no need to use any of them, but many people find their memory for details increases by using them selectively. These retrieval cues are also very personalized; what helps one person may be useless to someone else. The cues that work the best are likely the ones you develop yourself.

The use of rote learning (memorization) and mnemonic devices are often referred to as a 'surface approach' for learning. Studies have shown that using a surface approach is best when combined with a deep approach for learning, and it is best if it remains an option rather than a characteristic style (Biggs and Rihn, 1984).

### SUMMARY

This section has given you some guidelines for reviewing and retrieving information in preparation for the R.N. exam. The emphasis has been to review the material so that you comprehend it. The more attention you give to a topic or concept (i.e., the more completely you comprehend it), the more likely future searches of your long-term memory will be successful. Studies have indicated that it is just those aspects that were noticed and believed relevant at the time of storage that can serve as efficient guides back into memory (Rumelhart, 1977).

The importance of meaning and structure of stored information has been described in relation to retrieval of information, since both meaning and structure are so vital to the ability to remember. Using strategies based on surface feature associations has also been discussed, along with suggestions for appropriate content from nursing to use with these techniques.

Try using these ideas, and think of others that may be effective for you as an individual learner.

Questions for ReviewCHAPTER 3

Student I.D. \_\_\_\_\_

Please take about 5 minutes to respond to the following questions related to the content of this chapter. I will be using the responses to assist me in making revisions of this manual, not to assess your learning. Please tear the review pages out of the manual and submit them to me, along with any general comments or suggestions for change, if you wish. I'd like all review questions by July 5, prior to the practice test.

*L. Christie*Aim for June 7 for questions on Chapter 3

1. That part of your memory which you are paying attention to at one particular time is called \_\_\_\_\_ memory.
2. Storage of information in LTM is not usually a problem. What is it that commonly causes difficulties in this regard?  
\_\_\_\_\_
3. Name the six steps that were recommended you could take if you had to re-learn some of the nursing content.
 

a) _____	d) _____
b) _____	e) _____
c) _____	f) _____
4. To recall the answer to questions number 3 above, what method did you use? \_\_\_\_\_
5. In an exam situation, what is one advantage of being thoroughly familiar with the principles of nursing?  
\_\_\_\_\_
6. In your own words, what does "processing information elaboratively" mean? \_\_\_\_\_
7. Using suggested terminology for networks, how would you interpret the following small section of a network?  

nurse-patient relationship — c —> therapeutic
8. In your own words, what is a 'chunk' of information and in what way can this concept be helpful to learning?  
\_\_\_\_\_

## CHAPTER 4

### TEST-TAKING STRATEGIES

Responding well to multiple choice questions involves a skill that can be developed and increased. Obviously, this skill is related to knowledge of the content, but it also includes deductive reasoning and cue-using strategies. Analysis of nursing tests for a five year period has shown that the strategies in the deductive reasoning category have been most useful (Hyde, 1981). A deductive strategy is one in which the least likely responses are eliminated and a logical reasoning process is employed to increase the probability that the chosen answer will be correct.

A useful way to approach multiple choice questions involves following a basic approach for all questions. Then, if difficulties are encountered, you can employ further strategies.

#### Basic approach for all multiple choice questions

1. Read the question carefully. Concentrate your attention completely on this one question and relate it to the data given. Avoid reading more into the question than what is there.
2. Pick out the 'key words'. These are particular words or phrases that make a general situation specific. These are extremely important to consider, since the 'best' answer is only best in terms of these specifics. Examples of key words include the age and diagnosis of the patient, information given about vital signs, diagnostic tests, assessment findings, emotional behavior, etc. Key words vary from one question to the next. Occupation, for example, may be very significant in one question, but not at all important in another. You need to practice picking out the key words and then you will be able to recognize them readily.
3. Deliberately ask yourself: "What is this question asking me?" There is a tendency in an examination to read very quickly and jump to conclusions about what the question really is asking. For example, you may interpret a question to be asking you for the most important nursing intervention, when, in fact, the question is asking you to identify what nursing assessments you would make. There are likely some options that are assessments and some that are intervention. So, make sure you read the question and interpret very carefully the words that are there.
4. Read over all options before making any decisions. Since more than one option may be correct (but only one is best) you want to keep an open mind until you have read them all over.

5. Choose the best response. The ideal strategy for doing this, of course, is to know the response that is considered best. In other words, use the retrieval strategies that you have practiced to locate the best response from your memory. If you can determine the best response readily, mark your answer sheet and go through this same process with the next question.

You will likely be able to use this simple five-step approach on many questions. There will, however, probably be a greater number of questions for which the best answer is not at first obvious to you. What should you do? . . . It is often helpful to consider some deductive strategies next. These strategies will help you make a guess for which your probability of being correct is directly related to how well you can use the knowledge you do have to reason out the best response.

#### Deductive Reasoning Strategies (adapted from Sarnacki, 1979)

1. Eliminate options which you know to be incorrect and choose from the remaining options. Guidelines for eliminating options are included following this section.
2. Choose neither, or both, of two options which imply the correctness of each other. This principle directs you to examine all options for similarity or any other cue that if one were correct, the other would be correct as well. Each multiple choice question has only one best response. That response, though, may be made up of several parts. For example, the best answer to one question may be response number 2 which is "A, C, D" where "A, C, D" are all options related to that question.
3. Choose neither, or one (but not both), of two statements, one of which, if correct, would imply the incorrectness of the other. For example, if the options "maintain strict bed rest" and "encourage running exercises" were being considered, it is obvious that you should not select both even if it were possible. Other examples would not be as obvious. Consider: one option may be "slow, shallow breathing" and the other "Kussmaul respirations." For complex questions, this principle directs you to examine each option carefully to determine if any one would imply the incorrectness of the other.
4. Restrict your choice of best answer to those options which encompass all of two or more given options known to be correct.
5. Use relevant content information in other test questions and options. It's a good idea to mark those questions you are not sure you have guessed correctly. As you proceed through the test, your association links may become activated by something you read. By comparing content information in

several sections of the test, you may be better able to retrieve information that you couldn't think of earlier.

Most questions can be responded to with some confidence using this deductive form of reasoning. Some test-takers, however, have difficulty with the first step: eliminating options that are not correct. Here are some guidelines for doing this in relation to nursing exams.

Options should be eliminated if:

1. The correct nursing care is described for the wrong reason.
2. The incorrect nursing care is described for any reason.
3. One of a series of signs, symptoms, assessments, or nursing actions is incorrect (no matter how many are correct).
4. Details are not congruent with the data given. For example, if the patient has an infection in his right eye, the option "instill antibiotic drops into his left eye" is not correct. This would appear to be obvious, but there may be a page or two of other questions separating the data and the question.
5. Any reference to anatomy, physiology, microbiology, etc. that is incorrect (no matter how correct the rest of the sentence is).
6. The action recommended is not within the scope of activities that, legally, can be carried out by a nurse.
7. The action recommended violates any of the basic principles of nursing.
8. The option is worded with specific determiners such as all, never, any, none, etc. Since exceptions are common, these options are usually, but not always, incorrect.

In addition to knowing which kinds of options to eliminate, it's also helpful to be aware of some situations in which there is a tendency to eliminate options too hastily or for the wrong reason. Here are some suggestions for the kinds of options NOI to eliminate. Naturally, you may want to eliminate them later if they are not the best answers.

1. If an option is printed on the page, consider it a possibility. Don't eliminate it on the basis of availability. For example, if one option is "encouraging the individual to attend diabetic day care" don't eliminate it on the basis that diabetic day care is not available everywhere. The question is not whether it's available, but whether it would be appropriate if it were available.
2. Don't automatically eliminate an option because of a lack of universality. For example, suppose a question were asking the nurse to select examples of behavior that would indicate healthy maternal-infant bonding two days after birth. The option "calling the baby by name" should not be eliminated on the basis that not all mothers have a name picked out at this time. The question is not asking whether everyone behaves in

this way, but, if they did, would it indicate anything about bonding.

3. Don't automatically eliminate an option because of expense. Suppose the question asks "What is the best way to . . .?" If one option is more expensive than another you should still consider how effective it would be for the patient. You need to use some common sense in relation to this suggestion, however. If the main point of the question is to have you demonstrate that you understand the importance of economic factors, then, by all means, consider cost.
4. Don't eliminate an option on the basis of difficulty in carrying out the option. For example, in a question on priorities to consider with an individual requiring medical care, if one option is "seek patient's consent" it should not be eliminated on the basis that this action may be very difficult to carry out. The patient may be too ill. The patient may not speak your language, etc. The test writers are not asking you to rate the difficulty of carrying out the option, but, given those available options, what should the priority be.
5. Don't automatically eliminate an option on the basis of practicality. For example, in a situation where a patient is extremely upset or depressed, one option may be "spending a half hour with the patient each shift." You may reason that with ten patients to care for you would never have time to do this and it would be difficult to organize with medications and treatments due, and so on. Unless you are told in the question that you have ten patients to care for, it's best not to reason that way. If the option is presented, consider it as a possibility. Weigh that option, along with the others. Consider: if you could do all of these options, which would be best for the patient?

Examples of multiple choice questions in which these deductive reasoning strategies could be applied are included in the practice test. During the test review, you will have an opportunity to ask for assistance in applying these ideas, if you wish.

After using this deductive reasoning strategy, including the consideration of which options to eliminate and which not to eliminate, most questions will be answered. There may be some questions, though, for which you have narrowed down the options but there remains two that seem very close. How can you select the best response? Here are some guidelines for areas to think about as you weigh the two alternatives:

1. If one option is best for the nurse and the other is best from the point of view of the patient, chances are the latter is considered correct.



2. If one option is more directly related to the question, it is likely the best response.
3. If timing is an important aspect of the question (e.g., "which nursing measure would be indicated first?" make sure you look at each option in this light; there is likely an important reason why one action precedes another.
4. If one option is more complete than the other, it is most likely best.
5. If one option could be considered best in terms of practical reality (i.e., when the nurse cares for ten patients) and the other option is best in terms of nursing theory (i.e., is the ideal response), the latter is most often intended as the correct response.
6. If you have studied, and you do not have any idea about the meaning of one option, but the other seems quite plausible, the latter is more likely correct. The more you have studied, the more confident you can be with this strategy.
7. Some research has suggested that if you change your perspective, you may think of something which you couldn't recall before (Anderson & Pichert, 1978). Rereading the question from a different point of view may help you decide between close options. For example, a communication question may be asking for the best response of the nurse. You may be able to eliminate two options. If you have difficulty weighing the remaining two, consider the situation from the patient's perspective.
8. If one option describes an action which is a 'means' and the other option describes a 'desired result', reread the question before deciding which to choose. If the question asks for a method or a way of doing something, then the former option is best. If the question asks for a goal, then the latter is likely best. If you cannot determine from the question whether the response should use a 'means' or an 'end', all other factors being equal, select the 'end'. An appropriate process is no guarantee of meeting a goal, whereas if you know what the desired state is, you could try various approaches until the goal is reached. An example of this could be a situation in which the patient has a terminal illness. You could be asked to identify what the nurse should consider as important. Suppose you are able to eliminate two options. The remaining two are "encourage the patient to talk about his feelings" and "assist the patient to come to the highest level of acceptance of which he is capable." The latter may be intended as best.

There could be a few questions for which you are not able to deduce the best response, even with using all the strategies

discussed so far. It is at this point that you could consider cue-using strategies. These should be used as a last resort.

1. Consider the length and general structure of each of the options. Sometimes the answer considered to be best is either longer, shorter or structurally different than the other options.
2. Consider the relevance of specific details. Sometimes the correct answer is more qualified than the other options. Consider the second option used in point 8 on the previous page. Can you see that it is much more qualified than simply saying "assisting the patient to reach acceptance"?
3. Consider the level of generality of all of the options. The best response may be the one that is closest to the same level of generality as the question. Sometimes one option encompasses the meaning of one or more other options.
4. Avoid changing your first impression of the best answer, unless you think of new information.
5. Recognize and make use of resemblances between words in the stem and words in one option.
6. Make use of your knowledge of prefixes and suffixes, Latin roots and general knowledge.

The preceding strategies relate to each question on the R.N. exam. In addition, there are strategies that apply to the exam as a whole. For example, during the exam, you will want to use your time as strategically as possible. Here are suggestions for time using strategies.

1. Have a watch available with you during the exam.
2. Calculate how long you have, on the average, for each question.
3. Work quickly through the exam, but don't rush. You want to be spending sufficient time on each question to allow you to read and reason with good accuracy.
4. Mark questions that you wish to return to at the end to give you more thinking time. In the meantime, make a quick guess on these questions, in case you don't have extra time at the end.
5. Use any time remaining to check your answers.

You will also benefit from adopting error avoidance strategies. Considerations in this category include:

1. Make certain you put each response in the place you intend on your answer sheet and mark your I.D. number, as instructed.
2. When finished the exam, go back and check your answers. Sometimes errors are made in marking your selection of answers. You may find you are more relaxed at the end of the exam and you can think out the difficult questions more readily.

During the practice exam you will have an opportunity to try cue-using, time-using and error avoidance strategies. Some cues have been purposely included in the exam. If you do not pick them up, let me know at the time of the exam review and I will help you to see them.

## Questions for Review

### CHAPTER 4

Student I.D. \_\_\_\_\_

Please take about 5 minutes to respond to the following questions related to the content of this chapter. I will be using the responses to assist me in making revisions of this manual, not to assess your learning. Please tear the review pages out of the manual and submit them to me, along with any general comments or suggestions for change, if you wish. I'd like all review questions by July 5, prior to the practice test.

*L. Christie*

Aim for June 14 for questions on Chapter 4

1. Using the following multiple choice question, respond to the questions below:

**SITUATION:** A nurse was called to a neighbour's house during a snowstorm in which all local roads are impassable. As the nurse arrives, the woman screams: "Hurry nurse! The baby is coming!" The nurse assesses the situation and observes "crowning."

**QUESTION:** What immediate action should the nurse take?

- A) Run to the bathroom, scrub her hands and assemble clean newspapers.
- B) Tell her husband to gently hold the head in until all necessary supplies are assembled.
- C) Encourage her to pant with the next contraction and deliver the head between contractions.
- D) Advise her to push with the next contraction and deliver the head during the contraction.
- E) Act in a confident manner to help reduce anxiety.

**Key** 1) A, B, E  
2) C, D, E

3) A only  
4) C and E

- (a) Underline the key words in the situation and question.
- (b) What strategy leads you to eliminate option number 2 as a possibility? \_\_\_\_\_
- (c) What strategy leads you to eliminate option number 1 as a possibility? \_\_\_\_\_
- (d) How do you weigh options 3 and 4? \_\_\_\_\_

2. How can you use your knowledge about 'specific determiners' to help you respond to multiple choice questions?
- 

3. Why are 'cue-using' strategies suggested as a last resort?
-

## CHAPTER 5

### STUDY SKILLS

#### LEARNING STYLE

What comes to your mind when you think about study skills? Do you think of mechanical skills that you were taught, perhaps in high school--preparing a schedule, writing good notes with margins correctly aligned, and marking your text with colored highlighter pens?

Or do you think of the activities you engage in to help you really comprehend the meaning of the material you are studying--associating it with past learning, analyzing it into component parts, generating hypotheses, and considering alternative explanations of the data?

Hounsell (1979) identifies two different conceptions in relation to studying and learning. He describes studying as the exercise of a collection of identifiable skills, whereas learning is an intensely personal activity characterized by a search for meaning and understanding. The aim of study is learning, but the two types of activities are not always related in a direct way.

Good study skills do not cause high academic achievement. What may lead to high achievement is the quality of learning that goes on in the mind of the learner. This learning may take place during periods that we could call 'studying' or the outward activity during learning may go unnoticed by others. Whether studying leads to learning or to other less desirable outcomes such as boredom frustration, anxiety, or fatigue, depends very much on the individual learner.

Studies have indicated that successful learners do a wide variety of things while learning. In trying to establish what it is good learners do and how they go about doing it, researchers have had to examine more than just study skills. They have had to look at the learner's general approach to learning. The way a learner typically goes about learning reflects what some authors call learning style. Studies have been carried out relating learning style to student motivation and orientation to learning (Hounsell, 1979; Entwistle, 1979; Anderson, 1979; Schmeck, 1983). Putting together the ideas from these researchers, four basic learning styles seem evident. Some students have one predominant style, while others adopt different styles, depending on their perception of the learning task. From the following descriptions given, see if you can identify your own style or styles.

1. Students who use primarily deep processing as a strategy for learning:

Such students are very conceptual. They spend time categorizing, critically evaluating the appropriateness of the

categorization and comparing and contrasting the categories with one another.

2. Students who use mainly elaborative processing as a strategy for learning:

These students have a tendency to personalize and concretize information by translating it into their own terminology and life experiences. They also search for practical applications.

Students who use either (or both) of the above processing strategies tend to be intrinsically motivated and their aim of learning is to understand meaning. Their orientation is toward true comprehension, and thus they may be referred to as 'comprehension learners'.

3. Students who use predominantly a reproducing strategy or a surface processing strategy for learning:

These students typically are externally motivated. They view knowledge as a means to an end--perhaps a way to become qualified for a particular position. Generally, such students have a predisposition for processing details and specifics, often using rote learning. Since their intention of learning is to reproduce facts, they are sometimes called 'fact retainers'.

4. Students who use methodical study as their main strategy for learning:

These students' intention of learning is to achieve high grades. They follow a system of organization, planning, scheduling and meticulous performance of study skills of the type specified in the old 'how to study' manuals, with an emphasis on repetition and reciting. These students are sometimes referred to as 'methodical studiers'.

A table identifying distinctive approaches to learning is available in Appendix C.

How can your awareness of your own learning style help you to become better prepared for the R.N. exam? . . . . Mainly by encouraging you to develop some flexibility in your style. It is beneficial in terms of achievement if you can modify your natural style to meet the demands of particular learning tasks.

It is of interest to note that Schmeck and Grove (1979) found the most successful college students were those who were able to adopt a strategy of deep processing, elaborative processing and fact retaining, as the situation demanded. These students have been called 'versatile' learners. There was no evidence, however, that methodical study contributed to success in college. Another study (Entwistle, 1977) also found very little relationship between study skills of students and their academic performance.

Given the results of the above research, it may seem incongruous to include the next three sections on study skills: making use of resources, studying efficiently and making the task of studying easier. I have done so, however, because I think I have some suggestions that may be helpful for this particular learning task--preparing for the R.N. exam. In addition, there are many writers who describe the value of specific study skills (Rickards, 1980; Anderson, 1979; Biggs, 1984). I also believe that with a bit of practice, you can learn to combine what you understand about style and strategies with whatever makes sense to you about study skills. Study skills do not need to be simple mechanical tasks that are devoid of meaning. Learning strategies aimed toward comprehension and operation learning and study skills can operate in a complementary fashion. The former offers meaning and purpose, and the latter contributes some measure of systematization (Hounsell, 1979). Using study skills can be an interactive process in which the student's comprehension of the topic is expanded, sharpened and made more relevant (Anderson, 1979.)

### MAKING USE OF RESOURCES

There are various kinds of resources and aids to help you study. It's a good idea to know what kinds of things are available to you and how they can help.

Each semester you have purchased packets which have objectives and content outlines. These should help you to know what is considered important in a nursing program. The objectives should guide your studying; they are the way in which expected knowledge and behaviors are identified to you as a learner. Use these objectives and outlines to keep you "on track." After the exam, you can pursue interesting topics such as African sleeping sickness or Leprosy or whatever; while you are preparing for the exam, however, it's more profitable to spend your time on areas related to the objectives.

Aids to study are incorporated in your textbooks and other materials. Look at boxed information and summaries of nursing care for a patient with a particular health concern. Tables of information often condense an entire chapter, and are easier to recall than many pages of text. If you underlined your text in a helpful way when you first learned the material, rereading underlined portions may be beneficial. You may find, however, you underlined too much to be of any use. Depending on your ability as a notetaker, you may want to study from your notes or you may decide to ignore them and use other sources of information. In addition, check out the handouts that you've been given in class, as they may be good resources.

Many students preparing for the R.N. exam use Nursing Review books that include summaries of content and examples of multiple choice questions. An advantage of these books is that they allow

you to review just the main points without getting bogged down in all the detail. You can review much more quickly than if you tried to get through all the equivalent material in separate texts. These books are especially helpful to those students who learned the material well when they were first exposed to it.

A disadvantage of review books is that the content may be too condensed for some learners. What to do in a particular situation may be stressed more than why. An action may be recommended without identifying the process the nurse used to arrive at the particular action. Because such overcondensation can have serious detrimental effects on your learning, it is often helpful to combine study from review books and from individual textbooks. Use the review books for information you have a good grasp of, and consult individual textbooks on important topics whenever you are not understanding beyond a surface level.

The R.N.A.B.C. library has some specific resources that student members may borrow. For example, audio tapes are available on the subjects of nutrition, pharmacology, relaxation exercises, and preparation for the R.N. examination. One advantage of listening to taped information is the possibility of learning important content while carrying out other routine tasks, such as housework.

Mosby Company puts out a test booklet with multiple choice questions. For about \$30, a computer will analyze your responses and give you feedback as to your strong and weak areas. The results take about six weeks. The practice test used in semester VI is designed to give you similar feedback.

In summary of this section, there is no shortage of resources, except possibly your own time and energy. But a word of caution. Don't try to use every resource; it would be too confusing. Decide what resources you think would work best for you as an individual learner and ignore the rest.

### STUDYING EFFICIENTLY

A common difficulty students have in preparing for the R.N. exam is a lack of time. There is no strategy that I know of, however, for coming up with more time (it would be nice!). There remain only 24 hours in the day. In order to study efficiently, you need to make the best use of the time you do have.

Making a schedule may increase your efficiency of study. Otherwise you will waste time each study period thinking about what it would be best to study. You will likely worry about whether you are "covering" everything. If you look back at the cartoon at the beginning of this manual, you may be able to see beyond the humor in the situation. The books represent various topics that likely you do need to review. How can you do this in



an efficient way? Just the sheer volume of the nursing curriculum can be overwhelming.

To guide you in preparing your schedule, you could start by applying a simple strategy called 'means-end analysis'. You can use this kind of reasoning whenever you identify a difference between your present state (no review done; not feeling 'ready') and the desired state (review completed; feeling prepared). Work out a series of subgoals that are reasonable, that will lead to the final goal. Then identify the means, or ways that you can progress towards the subgoals. For example, you may have a particular subgoal each week. As you accomplish the tasks you have considered necessary to meet each subgoal, you are progressing toward meeting the overall goal. Some people set themselves one small goal to try to reach each day.

In addition to considering these means and subgoals, there are other factors to consider when preparing a review schedule. It's a good idea to identify your strengths and weaknesses, and allot more time to weak areas. You will likely want to schedule more time to review content that is important, as opposed to that which is less important. However, don't use your own idea of what is important and what is not; think in terms of the test writers. Use the blueprint for the R.N. exam as a guide. Also, don't use clinical criteria to establish the relative importance of nursing content. The most serious health problems may not necessarily be reflected by the most test questions. The R.N. exam will most likely have questions testing rather basic situations, for example, acne, constipation, measles and obesity. Complex health concerns, such as cardiac arrhythmias, increased intracranial pressure, organ transplants and disseminated intravascular coagulation, on the other hand, will likely have very few questions. So don't spend a lot of time aiming for in-depth knowledge of complex nursing topics. Be content with a basic understanding. Also, don't focus your review only on illnesses. The R.N. exam tests your understanding of health as well. Examples of topics related to health include characteristics of development throughout the life cycle, children's play, nutrition for optimum health, parent-infant bonding and immunization.

In preparing your schedule, you may want to mark off blocks of study time and write in what topics you plan to review. How you organize and sequence your review will be a personal matter. Some people spend a specific amount of time going over each specialty area: medical-surgical, pediatrics, maternity, psychiatry. All other aspects--e.g., anatomy, pathophysiology, pharmacology, nutrition, growth and development, etc., are then integrated. Other people use the nursing process as an organizing framework; they review assessment, then planning, implementation and evaluation. Still others prefer a body systems approach. There is no one best way for all learners. Since the exam is supposed to test knowledge that is integrated, there is some logic to relating various elements of nursing as you study.

It's probably best to use the approach that makes most sense to you and try it out. After a week or two, you will know if it is working or not. Make your schedule in pencil so you can revise it as needed.

Some students find it useful to prepare small recipe-type cards with information that is associated in some way. For example, you could have a series of cards which, on one side, you have outlined the overall action of a classification of drugs, and, on the other side, you have identified the name of the most common drugs that belong in that category. You could make a card with the names of defense mechanisms on one side with a short example that would be typical on the back. The type of information you put on your card depends on what aspects of nursing you have difficulty recalling. Save time and don't write out a card for things you already know.

You can use these study cards during your scheduled review time. You can also use them during short periods of time, such as when you are waiting in line, riding on the bus, while you are at the laundromat, etc. During these periods, you can study from your prepared cards (which are easier to carry around than a heavy textbook). Making use of short periods of time for study does increase your study time; be prepared, though, that carrying out this behavior makes others regard you as rather antisocial or at least eccentric. Most students don't need to go to this length to study; they can use their time more profitably for relaxation. On the other hand, if a student has reason to be concerned about failing the exam, this extra effort devoted to the review task could well make a difference in confidence level, if not in the actual knowledge of content.

When you are reviewing it's helpful to pay particular attention to any 'negative information' (Collins et al., 1975), e.g., what the nurse doesn't do in a specific situation. Usually we store the appropriate action to take, or the correct action of drugs, etc. People usually do not 'store' information about what not to do, or what the drug doesn't do, etc. There are situations in nursing, however, that involve knowing what not to do and why. This knowledge could readily be tested on the R.N. exam. It may be helpful to make a list of such 'negative information' as you carry out your review. Included on your list could be such prohibitions as: "Don't give oral fluids to an unconscious person. Don't put a person with increased intracranial pressure in trendelenburg position." Another way of deciding if something is not indicated, of course, is to be so familiar with nursing context that you know what is appropriate. Then, by inference (using judgment) you can deduce what would not be true or correct (Collins, et al., 1975).

#### MAKING THE TASK OF STUDYING EASIER

First of all, make your environment as conducive as possible to studying. Have a place set up with your books and notes

handy. It's best if you don't have to take everything out and put everything away each time you study. Avoid attempting any serious study in places you know you won't be able to, e.g., in the middle of the family room while everyone is watching a good movie. Studying in bed is usually a good cure for insomnia. Use a comfortable chair, but not one which reclines.

Next, try studying when you know your ability to learn is optimal; for some, it's late into the night, for others, early in the morning. Don't try studying when you are too tired or too hungry. And remember, schedule breaks at intervals.

Then, do what you can to make your study time, if not enjoyable, then at least less boring. There is no magic way of doing this. Trying to see the relevance of the material you are reviewing to clinical practice may help. Some people find using case studies to review adds some interest. You could try thinking about the patients you've cared for with a particular health problem. If those kinds of things aren't helpful, try thinking of your name pin with "R.N." on it and the job you will be able to get once you are registered. If you can somehow come up with a way to enjoy studying, then things will be a lot easier.

To make studying easier, you need to learn how to cope with distractions. The difficulty of coping with distractions is second only to the problem of getting enough time for study.

The first way to cope with distractions is to minimize those you can anticipate. Attend to obvious needs prior to studying. If possible, try to arrange for someone else to assist you if you have young children or other responsibilities that make frequent demands on your time.

If you find your own home is so full of distractions that you can't begin to reduce them significantly, try studying somewhere else. The library at Langara may be suitable. U.B.C., B.C.I.T., S.F.U., V.G.H. and St. Paul's Hospital all have libraries that are open late and offer some degree of quietness. No library card is required unless books are borrowed. The R.N.A.B.C. has a small library and is open 9 - 5 on weekdays, and some Saturdays. Public libraries in your neighborhood could be explored. Being in a library can encourage study since others are there studying. You can always hope that learning is contagious!

If you keep complaining that distractions in your home prevent you from studying and you don't at least try studying elsewhere, then likely you really don't want to study. Distractions are a rationalization.

The second way of coping with distractions, once you've minimized the ones you can, is to learn to 'tune' them out.

After all, you can't expect the world to be quiet because you are studying. Life must go on.

How do you 'tune out' distractions? Basically by 'tuning in' whatever it is you are studying at the time. It is difficult, if not impossible, to describe precisely how one can accomplish this. People cannot concentrate 'at will'. It is a state reached as a by-product of being engaged in, or absorbed by, a task (Gibbs et al., 1982). If you are able to concentrate very hard on really understanding what you are reviewing, you won't notice occasional potentially disruptive factors. Some people can concentrate so well, they don't hear fire alarms!

As you review, it is helpful to develop at least some ability to ignore distractions, since the actual exam situation is not distraction free. People finger tap, foot jiggle and get up to go to the washroom. They cough, sniff, sneeze, wheeze, hyperventilate and so on, all of which can be quite irritating to other nearby writers. Most people are oblivious to these characteristics in themselves, but find them extremely distracting in others. Train yourself ahead of time to really concentrate.

Some people use another sound to 'drown out' disruptive sounds while studying. Music may work, but this is highly individual. If you find yourself singing along and listening to the ads, then the solution has become the problem.

Using positive reinforcement may help you to concentrate. You could set yourself a specific learning task and reward yourself once you've accomplished it. The 'reward' could be something very simple, like watching a T.V. show, or it could be more substantial, such as buying yourself something new, going out for lunch, etc.

In summary on this section on study skills, assess your own learning style and practice ways to adapt your natural style to suit specific learning tasks. As your flexibility increases, you will be better able to combine appropriate styles, strategies and skills to prepare you as well as possible for the R.N. exam. Use the resources you think would be helpful, and make the task of studying effective and easier.

Questions for ReviewCHAPTER 5

Student I.D. \_\_\_\_\_

Please take about 5 minutes to respond to the following questions related to the content of this chapter. I will be using the responses to assist me in making revisions of this manual, not to assess your learning. Please tear the review pages out of the manual and submit them to me, along with any general comments or suggestions for change, if you wish. I'd like all review questions by July 5, prior to the practice test.

*L. Christie*Aim for June 21 for questions on Chapter 5

1. Good study skills do not cause high academic achievement. What does? \_\_\_\_\_
2. Students who are intrinsically motivated and who use deep processing and elaborative processing usually have \_\_\_\_\_ as the aim of learning.
3. Identify one way that being more aware of your learning style could be beneficial to you as you prepare for the R.N. exam.  
\_\_\_\_\_
4. Name the strategies that successful college students use.
  - a) \_\_\_\_\_
  - b) \_\_\_\_\_
  - c) \_\_\_\_\_
5. Identify one possible disadvantage in studying only from review books. \_\_\_\_\_
6. In your own words, how could you use 'means-end analysis' to help you plan your study time? \_\_\_\_\_  
\_\_\_\_\_
7. How is it recommended that you try to 'tune out' distractions? \_\_\_\_\_
8. This manual suggests it may help you to make a list of 'negative information'. What would be the rationale for doing this? \_\_\_\_\_  
\_\_\_\_\_

## CHAPTER 6

### COPING WITH TEST-TAKING ANXIETY

#### THE HIGH TEST-ANXIOUS STUDENT

A little anxiety is a good thing. It can motivate typical students to perform at their best. Whenever such students anticipate a test of their performance, their level of anxiety increases somewhat, which usually leads to increased study behavior and optimal performance on the test.

What happens when high test-anxious students anticipate a test of their ability? Test-anxious students are those who have a satisfactory knowledge level but suffer debilitating anxiety during examinations which results in lowered performance. These students experience considerable worry and emotionality both prior to and during a test. High test-anxious students, in situations where their performance is being evaluated, spend a great deal of time worrying about their performance and about how well others are doing. They ruminate over alternatives and are often preoccupied with feelings of inadequacy, anticipation of loss of status and esteem, and heightened somatic and autonomic reactions (Meichenbaum, 1972).

Test-anxiety does not affect all college students equally. This anxiety seems to affect more students who have poor study habits (Spielberger, 1979) and who are of average intellectual aptitude (Tryon, 1980).

Although test-anxiety is comprised of two main components, worry and emotionality, it seems to be the former that is related to reduced academic performance (Spielberger, 1979).

There are a number of therapies for test-anxiety that have been used, either alone or in combination. Some focus on the emotionality component (e.g., desensitization, relaxation exercises). Other therapies focus on the worry component (e.g., cognitive modification). This latter therapy is based on research which demonstrates that the thinking of high test-anxious subjects can be changed (Goldfried et al., 1978). Cognitive modification may include coping imagery procedures, in which high test-anxious subjects are encouraged and helped to imagine themselves in an evaluation situation. At the first indication of anxiety, these subjects are directed to visualize themselves coping well (Meichenbaum, 1972). The cognitive therapies seem to be more effective than desensitization alone in increasing academic performance of test-anxious students (Tryon, 1980). Treatment appears to help students with good study habits to improve their academic performance (Spielberger, et al., 1979).

It is not likely that many nursing students who have managed to cope with six semesters of midterms and finals would have

severe test-anxiety. If some students do, however, assistance for this difficulty could be arranged, either individually or in a small group setting.

It is probable, though, that many students experience a higher level of anxiety related to exams than what is optimal. Such anxiety can reduce students' ability to process information during review and during the test situation. It is likely that this reduced effectiveness of studying leads to test scores that are lower than what students are capable of achieving. It is with these students in mind that the following guidelines for reducing test related anxiety have been developed.

#### GUIDELINES FOR REDUCING TEST RELATED ANXIETY

##### A. During the review period:

1. Keep anxiety at a low level and don't allow any negative thoughts.
2. Use anxiety to motivate you to study.
3. Set realistic goals for yourself in relation to studying.
4. Work diligently to accomplish goals. Channel the energy that would have gone into worrying into effective studying.
5. Aim to understand material being studied. Use appropriate learning strategies; attempting to memorize too much can create anxiety.
6. Keep your life balanced--physical activity may be helpful.
7. Practice relaxation exercises.
8. Imagine yourself starting to become anxious, and then coping successfully.

##### B. During the immediate pre-exam period:

1. Continue to do relaxation exercises and carry out coping imagery.
2. Get a good night's sleep prior to the exam.
3. Avoid excessive coffee, tranquilizers, sleeping pills.
4. Get sufficient nutrition.
5. Avoid interaction with anxious friends (anxiety is contagious!).
6. Maintain a positive, optimistic outlook (reassure yourself that you have studied as much as you can).
7. Avoid last minute cramming--it may make you anxious.
8. Try to avoid stress from other sources. Deal with other life problems, e.g., financial difficulties, mother-in-law problems, boyfriend problems, etc., at a later date.

##### C. During the exam:

1. Maintain a positive, optimistic outlook. Don't allow any negative thoughts.
2. Consider each question as an entity--like the alcoholic's slogan "one day at a time." This is "one question at a time." Refuse to allow a difficult question to make you anxious when approaching the next question. Also, refuse

to allow anxiety over future questions interfere with your ability to answer this one question. Cope with each question as you come to it, in much the same way as nurses teach women in labor to cope with each contraction.

3. Focus your complete attention on each question and then move on to the next. Don't spend any time worrying about how you are doing.
4. Every 15-20 minutes (or as needed), exercise your neck, arm and leg muscles to prevent tension and take a deep breath in and out.
5. If you feel anxiety starting, close your eyes, and think of your relaxation exercises. Tell anxiety to "STOP" (in your mind) and say "RELAX." Take a deep breath in and out, then continue answering questions.
6. There will be questions for which you will not be sure of the answers. Avoid allowing your uncertainty make you anxious. Trust your ability to reason out the best answer.
7. Have some hard candies to suck on during the exam to provide calories and possibly to reduce anxiety.
8. Some individuals are quicker at writing exams than others. Avoid becoming anxious when you see others leave the exam early. Don't assume they know any more than you.
9. Have a watch with you and keep track of the time to gage your pace.
10. Defer any emotionality about the quality of the questions, the logic of the options or the importance of the content tested, until after the exam.



Questions for ReviewCHAPTER 6

Student I.D. \_\_\_\_\_

Please take about 5 minutes to respond to the following questions related to the content of this chapter. I will be using the responses to assist me in making revisions of this manual, not to assess your learning. Please tear the review pages out of the manual and submit them to me, along with any general comments or suggestions for change, if you wish. I'd like all review questions by July 5, prior to the practice test.

*L. Christie*Aim for June 28 for questions on Chapter 6

1. Why is a little anxiety helpful for learning?  
\_\_\_\_\_
2. Name the two components of test anxiety and state which has been found to be related to reduced academic achievement.  
\_\_\_\_\_
3. Briefly describe what is meant by 'coping imagery procedures'.  
\_\_\_\_\_
4. If you try to memorize too much, your anxiety level will likely \_\_\_\_\_.
5. Some high test anxious students are treated with 'cognitive modification'. On what basic principle is this treatment based?  
\_\_\_\_\_
6. Test anxiety does not affect all college students equally. Generally, in what two groups is test anxiety most prevalent?  
\_\_\_\_\_
7. Identify one action you could take to reduce anxiety prior to the R.N. exam.  
\_\_\_\_\_
8. During the R.N. exam, if you start to feel anxious what could you do?  
\_\_\_\_\_

## CHAPTER 7

### MONITORING STRATEGIES

It would be a waste of time to continue to review or study in a particular way if you weren't benefiting. To avoid this problem, you want to be checking, or 'monitoring' how well you are understanding. Effective learning requires an active monitoring of one's own learning activities (Baker, 1980).

The concept of 'monitoring' presented in this manual is similar to the concept as it is used in the hospital setting. You are familiar with using a thermometer to monitor a patient's temperature. You have likely read about heart monitors that contain an alarm that will ring if the patient's heart rate is abnormal. Thus, strategies for monitoring these patients include observing the thermometer and listening for the alarm bell. In order to monitor learning, there is a sensor in your brain that, like the thermometer or heart monitor, will alert you when problems occur. At first you may think monitoring learning will be difficult because this 'sensor' in your brain is not something you can see. But this is not so. To monitor your learning, you simply need to pay attention to internal signals that, with practice, will be as easy to perceive as reading the thermometer or hearing the alarm bell.

When you monitor a patient's temperature or heart rate, it is obvious that knowing about the problem doesn't fix the problem. The thermometer does not cure the fever; the heart monitor does not alter the heart rate. The value of knowing is determined by the corrective actions taken as a result of knowing. There is a similar situation with monitoring learning: monitoring alone will not help you to learn more effectively. It will only increase your learning if you take active steps to overcome the difficulties that monitoring identifies.

The following monitoring strategies are those related to monitoring comprehension.

#### 1. Using Self-Questioning

Think up questions (as discussed in Chapter 3) related to the topic you are planning to read. If you have difficulty coming up with questions, chances are your comprehension is not as good as it should be and you should read with extra care and attention.

#### 2. Listening to Clicks of Comprehension and Clunks of Comprehension Failure

As you study the sections in your notes or text, listen (in your mind) to the 'clicks' of comprehension and the 'clunks' of comprehension failure (Anderson, 1979). Of course, these are not true sounds, in the literal sense. Clicks are perceptions that ideas are fitting together, that things make sense. The "a-ha!"

feeling you get may be similar to how you feel when a long-searched for piece of the jigsaw puzzle fits into place.

In contrast, the clunk of comprehension failure comes when you realize something is incongruous, something doesn't fit. For some reason, you are not completely following what you have read. Although it is frustrating to have this experience, you must expect it now and again. Don't think that hearing these clunks is a negative thing. The most beneficial aspect of monitoring comprehension is that through this process, you know what you don't know or what you are perplexed about from the material that you've read. This knowledge is a real advantage, as you then can go back and reread or rethink, check a different reference, etc.

Consider the following illustration of this monitoring strategy. Suppose you were reading the following passage from your notes:

Deoxygenated blood enters the right atrium via the superior and inferior vena cava. It goes through the mitral valve to the right ventricle, then through the pulmonary artery to the lungs . . .

Everything may click until you read the words "pulmonary artery." Then you may ask yourself: "Is this a mistake? Should this be 'pulmonary vein'?" This blood vessel carries deoxygenated blood." Then you recall that arteries are blood vessels that carry blood away from the heart so that "pulmonary artery" is, indeed, correct. It is good to stop, question and reason things out.

Your ability to pick up discrepancies or inconsistencies will help you a great deal when you respond to multiple choice questions. Once you know your subject, the options that clunk are the incorrect choices; the one that clicks the loudest is the best response.

Did anyone hear a clunk as you read "mitral valve" in the previous example? If so, that's good. It shows you are able to monitor your reading. If not, you may need to increase your background knowledge, or 'turn up' your monitoring sensor.

Sometimes there is a tendency to want to read on and study without sorting out the clunks as you go. If the misunderstandings involve major principles or concepts, it's not a good idea to ignore the clunks. When you try to build on a shaky foundation, you will likely have difficulty with more advanced material. Another reason to pay attention to this triggering event or signal in your mind is that if you persistently ignore it, soon you won't be alerted. Then you won't realize that you don't understand. Certainly, if you gloss over all the clunks, reviewing your text will be accomplished more quickly, but what will you gain?

While you are reading, a minor detail may clunk. In this situation, you may find it more profitable, in terms of your overall learning, simply to continue reading. You can store the confusion in your mind (Anderson, 1979) as a pending question to sort out later if you have time. Often, further reading will explain a point that at first seems incongruous. Other times, you can determine the overall meaning of the passage by the schema or knowledge framework in your mind; the context can provide sufficient meaning.

### 3. Responding to Questions

Once you have reviewed a section, try responding to the questions you posed earlier. You should be able to do so. You may, at this time, be able to ask higher level questions, such as those involving analysis of the situation, synthesis of various components and evaluation. If you can respond well to these questions, you will know that your comprehension is proceeding very well. It is often helpful to study with a friend and ask questions of each other.

The following monitoring strategies are those that check your ability to retrieve information and to perform in a test-like situation. The most appropriate phase of the review in which to use these strategies is after you have put time and effort into your studying and your comprehension is good. If you monitor your ability to retrieve information too early in your review process, there may not be sufficient information to retrieve. In such a case, you would then simply be assessing comprehension.

#### 1. Practicing with Sample Multiple Choice Questions

This task is one effective way to monitor retrieval of information. There are many review books available that will supply you with hundreds of such questions. Once you have reviewed, try to answer a specific number (say 50), and mark them. Pay particular attention to those you get wrong. Try to identify why. Did you simply not know the content? That tells you to go back and review again. Did you read the question incorrectly? That tells you to read more carefully. Did you not select the key words in the question that should have helped you retrieve the needed information from your memory? That tells you to focus on this aspect. After reading the rationale for the 'correct' answer, does it now make sense? Would you be able to answer a similar question correctly in the future?

When you practice answering large numbers of multiple choice questions, it is often helpful to treat the situation seriously and really try to do your best. If you don't know an answer, work it out the best you can. Later, go back and see if you still agree with your original choice. At this time, you may wish to change your mind or keep the answer you originally had. When you mark your questions, keep track, over the long run, of whether your score is usually increased or decreased by changing

your answers. You can use this information when you are considering changing answers on the R.N. exam. Many people find it's better to leave answers as they initially decided, unless they retrieve new information. Find out what is best for you.

Each time you mark a set of questions, you should be improving your score. Don't be alarmed if at first you perform rather poorly. Avoid thinking about this in a negative way (that would only discourage and depress you, which would interfere with study). Think of the positive aspect of knowing what information you had difficulty retrieving. Each time you practice, score yourself. If you are appropriately applying strategies for learning, your scores should improve over time. If not, go back and review your text. The idea of using multiple choice questions is not to store up a vast number of correct answers in your memory. It's to identify where misunderstandings are and to go back and sort things out.

## 2. Writing the Practice Test

Another way to monitor your comprehension, retrieval and test taking strategies is to write the practice test that is scheduled for you. This test is designed to give you a printout indicating your strong and weak areas. This information, hopefully, will help you to plan the final phase of your review prior to the R.N. exam. Simply knowing your weak areas, however, is no magic solution; it's what you do as a result of knowing that may make a difference.

## 3. Participating in the Review of the Practice Exam

This activity should assist you to assess your retrieval and test-taking strategies. During the review you will be able to compare your answers to the exam key. If you don't understand why the best answer is better than the option you selected, then you will have an opportunity to ask. Although you will not be permitted to take the exam home, you can make a list of areas, if you wish, in which you want to do further study.

In addition to finding out the rationale for correct answers, you may want to consult about any problems you encountered in your exam-writing process. For example, you may have had difficulty in identifying key words, interpreting the question, weighing close options, etc.

In conclusion, research related to monitoring comprehension in reading suggests there is no single best way to monitor comprehension. Good readers use a variety of monitoring activities with flexibility and effectiveness (Baker and Anderson, 1981). The key is to be an active processor of information. As the mind interacts with information, it should not act as a passive absorber, a 'sponge', but as an active shaper, an 'editor' (Tuinman, 1980).

Questions for ReviewCHAPTER 7

Student I.D. \_\_\_\_\_

Please take about 5 minutes to respond to the following questions related to the content of this chapter. I will be using the responses to assist me in making revisions of this manual, not to assess your learning. Please tear the review pages out of the manual and submit them to me, along with any general comments or suggestions for change, if you wish. I'd like all review questions by July 5, prior to the practice test.

*L. Christie*Aim for July 5 for questions on Chapter 7

1. What is the basic purpose of using 'monitoring' strategies?  
\_\_\_\_\_
2. What do 'clicks' refer to? \_\_\_\_\_
3. What do 'clunks' refer to? \_\_\_\_\_
4. As you review for the R.N. exam, under what circumstances is it recommended that you go back and sort out things you don't understand? \_\_\_\_\_
5. Why is it best to wait until you have studied before trying to monitor your retrieval and test-taking strategies?  
\_\_\_\_\_
6. What does this manual recommend that you do during practice sessions when you get a multiple choice question wrong?  
\_\_\_\_\_
7. The aim of practicing with multiple choice questions is not to store many 'correct answers' in your mind. Why, then, is such practice recommended?  
\_\_\_\_\_
8. When you write the practice test, you will get a printout indicating your weak and strong areas. Why won't this knowledge, in itself, help you to achieve a higher score on the R.N. exam? \_\_\_\_\_

## SUMMARY

This manual has provided you with some guidelines for preparing yourself for the R.N. exam. Some of the suggestions have been based on the results of research in methods to facilitate the learning of content. Other suggestions are from writers in education who promote increasing the learner's awareness and control of the learning process. Still other ideas, which are specifically related to nursing, are of a highly practical nature. These have evolved as a result of an understanding of the types of difficulties that nursing graduates experience as they try to prepare themselves for the R.N. exam. Problems in preparation typically occur once writers realize that the exam could include questions associated with any aspect of the nursing curriculum. The scope of this learning task is extremely broad.

If you have tried the ideas presented and have found some of them useful for preparing yourself for the R.N. exam, then this manual will have met the overall purpose.

In addition, you may be able to see a wider application for some of the suggestions included in this manual. After all, the R.N. exam will come and go, but with medical advances and changes in technology, the need for effective learning methods will continue. The R.N. exam is a beginning, not an end.

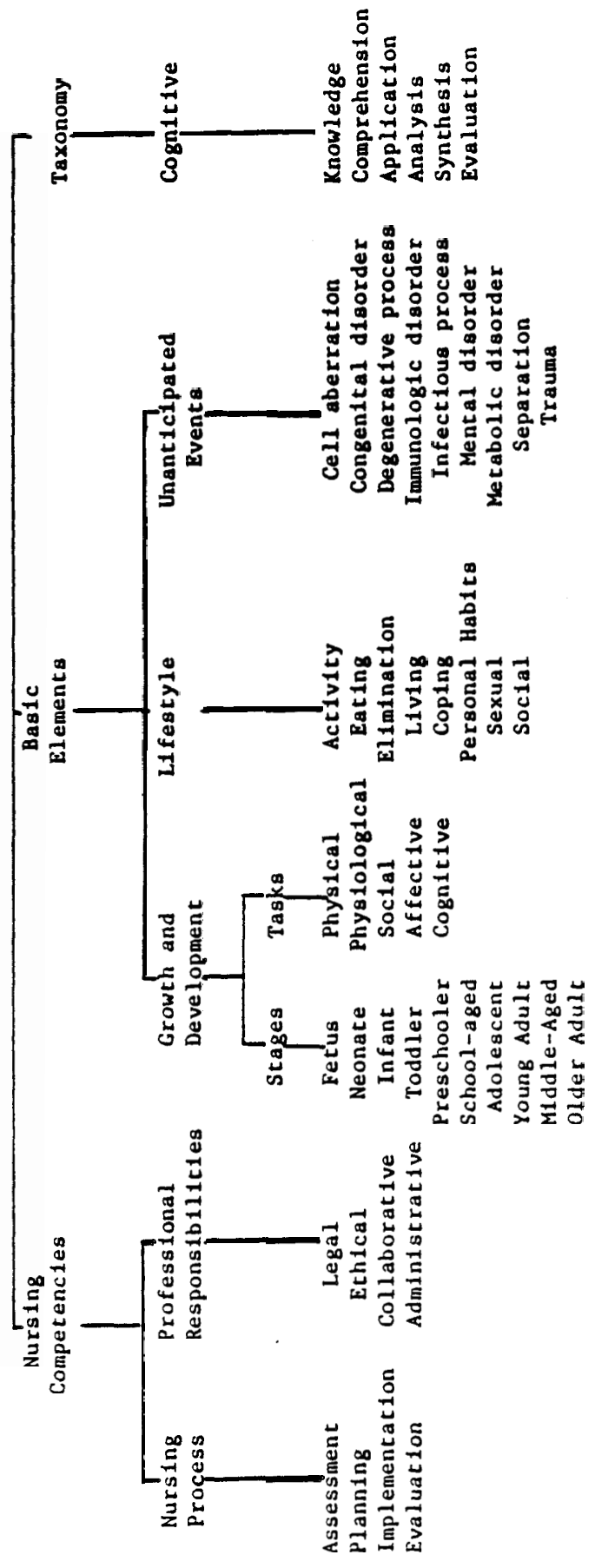
You may have increased your awareness of your options as you select strategies that are most appropriate for a particular learning task. You may have developed your skill as you use strategies. If you can also consider applying the processes described here to other learning and evaluation situations, then the aim of this manual has been met.

In conclusion, the following quotation by Carl Rogers expresses the importance of emphasizing processes for learning. His ideas, although expressed over 15 years ago in relation to general education, can be applied to professional education now and in the future:

The only person who is educated is the one who has learned how to learn. . . . The one who has realized that no knowledge is secure, that only the process of seeking knowledge gives a basis for security. A reliance on the process rather than upon static knowledge is the only thing that makes sense as a goal for education. (Adapted from Carl Rogers, 1969, p. 104)

APPENDIX A

BLUEPRINT FOR EXAMINATION



Note. Adapted from A Blueprint for a Comprehensive Examination for Nurse Registration/Licensure (p. 13) by Canadian Nurses Association, 1977, Ottawa: Author.



WEIGHTING OF THE COMPONENTS

1. NURSING COMPETENCIES

- a) Nursing Process . . . . . 85% - 90%
  - (1) Steps of the nursing process
    - i) Assessment . . . . . 20-30%
    - ii) Planning . . . . . 20-30%
    - iii) Implementation . . . . . 20-30%
    - iv) Evaluation . . . . . 20-30%
  - (2) Types of intervention
    - i) Therapeutic care . . . . . 60-70%
    - ii) Anticipatory care . . . . . 30-40%
- b) Professional Responsibilities . . . . . 10% - 15%

2. BASIC ELEMENTS

For each stage of growth and development, categories of the basic elements which were chosen were:

- important for the age group
- frequently encountered in nursing practice
- important to test

3. LEVELS OF THE TAXONOMY

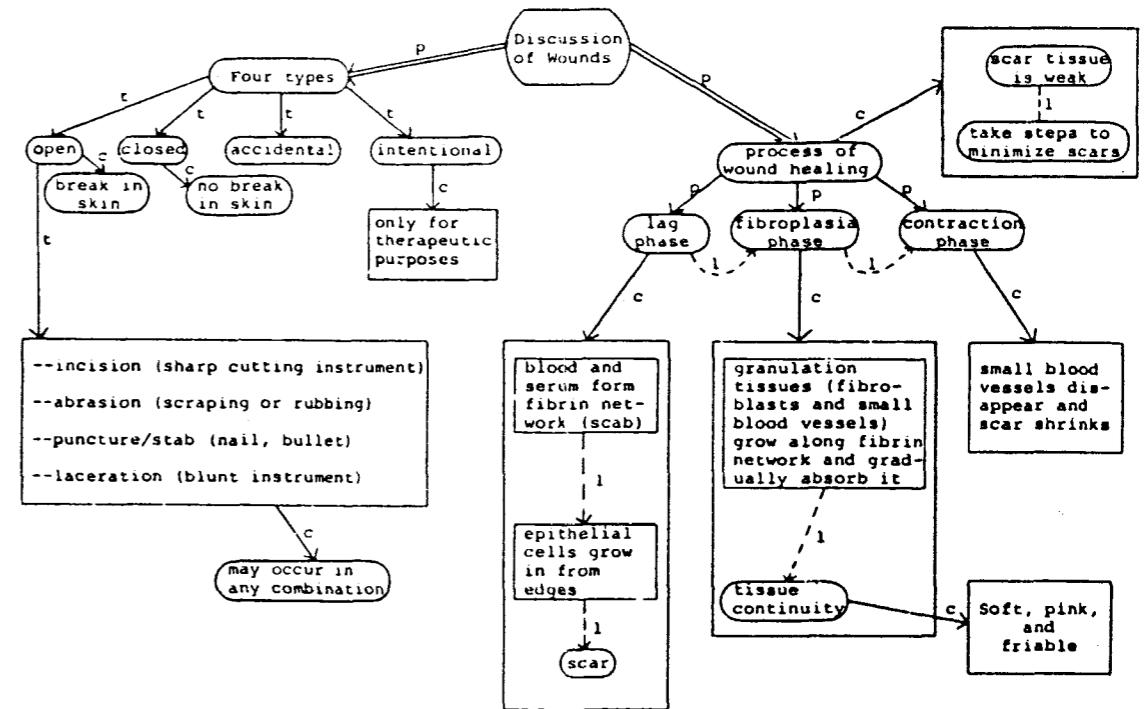
- a) Knowledge . . . . . 5% - 10%
  - b) Comprehension . . . . . 30% - 35%
  - c) Application . . . . . 40% - 45%
  - d) Analysis . . . . .
  - e) Synthesis . . . . .
  - f) Evaluation . . . . .
- } 15% - 25%

Note. Adapted from A Blueprint for a Comprehensive Examination for Nurse Registration/Licensure (p. 9) by Canadian Nurses Association, 1977, Ottawa: Author.

HIERARCHY STRUCTURES		
<p>Part (of) link</p>	<p>The content in a lower node is part of the object, process, idea or concept contained in a higher node.</p>	<p>Key Words</p> <p>is a part of is a segment of is a portion of</p>
<p>Type (of)/ Example (of) Link</p>	<p>The content in a lower node is a member or example of the class or category of processes, ideas, concepts, or objects contained in a higher node.</p>	<p>Key Words</p> <p>is a type of is in the category is an example of is a kind of</p>
CHAIN STRUCTURES		
<p>Leads to Link</p>	<p>The object, process, idea, or concept in one node leads to or results in the object, process, idea, or concept in another node.</p>	<p>Key Words</p> <p>leads to results in causes is a tool of produces</p>
CLUSTER STRUCTURES		
<p>Analogy Link</p>	<p>The object, idea, process or concept in one node is analogous to, similar to, corresponds to or is like the object, idea process, or concept in another node.</p>	<p>Key Words</p> <p>is similar to is analogous to is like corresponds to</p>
<p>Characteristic Link</p>	<p>The object, idea, process, or concept in one node is a trait, aspect, quality feature, attribute, detail, or characteristic of the object, idea, process, or concept in another node.</p>	<p>Key Words</p> <p>has is characterized by feature is trait is aspect is attribute is</p>
<p>Evidence Link</p>	<p>The object, idea, process, or concept in one node provides evidence, facts, data, support, proof, documentation, confirmation for the object idea, process or concept in another node.</p>	<p>Key Words</p> <p>indicates illustrated by demonstrated by supports is proof of confirms</p>

APPENDIX B

EXAMPLE OF A NETWORK  
USING HIERARCHY, CHAIN, AND CLUSTER STRUCTURES



Adapted from: Dansereau, D. F., McDonald, B. A., Collins, K. W., Garland, J., Holley, C. D., & Diekhoff, S. H., 1979.

## DISTINCTIVE APPROACHES TO LEARNING

Intention	Motivation/ Personality type	Orientation	Strategy or Style	Description of Process		Outcome
Understanding meaning	Intrinsic motivation for self-development  Autonomous, self- actualizing, syllabus-free	Comprehension Learning	Deep Processing  Elaborative Processing	Below 4 processes used appropriately to reach understanding		Personally meaningful and deep level understanding; internalized knowledge.  Overuse of comprehension may lead to failure to use supportive evidence.
				Stage 1	Stage 2	
				Building overall description of content area	Reorganizing incoming information to relate to previous knowledge or experience	
Retaining and Reproducing facts	Extrinsic motivation; views knowledge as a means to an end  Syllabus-bound: may be anxious and fear failure	Operation learning or Instrumental learning	Reproducing or Utilizing; serialist strategy	Attending to evidence and steps in the argument	Relating evidence to conclusions & main- taining a critical objective stance	Potentially good recall of facts.  Overuse of operation learning may lead to inability to see wider interconnections.
			Surface processing; rote learning	Memorization	Overlearning	Surface level of understanding
Achieving high grades	Achievement motivation--hope for success  Stable, self- confident, ruthless	Learning that leads to high grades	Structuring & organizing; Methodical study	Any combination of the six above processes		Possibility of high grades (depending on strategies used) <u>with</u> or <u>without</u> understanding.

Adapted from: Entwistle, 1979; Schmeck, 1983;

Main, 1980; and Biggs, 1984.

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APPENDIX B

GUIDELINES FOR SELF-STUDY:  
HANDOUTS GIVEN TO STUDENTS

APPENDIX B

## GUIDELINES FOR SELF-STUDY: HANDOUTS GIVEN TO STUDENTS

MINIMIZING TEST RELATED ANXIETY

- A. During the study period, prevent anxiety from interfering with learning by:
1. keeping anxiety at a low level.
  2. using this anxiety to motivate you to study.
  3. giving yourself sufficient time to study and prepare.
  4. setting realistic goals for yourself in relation to studying.
  5. working diligently to accomplish goals.
  6. practising with a variety of study materials.
  7. practising with questions from all areas of nursing.
  8. doing extra study and practise in areas of recognized weakness.
  9. aiming to understand material being studied; attempting to memorize too much can create anxiety.
  10. keeping your life balance--physical activity often helpful.
  11. practising relaxation exercises.
- B. During the immediate pre-exam period, prevent anxiety by:
1. continuing to do relaxation exercises.
  2. getting a good night's sleep prior to exams.
  3. avoiding excessive coffee, tranquilizers, sleeping pills:
  4. getting sufficient nutrition.
  5. avoiding interaction with anxious friends (anxiety is contagious!).
  6. maintain a positive, optimistic outlook (you have studied as much as you can!).
  7. avoid last minute cramming--it may make you anxious.
  8. trying to avoid stress from other sources. Deal with other life problems, i.e., financial difficulties, mother-in-law problems, boyfriend problems, at a later date.
- C. During the exam, reduce anxiety by:
1. maintaining positive, optimistic outlook.
  2. considering each question as an entity--like the alcoholic's slogan "one day at a time." This is "one question at a time." Refuse to allow a difficult question to make you anxious when approaching the next question. Also, refuse to allow anxiety over future questions interfere with your ability to answer this one question. Cope with each question as it comes, like we teach women in labour to cope with each contraction.

3. doing the best you can with each question and move on to the next. Don't get in a panic and rush. However, don't spend more than 2-3 minutes on any one question until you are finished.
4. Every 15-20 minutes (or as needed), exercise your neck, arm and leg muscles to prevent tension and take a deep breath in and out.
5. If you feel anxiety starting, close your eyes, think of your relaxation exercises. Tell anxiety to "STOP" (in your mind) and say "relax." Then continue on answering questions.
6. There will be questions you will not be sure of. Avoid allowing this feeling to make you anxious.
7. Have some hard candies (or other source of glucose) to suck on during the exam. (Don't crunch!)
8. Some individuals are quicker at writing exams than others. Avoid becoming anxious when you see others leave the exam early. Don't assume they know any more than you.
9. Have a watch with you and keep track of the time to gage your pace.

#### STRATEGIES FOR APPROACHING MULTIPLE CHOICE QUESTIONS

1. Read question carefully.
2. Identify key words.
3. Pause and consider "What is being asked?".
4. Read all responses before deciding one is correct (some are more correct than others).
5. Select the best response.
6. If the "best response" is not obvious to you, Avoid Panic, Keep Calm and Think.
7. Eliminate responses that are least likely to be correct.
8. Re-read the question and remaining responses.
9. Pay attention to wording, i.e., all, never.
10. Make you best guess.

## OTHER SUGGESTIONS

1. Avoid getting stuck on any one question.
2. Mark any you want to go back to if you have time.
3. When you guess, often first guesses are best; avoid changing unless you think of something new.
4. Repeated practise with this approach helps to make the approach automatic. Then all energy is directed to thinking about what is being asked.
5. Avoid allowing jargon to mislead you. Fancy-sounding phrases can make things difficult.

## TIPS ON STUDYING

### PLACE

1. Try to find a place that is convenient, quiet, free from distraction and comfortable enough for study (not too comfortable!). A chair with a padded seat may be good, but avoid the couch or a bed.
2. Best studying temperature is around 20 degrees or even cooler. Studying at the beach may not be as effective!
3. A table or desk is helpful to permit note taking and easy access to several books.
4. A good light is essential.
5. Have everything you will need collected together, i.e., medical dictionary, pencil, paper, books, etc.

### TIME

1. Try to organize a specific amount of time for studying. Several short periods, i.e., 20 minutes, are usually not as effective as one longer period, i.e., 1 to 1 1/2 hours. However, it is likely better to study for six hours on two different days than for 12 hours on one day.
2. Schedule defined breaks if studying for longer than 1 1/2 hours.
3. Avoid scheduling study time when you are extremely tired. Better to sleep then and study earlier in the day.
4. Get to know you own best times for learning--for some, it is late at night, for others early in the morning, or perhaps when the baby has his afternoon nap.

5. Once schedules are prepared, try to make the most of the time you have set aside. Avoid distractions, i.e., phone calls, household chores that need doing, etc. (the chores will wait). This requires a lot of self-discipline. It also can cause some friction with family members. Explain what you are trying to do and why, and try to get support.
6. Try to make use of short periods of time, i.e., while waiting in line with groceries, or while riding the bus, and review specific points you have been studying. Choose content areas that you can get into quickly, for example, drugs, or some physiological process. Carry a small book or study cards with you at all times to make use of extra time.
7. Reward yourself for studying effectively. Treat yourself to a special lunch, watch your favorite T.V. show or do whatever is a treat for you, once you have accomplished a certain amount. Then, start increasing the amount to get the reward.

#### CONTENT

1. Concentrate on aspects of nursing that are commonly encountered and typical for a certain age group.
2. Emphasize areas of nursing where you have had little experience.
3. Avoid trying to learn a whole lot of specific facts. Try to relate the facts together in a way that makes sense, i.e., see meaning in what you are studying. Try to think of an application of the knowledge you gain.
4. Try to fit together various content areas, for example when studying about any illness, review the A&P of the organs involved, highlight the pathophysiology, a review of some microbiology may be needed and also diagnostic tests. When considering the treatment, consider the nursing care as particularly important, but don't neglect diet therapy, drug therapy, occupational therapy and whatever is applicable.
5. Study conditions that have similarities and differences together to help you distinguish them in your mind, i.e., placenta previa and abruptio placenta neuroses and psychoses, S&S of hyperglycemia and hypoglycemia, fetal and adult circulation.
6. Think of personal ways to remember specific ideas that you tend to get mixed up. For example, in cardiac arrest, we think of ABC, Airway, Breathing, Circulation. Avoid over-using this method. Use this method to associate ideas that are more difficult to relate logically.

7. You may want to make brief notes as you are studying. Avoid rewriting textbooks. Some people underline textbooks if they are their own. Do what works for you. Often a table, giving a summary is helpful, i.e., drugs for leukemia.
8. Every 5-10 minutes of studying, close your eyes and see if you can recall the major points. There is no point in reading for chapters without being able to state what the main ideas are. Actively recalling these points helps to keep them in your mind.
9. Some people find studying with a friend helpful. You can discuss points, compare experience, explain difficult aspects and question each other. Usually this is best when it is preceded by a considerable amount of individual study.
10. Combine studying and review questions on the content studied. As you study, you should increase your ability to answer questions correctly. This improvement becomes your "reward" for learning and will make you feel more confident.

APPENDIX C

PRACTISE TEST

PRACTISE  
COMPREHENSIVE  
NURSING  
EXAMINATION

PART A

DIRECTIONS:

1. Do not make any marks on this test paper.
2. Use the answer sheet provided.
3. Use pencil only, and clearly erase any errors.
4. For each question, completely fill in the circle that surrounds the number of the best response.



Mr. George Davis, age 67, is admitted to the hospital with congestive heart failure. Your initial assessment indicates severe dyspnea, dependent edema of both legs, and rales in his lung bases. Items 1 to 12 refer to this situation.

1. Which of the following nursing measures will help decrease Mr. Davis' need for oxygen?

- A. Position patient in Fowler's with pillows under his head, back and arms.
- B. Provide for maximum hydration to loosen bronchial mucus.
- C. Complete morning care as soon after breakfast as possible.
- D. Give 4-5 small meals per day.
  - 1. A, C
  - \* 2. A, D
  - 3. B, C
  - 4. B, D

2. The goal of therapy at this time is to:

- 1. Educate the patient to his low-sodium diet.
- 2. Determine the cause of the patient's heart failure.
- \* 3. Decrease work load of the heart by decreasing fluid volume.
- 4. Make the patient comfortable by reducing his activity level.

3. The physician orders furosemide (Lasix) 40 mg IV stat. The most important assessment to be made before and after its administration is:

- 1. Pulse rate.
- \* 2. Blood pressure.
- 3. Weight.
- 4. Calcium level.

4. Before you give the Digoxin ordered for Mr. Davis, you take his apical pulse. It is 52 and has become irregular since yesterday. You, therefore:

- 1. Give half the dose of the medication and check his pulse every 2 hours.
- 2. Recognize that the bradycardia is desirable and give the medication.
- \* 3. Withhold the medication until you discuss the situation with the physician.
- 4. Question the physician's order and notify the supervisor.

5. Desired outcome of Mr. Davis' digitalization is:

- \* 1. Increased left ventricular output.
- 2. Decreased blood flow rate into the right atrium.
- 3. Enhancement of ventricular latent pacemakers.
- 4. Reduced edema in legs.

Mr. Davis develops acute pulmonary edema.

6. Mr. Davis should be positioned in:

- 1. Sims's.
- 2. Trendelenberg.
- 3. Low Fowler's.
- \* 4. High Fowler's.

7. Which of the following assessments indicate that your patient is in acute pulmonary edema?

- \* 1. Pink-tinged frothy sputum.
- 2. Hacking cough.
- 3. Pain on inspiration.
- 4. Use of accessory muscles on inspiration.

8. Rotating tourniquets are applied. Which of the following is NOT appropriate?
1. One extremity should be free of constriction at all times.
  2. Tourniquets should be released on one extremity approximately every 15 minutes.
  - \* 3. When symptoms have been relieved, discontinue all tourniquets simultaneously.
  4. Pulses should be palpable even in extremities with the tourniquet applied.
9. Mr. Davis has been started on 500 cc 5% D/W IV to be administered in 8 hours. He was detained in x-ray for 3 hours, and then returns to your floor. The IV is running slowly, and there is 450 cc in the bag. The best nursing action would be to:
1. Do nothing; allow the IV to continue at this rate.
  2. Give him additional oral fluids to prevent dehydration.
  - \* 3. Readjust the flow to the initial rate, allowing the total to remain behind schedule.
  4. Accelerate the flow rate so that the total fluid will be administered in the 8 hours, as initially ordered.
10. Mr. Davis complains of being severely nauseated and seeing yellow lights. The nurse should recognize these symptoms as toxic effects of:
- \* 1. Digoxin.
  2. Lidocaine.
  3. Morphine sulfate.
  4. Meperidine hydrochloride.

Mr. Davis progresses well, and will soon be discharged. The doctor orders him to continue his low-sodium diet while at home.

11. In carrying out teaching in relation to his low sodium diet, the nurse should advise Mr. Davis that which of the following groups of foods are lowest in sodium?
1. Canned soups, pork and beans, canned spaghetti with sauce.
  2. Chinese food and baking powder biscuits.
  3. Frozen peas and fresh bread with butter.
  4. Sandwich meat, carbonated beverages, milk.
  - \* 5. Apples, potatoes, bananas, roast chicken.
12. Mr. Davis is to continue taking furosemide (Lasix) and digoxin at home. It is best to instruct the patient to take the medication with:
1. Antacids to prevent gastric upset.
  2. Water to ensure adequate hydration.
  - \* 3. Orange juice to prevent hypokalemia.
  4. Milk to ensure adequate absorption.

\* \* \* \* \*

Eileen Adams, age 50, discovered a lump in her left breast upon self examination. She was admitted to the hospital for a breast biopsy. Items 13 to 18 refer to this situation.

13. As the nurse is preparing Mrs. Adams for the operating room, she asks the nurse, "Well, do you think I have breast cancer?" Which response would be most helpful?
1. "It is important for you to go into the operating room with a positive attitude."
  2. "Have you talked to your doctor about this?"
  - \* 3. "It sounds as if you are worried about what your doctor will find."
  4. "Breast cancer is more common in younger women than in your age group."

14. Mrs. Adams had a lt. modified radical mastectomy as the lump in her breast was found to be positive for cancer. Following surgery, Mrs. Adams should be positioned:

1. On operative side.
2. On unoperative side.
3. In semi-Fowler's with affected arm down to promote circulation.
- \* 4. In semi-Fowler's with affected arm elevated.

15. During the first dressing change Mrs. Adams does not look at the incision but at the nurse. The best response of the nurse to this would be:

1. "You will have to look at the incision sooner or later."
2. "Perhaps you will feel like looking at your incision once some healing has taken place."
3. "The incision looks good. You really should see it."
- \* 4. "It is often difficult to look at the incision the first time."

16. While attempting to teach post-operative exercises, Mrs. Adams states: "My husband will never accept this." In evaluating this situation, which of the following teaching-learning principles is most significant?

- \* 1. Patients can learn best when they are emotionally and physically ready.
2. Learning requires participation, so patients should be asked to give a return demonstration.
3. Patients will eventually learn if repeat demonstrations are given.
4. Visual aids are often very helpful to enhance learning.

17. Mrs. Adams undergoes chemotherapy and radiation therapy. While she is experiencing side effects, Mrs. Adams should be instructed to avoid eating which of the following foods?

- \* 1. Cheese, fried eggs, nuts, raw fruit.
2. Beef, pork, bread, cooked vegetables.
3. Lunch meat, canned soups, tomatoes, yellow vegetables.
4. Milk, eggs, canned vegetables, fish.

18. Mrs. Adams' treatment successfully brings about a remission. She is to have follow-up examinations at the cancer clinic every three months. In working with Mrs. Adams, the clinic nurse should consider that it is characteristic of middle-aged adults to demonstrate which of the following behaviors?

- A. Have a working philosophy of life which gives stability and meaning.
  - B. Function with a minimum of self-deception.
  - C. Display a depressive reaction to unmet needs.
  - D. Master the environment in realistic ways.
  - E. Demonstrate interest in and concern for community needs and problems.
1. A, B
  2. D, E
  3. B, C, D
  - \* 4. A, B, D, E
  5. All of the above.

\* \* \* \* \*

Eight-year-old Timmy Smith was admitted to the hospital 2 days ago with third-degree burns on his hands and arms. Items 19 to 23 refer to this situation.

19. The practice of cautious administration of fluids to a burned patient who is hypovolemic is based on a major principle that:

1. Fluids by themselves do not contain the necessary electrolytes.
2. Fluids are given to maintain kidney perfusion.
- \* 3. Excess fluid can lead to congestive heart failure.
4. There is an extracellular fluid volume shift occurring after 24 hours.

20. Timmy's condition improves. One afternoon he tells you that he is bored. Which of the following is the most appropriate nursing intervention?
- \*1. Read Timmy a young boy's adventure story, encouraging him to read some short sections to the nurse.
  2. Make a building from Leggo, permitting him to express his creativity.
  3. Watch game shows and cartoons on T.V., encouraging him to discuss the shows with the nurse.
  4. Listen to the radio, allowing Timmy to choose the station.
21. Timmy's burns are treated with mafenide acetate (sulfamylon cream) to prevent infection. In planning care, it must be remembered that one of the disadvantages of this medication is that this cream may:
1. Cause a loss of blood during debridement.
  - \*2. Result in an acid-base imbalance.
  3. Result in fluid retention.
  4. Cause skin discoloration.
22. Timmy weighs 27 kg. If the adult dose of a medication is 500 mg q.i.d., what would be the most likely safe dosage the doctor will order to give to Timmy?
1. 150 mg b.i.d.
  - \*2. 200 mg q.i.d.
  3. 300 mg b.i.d.
  4. 350 mg q.i.d.
23. According to Erikson, Timmy should be in which developmental stage?
1. Industry vs. intimacy
  2. Initiative vs. inferiority
  3. Initiative vs. guilt
  - \*4. Industry vs. inferiority

\* \* \* \* \*

Mrs. Allen, a 36-year-old mother of two children age 3 and 5 was admitted yesterday to the hospital with a diagnosis of rheumatoid arthritis. This morning she has a temperature of 38.5°C and is feeling very weak and tired. She is experiencing considerable pain in her knees, ankles and wrists, and examination shows them to be warm to touch and swollen. Items 24 to 28 refer to this situation.

24. While caring for Mrs. Allen this morning, the nurse should:
- \*1. Bathe her, encouraging her to assist where she is able.
  2. Help her to the bathroom so she can wash at the sink.
  3. Omit the bath completely today and position her comfortably.
  4. Provide her with suitable equipment and encourage her to carry out her bath independently.
25. Nursing interventions you may introduce to try to improve Mrs. Allen's comfort should include:
- A. Bed cradle.
  - B. Pillow under her knees.
  - C. Care in handling limbs.
  - D. Full range of motion q. 2 hr.
    1. A, D
    2. B, C
    - \*3. A, C
    4. All of the above.

26. Later in the day, the nurse finds Mrs. Allen crying. When asked what is concerning her, she replies, "I miss my children so much! I should be at home caring for them." The best response for the nurse is:

1. "Did you have time to make adequate babysitting arrangements prior to coming to the hospital?"
- \* 2. "Would it be helpful to be able to speak to your children on the telephone?"
3. "I will talk to the doctor about getting you a day pass so you can go home."
4. "The most important thing for you to concentrate on is to get well and then you will be able to go home."

27. Mrs. Allen tells you that another staff nurse, Sara, hurts her when she is bathing and moving her, as she is so rough. The most appropriate action in this situation would be to:

1. Suggest to the Head Nurse that Sara not be given Mrs. Allen as a patient.
2. Assure Mrs. Allen that Sara gives good thorough nursing care.
3. Report what Mrs. Allen said to the Head Nurse immediately.
- \* 4. Gather more information from Mrs. Allen, Sara, and others.
5. Do nothing, since evaluating Sara's nursing care is not your role.

28. According to Erikson, Mrs. Allen should be in which development stage?

1. Integrity vs despair.
2. Industry vs isolation.
- \* 3. Intimacy vs isolation.
4. Generativity vs self-absorption.

\* \* \* \* \*

Mrs. Grant, 70 years old, has been admitted in an unconscious state with an acute cerebrovascular accident (CVA) resulting in left hemiplegia. She also has diabetes. Items 29 to 43 refer to this situation.

29. Before this hospitalization, Mrs. Grant was placed on anticoagulant therapy for a pulmonary thrombosis. Which of the following statements best describes the use of anticoagulant therapy in treating a patient with suspected intracerebral hemorrhage?.

- \* 1. Anticoagulant therapy is contraindicated because the bleeding would increase.
2. Anticoagulant therapy is maintained because circulation is enhanced.
3. Anticoagulant therapy is contraindicated because it would mask signs and symptoms.
4. Anticoagulant therapy is maintained because preventing pulmonary thrombosis is imperative.

30. Which of the following is CONTRAINDICATED during the acute phase of a cerebrovascular accident?

- \* 1. Place in slight Trendelenburg position to combat shock and increase oxygenation of cerebral tissues.
2. Frequently assess neurologic status, including level of consciousness, pupillary reactivity and equality, and vital signs.
3. Maintain proper body alignment and begin range-of-motion exercises for all extremities on the first day of hospitalization.
4. Maintain adequate nutrition, including fluid and electrolyte balance, by intravenous or tube feedings.

31. Mrs. Grant is particularly prone to decubitus ulcers because:

- \* 1. Increased pressure on denervated areas causes tissue ischemia.
2. Blood pools in dependent areas, producing edema.
3. Inadequate respiratory volume decreases the amount of oxygenated blood.
4. Nutrient absorption at the cellular level is poor.

32. To assess and facilitate respiratory function, nursing measures for Mrs. Grant may include:

- A. Turning the patient to a semiprone position.
- B. Positioning the patient supine with no pillow to cause obstruction.
- C. Acutely flexing the patient's neck.
- D. Assessing breath sounds and noting arterial blood gases.
- E. Suctioning intermittently for thirty seconds prn.
  - 1. A, C
  - \* 2. A, D
  - 3. C, D
  - 4. A, D, E
  - 5. B, D, E

33. The nurse should use sedatives judiciously in caring for Mrs. Grant because:

- † 1. Oversedation may depress vital centers.
- 2. Sedatives often have a paradoxical effect on CVA patients.
- 3. Sedation may mask the signs that her condition is improving.
- 4. Absorption of medication from the gastrointestinal tract is delayed.

34. When auscultating Mrs. Grant's chest, you do not hear any sounds in the left axillary area of her chest at the level of the 3rd and 4th intercostal space. This will indicate to you which of the following?

- 1. You are listening over bone.
- \* 2. The airways are likely obstructed.
- 3. Her respirations are too shallow.
- 4. Sounds are not normally heard in this area.

35. The arterial blood gases on 50% oxygen for Mrs. Grant shows the following results: pH=7.31; pCO<sub>2</sub>=40; pO<sub>2</sub>=75; HCO<sub>3</sub>=15.

These results indicate that Mrs. Grant is experiencing:

- 1. Compensated metabolic alkalosis.
- 2. Compensated respiratory acidosis.
- 3. Uncompensated respiratory alkalosis.
- \* 4. Uncompensated metabolic acidosis.

36. If Mrs. Grant is placed on prolonged bed rest, she is prone to:

- A. Osteoporosis.
- B. Hypocalciuria.
- C. Encephalopathy.
- D. Atelectasis.
- E. Ataxia.
  - 1. A, B
  - \* 2. A, D
  - 3. B, C
  - 4. B, E
  - 5. C, D

37. Mrs. Grant regains consciousness. She is experiencing homonomous hemianopia, which means she has:

- 1. Spatial perceptual deficits in both eyes.
- 2. Global vision in both eyes.
- 3. Double vision in both eyes.
- 4. Deficits in the nasal visual field in both eyes.
- \* 5. Blindness for one half field of vision in both eyes.

38. She also has apraxia, which means:
- \* 1. Inability to use an object properly.
  - 2. Inability to understand written words.
  - 3. Inability to see clearly.
  - 4. Inability to express ideas orally.
39. Mrs. Grant experiences dysphagia, which means:
- 1. Difficulty in breathing.
  - 2. Difficulty in speaking.
  - 3. Difficulty in flexing and extending limbs.
  - \* 4. Difficulty in swallowing.
40. Mrs. Grant is being rehabilitated. In teaching Mrs. Grant to put on her sweater, your knowledge of psychomotor skill learning would direct you to first:
- 1. Allow Mrs. Grant to practice buttoning and unbuttoning a sweater.
  - 2. Assist Mrs. Grant to practice slipping her right arm through the sleeve.
  - 3. Let her try to put her sweater on unsupervised, then tactfully correct her.
  - \* 4. Show Mrs. Grant how to put on a sweater when one arm is paralyzed.
41. Two weeks after her admission, while discussing aids to easier dressing, Mrs. Grant is learning to put on her own sweater. All of the following are important to teach her EXCEPT:
- 1. Her right hand should be used to pull her left arm through the sleeve of the sweater.
  - 2. Her sweater should be at least a size larger than normal.
  - \* 3. She should wear practical rather than fashionable clothes.
  - 4. Velcro fasteners will be easier for her to use than buttons.
42. Mrs. Grant's skin is beginning to break down in the area of her sacrum. In order to enhance her nutritional status and decrease further breakdown, she should be on a diet that is:
- 1. High in calories, high in carbohydrates.
  - \* 2. High in protein, high in vitamin C.
  - 3. Low in calories, high in fluids.
  - 4. Low in fats, high in vitamin C.
43. Mrs. Grant continues to improve, and is able to take more responsibility for her diabetes. As you are teaching her a new method to test for sugar in her blood she becomes sarcastic and angry. Which of the following statements would be most helpful?
- \* 1. "It must be hard for you to get used to all this."
  - 2. "Mrs. Grant, can you tell me why this is so difficult for you?"
  - 3. "It is important to learn this, Mrs. Grant, because this new test is much more exact."
  - 4. "There are lots of people your age with diabetes who have learned this."

\* \* \* \* \*

Mrs. Seviigny has had repeated respiratory infections since childhood. Now at age 50 she is diagnosed as having bronchiectasis with chronic dilation and obstruction of the bronchi. She has been admitted to the hospital for surgical removal of the diseased portions of her right lower lung. In the immediate post-operative period she has a chest tube connected to underwater seal drainage with suction. Items 44 to 48 refer to this situation.

44. One sign indicating that the chest tube is functioning properly is:
- 1. Intermittent bubbling in the suction control bottle.
  - \* 2. Fluctuation of fluid in the water seal bottle.
  - 3. Drainage of at least 100 cc each hour.
  - 4. Continuous bubbling in the water seal bottle.

45. The purpose of the chest tube is:
- To drain blood and serum from the pleural space.
  - To facilitate gradual re-expansion of the right lung.
  - To prevent post-operative lung infection.
  - To stimulate deep breathing and coughing.
1. A, B
  2. A, C
  3. B, C, D
  4. All of the above.
46. In aiding Mrs. Seviegny to ambulate, which of the following nursing actions in relation to the chest tubes would be indicated?
- Disconnect the chest tube from the water seal bottle.
  - Splint the patient's affected side.
  - Clamp the chest tube if it was bubbling prior to moving.
  - Transport the chest bottle below chest level.
1. A, C
  2. A, D
  3. B, C
  4. B, D
47. In order to promote good pulmonary function for Mrs. Seviegny during her early post-operative period you would:
- Give her sedation as ordered that is sufficient to reduce chest pain.
  - Help her to do deep breathing and coughing q. 2 hr.
  - Help her to ambulate frequently for short periods.
  - Encourage bed rest to decrease her body's need for oxygen.
1. A, B
  2. B, C
  3. A, B, C
  4. A, D
48. When auscultating Mrs. Seviegny's chest, you hear rhonchi. You will ask the patient to do which of the following and then listen again?
1. To sit up in a more erect position.
  2. To take a deep breath and cough.
  3. To breathe in and out through the mouth.
  4. To say 99 in a louder voice.

\* \* \* \* \*

When the school nurse saw eight-year-old Shana's maculopapular rash and the pinpoint macula on her soft palate, she thought it likely that Shana had rubella. The physician agreed that Shana had rubella and should stay home from school. Items 49 to 52 refer to this situation.

49. A case of rubella can be serious because:
1. Its complications could be very severe for a child Shana's age.
  2. It can cause severe birth defects when a susceptible pregnant woman is exposed to it.
  3. It means that the immunizations given in early childhood are not effective.
  4. An epidemic of rubella in the school will probably ensue.
50. Shana's mother asks the school nurse regarding Shana's care at home. The school nurse should advise Shana's mother to:
1. Take Shana's temperature four times a day and give her Aspirin to make her comfortable.
  2. Check with her doctor about giving Shana Tylenol for fever and discomfort.
  3. Keep Shana in bed with as little light in the bedroom as possible.
  4. Obtain the rubella vaccine for Shana as soon as possible.



51. Remembering that Shana had complained of a stiff neck two days before the rash appeared, Shana's mother asks if anything more serious than rubella could be afflicting her daughter. The school nurse should explain to Shana's mother that:

1. Spinal meningitis is a possibility.
2. The stiff neck was probably just a coincidence.
- ✓3. Swollen lymph nodes probably caused the stiff neck.
4. There is no relationship between the stiff neck and the rash.

52. Which one of the following statements are accurate in relation to the communicable diseases of childhood?

- A. The etiology of these diseases is usually a systemic bacterial infection.
  - B. Antibiotics are not therapeutic for measles, mumps, and rubella.
  - C. Most childhood communicable diseases can be prevented.
  - D. There is usually a prodromal period associated with these diseases.
1. A, B
  2. C, D
  3. A, C
  - ✓4. B, C, D

\* \* \* \* \*

Mrs. Black is an obese 59-year-old secretary with a history of asthma and varicose veins. She has been admitted to the hospital for gallbladder surgery. Items 53 to 64 refer to this situation.

53. Which of the following complications would the nurse observe for if bile flow to the duodenum were obstructed?

1. Peripheral neuritis.
2. Ascites.
- ✓3. Bleeding tendencies.
4. Macrocytic anemia.

54. Mrs. Black says to the nurse: "That doctor's a real tough character. He told me I must stop smoking. I've been smoking two packs a day for 20 years--it's not that simple." The nurse can help Mrs. Black by replying:

1. "I know it's not easy, but he's right you know--you've got to stop."
2. "Why not try one of those stop-smoking groups--a lot of people I know have gone and stopped smoking."
- ✓3. "Can you think of some ways to help you to stop smoking?"
4. "Have you ever really tried to quit?"

55. Because of Mrs. Black's history of asthma, the nurse listens to her chest. Which of the following are important regarding auscultation of the chest?

- A. The patient should be semi-supine, propped up with pillows.
  - B. The nurse should begin to listen at the apex, going from one side to the other.
  - C. The patient should breathe deeply through the nose.
  - D. The patient should bring her shoulders forward when the nurse listens between the scapulae.
1. A, C
  2. A, D
  3. B, C
  - ✓4. B, D

56. When auscultating Mrs. Black's chest, you hear wheezing. This noise is caused by:
1. Air passing through moisture in the small airways and alveoli.
  2. Fluid or secretions in the large airways.
  3. The rubbing together of inflamed pleural linings.
  - \* 4. Constriction of the airways due to secretions or bronchospasms.
57. Following Mrs. Black's gallbladder surgery, the PAR nurse would be alert for which of the following possible post-operative complications?
- A. Hemorrhage or shock.
  - B. Urinary retention.
  - C. Abdominal distention.
  - D. Respiratory difficulty.
1. A, B
  - \* 2. A, D
  3. B, C
  4. C, D
58. Mrs. Black is receiving Aminophylline IV. Because of the side effects of this drug, it is most important for the nurse to monitor the:
1. Respirations.
  - \* 2. Pulse.
  3. Peripheral circulation.
  4. Skin color.
59. The evening of surgery, after Mrs. Black is fully recovered from the anaesthetic, the nurse should:
1. Apply a binder for support.
  2. Assist her to pivot from the bed to a chair.
  3. Perform passive range of motion exercises to legs.
  - \* 4. Ambulate her for a short distance in the room.
60. On her first morning after surgery, Mrs. Black complains of severe pain in the operative area. Considering Mrs. Black's complaints and condition, the preferred nursing action would be to:
1. Give her a tranquilizer and allow her to rest for the morning.
  - \* 2. Give her an analgesic and wait one-half hour before ambulating.
  3. Give her a tranquilizer and ambulate her.
  4. Give her an analgesic and wait 2-3 hours before ambulating.
61. Mrs. Black has a T tube. The main function of the T tube that is often inserted after a cholecystectomy with an exploration of the common bile duct is to:
1. Alleviate pain in the right upper quadrant.
  2. Stimulate the secretion of bile.
  - \* 3. Maintain the patency of the duct.
  4. Divert the flow of bile away from the GI tract.
62. On the 3rd post-operative day, the physician orders that the nasogastric tube be removed. To do this you would pull out the clamped tube while Mrs. Black:
1. Pants.
  - \* 2. Exhales.
  3. Inhales.
  4. Breathes normally.

63. In order to effectively evaluate Mrs. Black's nursing care, the nurse must:
- A. Be the primary nurse for a minimum of 48 hours.
  - B. Collect new data on the patient's status.
  - C. Be informed about specific goals written for her patient.
  - D. Meet frequently with the patient's family.
    1. A, B
    2. A, D
    - \* 3. B, C
    4. C, D
64. Mrs. Black progresses well and will soon be discharged. The doctor has suggested she go on a reducing diet. In carrying out health teaching in relation to her diet, the nurse understands the criteria for a reducing diet include:
- A. Servings from all 4 food groups.
  - B. Foods with a low satiety value.
  - C. Adaptability to one's lifestyle.
  - D. Weekly weight loss limited to two (2) kg.
    - \* 1. A, C
    2. A, D
    3. B, C
    4. B, D

\* \* \* \* \*

Peggy Sims, 6 years old, has nephrosis. Items 65 to 67 refer to this situation.

65. Which of the following would be the most important aspect of nursing care for this child in the acute phase of this illness?
1. Providing time for both active play periods and periods of rest.
  2. Forcing fluids every hour during the day.
  3. Feeding low-protein, high-carbohydrate and low-salt foods.
  - \* 4. Encouraging frequent change of position.
66. Mrs. Sims asked the nurse what she should bring Peggy to play with during her hospitalization. The nurse should suggest:
1. Stuffed animals, large puzzles and large blocks.
  2. Action toys such as a skipping rope.
  - \* 3. A doll, simple card games, crayons and colouring book.
  4. Record player, transistor radio and children's magazines.
67. At 6 years of age, Peggy should have learned to trust others and she should have developed a sense of:
1. Identity.
  2. Intimacy.
  3. Industry.
  - \* 4. Autonomy.

\* \* \* \* \*

Dave Jackson, aged thirty, is admitted to the hospital with ulcerative colitis. He has had the disease for eight years. Dave has been on soft diet at home. Items 68 to 72 refer to this situation.

68. Which of the following foods is restricted in a soft diet?
1. Poached egg.
  - \* 2. Bran muffin.
  3. Mashed potato.
  4. Cream of wheat porridge.

Following assessment, Mr. Jackson requires surgical intervention.

69. Your understanding of this condition is that the most common surgical intervention for ulcerative colitis is:

1. Colostomy.
- \* 2. Ileostomy.
3. Abdominal perineal resection.
4. Ureteroileostomy.

70. Dave's doctor orders total parenteral nutrition (T.P.N.) to enhance his nutritional status before surgery. Dave's urine is tested for sugar and acetone every six hours while he is on T.P.N. because:

1. Diabetes often develops with T.P.N. but corrects itself when therapy is discontinued.
2. The amount of glucose given daily in the solution is based on the amount of glucose excreted in the urine.
- \* 3. If T.P.N. solution is infused faster than it can be metabolized, glycosuria will develop.
4. Spilling of sugar by the kidneys is an adverse effect on T.P.N. that requires treatment be stopped immediately.

71. Following surgery, Mr. Jackson gradually regains his strength over the next five days. Nursing actions centered on assisting Mr. Jackson to accept his surgery could be considered successful, if he:

1. Talks about his upcoming vacation.
- \* 2. Looks at his stoma.
3. Sits quietly in his room.
4. Changes his bag every four hours.

72. Mr. Jackson has been tolerating solid food quite well. In planning Mr. Jackson's care, you know his diet one week following surgery will consist of foods that are:

1. Soft, high-residue, high-protein.
- \* 2. Bland, low-residue, high-protein.
3. Soft, low-residue, low-protein.
4. Bland, high-residue, low-fat.

\* \* \* \* \*

Joan is a 30-year-old mother of three children, two girls aged 4 and 3, and one son aged 2 years. Joan is married to Al, who is a life insurance salesman. Items 73 to 89 refer to this situation.

73. Joan has come to the OB clinic where you are a nurse. The results of her tests indicate she is pregnant. A positive urine test for pregnancy is based on the presence of which of the following hormones?

- \* 1. Human chorionic gonadotrophin (HCG).
2. Estrogen.
3. Progesterone.
4. Lactogenic hormone.
5. Follicular stimulating hormone (FSH).

74. Joan needs diet counseling for her pregnancy. She says she does not want to gain too much weight because Al likes her thin. Your best response is:

1. "It's best for the baby if you don't try to stay too thin."
2. "If you are careful about the foods you eat, you can cut calories to a minimum and not gain too much."
- \* 3. "Let's talk about the importance of good nutrition and weight gain in pregnancy."
4. "Why don't you have Al come to the clinic next time, and we can all talk about nutrition."

75. Joan asks you what is the guideline for monthly weight gain. Your best response is:
- \* 1. "Very little in the first trimester (1-2 kg), a larger amount in the second trimester (4-5 kg), and less in the third trimester (3-4 kg)."
  2. "1.5-2 kg a month."
  3. "2 kg in the first trimester, 3 kg in the second trimester, and 5-6 kg in the third trimester."
  4. "What would be most comfortable for you?"
76. Joan is now at 39 weeks' gestation and has been admitted to the hospital in labor. In assessing Joan, the nurse carries out Leopold's maneuvers which will help determine all of the following EXCEPT:
1. Engagement of presenting part.
  2. Fetal lie.
  3. Fetal position.
  - \* 4. Placental placement.
77. Joan is 4-5 cm dilated, 100% effaced, Station 0 with bulging membranes. She asks to get up and walk around. The best response of the nurse is:
- \* 1. "Yes, but lie down if your water breaks and report to the nurse immediately."
  2. "No; the baby is not down far enough yet. If your membranes ruptured, the cord could slip down ahead of the baby."
  3. "No; the baby is down so low that once your membranes rupture, you will likely deliver with the next few contractions."
  4. "Yes, that may help the baby to descend further into the birth canal."
78. Joan is having strong contractions every four minutes lasting 40 seconds. She complains of much back discomfort and an urge to bear down with the contraction. You suspect which of the following?
1. She is fully dilated.
  - \* 2. The baby is in a posterior position.
  3. She needs analgesic medication.
  4. She should get up and walk.
79. The best source of relief for Joan's back pain would be to:
1. Direct her attention to the T.V. or to talk.
  2. Have her walk around.
  3. Give her a narcotic analgesic.
  - \* 4. Apply counterpressure to her sacrum.
  5. Have her lie flat on her back.
80. Nursing care would include a careful assessment for signs of maternal exhaustion such as:
1. Circumoral cyanosis.
  2. Lowered body temperature.
  - \* 3. Fruity odor to breath.
  4. Skeletal muscle irritability.
81. If the back pain with contractions continues, you would expect which of the following?
1. A short labor with a precipitous delivery.
  2. Normal progress of labor.
  - \* 3. A long, painful labor.
  4. A stat C-section for uterine dystocia.

82. Joan's membranes rupture spontaneously. All of the following actions are appropriate; however, which should be done first?

- \* 1. Check FHR.
- 2. Check color of fluid.
- 3. Assess quantity of fluid.
- 4. Notify physician.

83. The nurse observes the amniotic fluid and decides that it appears normal, since it is:

- 1. Clear and dark amber colored.
- 2. Milky, greenish yellow, containing shreds of mucus.
- \* 3. Clear, almost colorless, containing little white specks.
- 4. Cloudy, greenish yellow, containing little white specks.

84. The beginning of the second stage of labor can be recognized by the patient's desire to:

- 1. Relax during contractions.
- \* 2. Push during contractions.
- 3. Pant during contractions.
- 4. Blow during contractions.

Joan delivers a 3.4 kg baby girl. Joan, Al, and the baby appear well.

85. To promote optimal parent-infant attachment, the most important nursing intervention at this time would be to:

- \* 1. Encourage both parents to hold the infant after delivery.
- 2. Encourage rooming-in so the mother can spend time with the baby.
- 3. Assist the mother to put the baby to breast.
- 4. Provide a role model for the parents.

86. On the first postpartum day, Joan asks you to bathe and change the baby. Your best response is:

- 1. "I'd be glad to."
- 2. "Don't you remember how from your last baby?"
- \* 3. "How does it feel to have a new baby to care for?"
- 4. "Let's do it together."

87. On postpartum day four you find on your physical exam of Joan that her fundus is five finger breadths below the umbilicus, her lochia is scant and serosa, her breasts are full and dripping milk. Your evaluation of the findings necessitate you to do which of the following?

- 1. Alert the physician for medication.
- 2. Observe her again in about 30 minutes for changes.
- \* 3. Nothing. The findings are normal.
- 4. Keep her under constant observation.

88. Joan decides to breast feed this baby. Since Joan bottle fed her other children, she seems uncertain about whether she is feeding this baby correctly. Which of the following provides correct information concerning breast feeding?

- 1. Wash the breasts with soap and water before each feeding, to ensure cleanliness.
- \* 2. When beginning the feeding, stroke the infant's cheek with the nipple once the baby is in position for feeding.
- 3. Use one breast for each feeding and alternate them.
- 4. Supplement each feeding with additional formula until the mother's milk is sufficient.

89. The day of discharge, Joan tells you, "We love this new baby, but we have three little ones at home, and I don't know how I'll manage with another one." The most helpful response initially would be:

- \* 1. "You seem to feel overwhelmed because there's so much to do."
- 2. "It will be extremely difficult to manage with four babies."
- 3. "Have you thought of what birth control method to use?"
- 4. "I'll speak to the social worker to get you some help."

\* \* \* \* \*

Bob Sands is thirteen years old and has type A hemophilia. He is brought to the emergency room after being knocked down in a touch football game. Items 90 to 94 refer to this situation.

90. In type A hemophilia a child is deficient in what clotting factor?

- \* 1. VIII.
- 2. IX.
- 3. XI.
- 4. XII.

91. Bob's mother is in the emergency room with him. She says to the nurse, "This never would have happened if I had watched him more closely." The most appropriate response by the nurse would be:

- 1. "Hemophiliac children should not be allowed to play contact sports."
- \* 2. "I think I can understand how you feel, but at some point Bob is going to have to accept responsibility for monitoring his own activities."
- 3. "All mothers of chronically ill children feel this way, but it doesn't accomplish anything."
- 4. "It is difficult not to feel guilty, particularly when you could have watched him more closely."

92. Bob is found to be bleeding into his knee joint. The most likely treatment if all substances are available is:

- 1. Vitamin K.
- 2. Fresh, whole blood.
- \* 3. Cryoprecipitate.
- 4. Exchange transfusion.

93. Mrs. Sands expresses concern regarding the adequacy of Bob's diet. Your counselling will be based on your knowledge that Canada's Food Guide suggests which of the following for a balanced teenage diet?

- 1. 2 servings milk group, 2 servings meat, 3 servings fruits and vegetables, 3 servings breads and cereals.
- \* 2. 4 servings milk group, 2 servings meat, 4 servings fruits and vegetables, 3 servings breads and cereals.
- 3. 2 servings milk group, 4 servings meat, 4 servings fruits and vegetables, 5 servings breads and cereals.
- 4. 4 servings milk group, 3 servings meat, 4 servings fruits and vegetables, 2 servings breads and cereals.

94. Bob requires extra iron in his diet. Which of the following foods would you encourage?

- A. Eggs.
  - B. Cereals.
  - C. Milk and cheese.
  - D. Muscle meat.
  - E. Dark green leafy vegetables.
1. C, D, E
  2. A, B, C
  3. A, D, E
  - \* 4. A, B, D, E
  5. All of the above.

\* \* \* \* \*

Donald Ray, a 19-year-old college sophomore, has been admitted through the university health service. He had become increasingly withdrawn, unkept, isolated and depressed. The referring psychiatrist notes strong suicidal tendencies. Items 95 to 98 refer to this situation.

95. Initially the nursing care plan for Donald should include:

- A. Assigning him to a problem-solving group.
  - B. Introducing him to a few people at a time.
  - C. Meeting some of his dependency needs.
  - D. Minimizing the number of decisions he has to make.
  - E. Keeping him supervised at all times.
1. A, B, C
  2. B, C, E
  3. A, D, E
  - \* 4. B, C, D, E

96. Donald is treated with amitriptyline (Elavil). Which of the following are appropriate for the nurse to consider?

1. He should not eat certain foods such as wine, cheese, beer, or chicken livers.
2. He should try to drink a lot of fluid, as this drug depletes fluid balance.
3. He will probably have to take Cogentin to reduce the extrapyramidal effects.
- \* 4. He may experience hypotension, drowsiness, dry mouth, and tremors.

97. On the second day after his admission, Donald asks the nurse why he is being observed around the clock and has his freedom of movement restricted. The nurse's most appropriate reply would be:

1. "Your doctor has ordered it. He's the one you should ask."
2. "Why do you think we are observing you?"
- \* 3. "We want you to feel safe and we are able to provide that safety this way."
4. "What is it that makes you feel your movements are being restricted, Donald?"



98. With treatment, Donald appears to make progress. After five days he appears happier. At this time, the nurse leaves Donald alone for a short period. On her return a few minutes later Donald is gone. He is found in a bathroom where he has hanged himself. Which of the following statements reflects the best analysis of this situation?

1. Determined patients usually succeed at suicide, even with constant supervision.
2. The lifting of the depression demonstrated Donald's recovery so supervision was unnecessary.
3. Suicidal patients should be observed until all symptoms of depression have disappeared.
- \* 4. Donald's actions should have been anticipated by the nurse.

\* \* \* \* \*

Mr. Brown, age 72, has idiopathic thrombocytopenic purpura. Items 99 to 102 refer to this situation.

99. Which of the following lab results would be typical of Mr. Brown's condition?

- A. Normal prothrombin time.
  - B. Increased bleeding time.
  - C. Decreased partial thromboplastin.
  - D. Decreased clotting time.
  - E. Decreased platelet count.
1. A, C
  2. B, D
  - \* 3. A, B, E
  4. C, D, E
  5. All of the above.

100. For a patient with idiopathic thrombocytopenic purpura a splenectomy is performed in order to:

1. Cause slight elevation in hemoglobin levels.
- \* 2. Elevate platelet levels.
3. Halt the premature destruction of sensitized polymorphonuclear leukocytes.
4. Reduce the O<sub>2</sub> requirements of the body.

101. For patients who have idiopathic thrombocytopenic purpura, it is most important to observe for and prevent:

1. Gastrointestinal hemorrhage.
- \* 2. Cerebral hemorrhage.
3. Nasal hemorrhage.
4. Urinary tract hemorrhage.
5. Infection.

102. With treatment, Mr. Brown improves. You observe his knowledge of nutrition appears limited. In carrying out nutrition counselling you know that Canada's Food Guide suggests which of the following for an elderly individual?

1. 3 servings milk group, 1 serving meat, 4 servings fruits and vegetables, 4 servings breads and cereals.
2. 4 servings milk group, 2 servings meat, 3 servings fruits and vegetables, 3 servings breads and cereals.
- \* 3. 3 servings milk group, 2 servings meat, 3 servings fruits and vegetables, 3 servings breads and cereals.
4. 4 servings milk group, 2 servings meat, 4 servings fruits and vegetables, 3 servings breads and cereals.

\* \* \* \* \*

Barbara Jacobs, age 4, is admitted for a tonsillectomy and adenoidectomy. Items 103 to 108 refer to this situation.

103. At the conclusion of visiting hours, Barbara's mother hands the nurse a bottle of capsules and says, "These are for Barbara's allergy. Will you be sure she takes one about 8 o'clock?" The nurse might best respond:

1. "One capsule at 8 P.M.? Of course, I will give it to her."
2. "Did you ask the doctor if she should have this tonight?"
3. "I am certain the doctor knows about Barbara's allergy."
- \* 4. "We will ask Barbara's doctor to write an order so we can give this medication to her."

104. As you are taking her temperature, you notice that the parents are leaving without saying goodbye to Barbara. How do you respond?

1. Say goodnight and reassure them that Barbara will be fine.
- \* 2. Ask them to tell Barbara that they are leaving and when they will return.
3. Keep the curtain closed until they are gone so that Barbara won't be needlessly upset.
4. You tell Barbara that her parents have left, but will return soon.

105. When planning nursing care for Barbara, the nurse should remember that pre-school age children often have strongest fears associated with which of the following?

1. Strangers.
- \* 2. Intrusive procedures.
3. Death.
4. Pain.

106. In your post-operative assessment, which is an early sign that Barbara may be bleeding excessively?

- \* 1. Continual swallowing.
2. Dried brown exuate in the n\_res
3. Coffee ground emesis.
4. A falling BP and tachycardia.

107. On the morning after surgery, Barbara is thirsty. Which beverage is appropriate to give her at this time?

1. Orange juice.
2. Milk.
3. Lemonade.
- \* 4. Apple juice.
5. Hot chocolate.

108. According to Piaget, the developmental period characteristic of children aged 2-7 is:

1. Sensorimotor.
- \* 2. Preoperational.
3. Concrete.
4. Formal.

\* \* \* \* \*

Len Thatcher, a thirty-seven-year-old man, was admitted to the locked ward of the psychiatric hospital because he was caught breaking his neighbors' windows. He explained upon being arrested that his neighbors were always laughing at him and he knew they were "out to get him." He said, "If they don't stop, I'll burn their house down." Upon asking him to have a physical examination, he became extremely angry and struck out at the staff both physically and verbally. Items 109 to 116 refer to this situation.

109. Mr. Thatcher's violent outbreak can best be explained by which of the following?

- \* 1. Mr. Thatcher was experiencing a threat to his self-esteem, and the request for the physical examination compounded this threat.
- 2. Mr. Thatcher was angry that he had been arrested, and therefore projected his hostility onto the nursing staff.
- 3. The nursing staff impinged on Mr. Thatcher's rights and thwarted his attempt to meet his own needs.
- 4. Mr. Thatcher has an exaggerated superego and insufficient ego strength to withstand the impulses from his id.

110. On his admission to the psychiatric ward, Mr. Thatcher was observed shouting and shaking his fist at the doctors who had committed him. A short while later, he shouts at a patient passing by his room. Mr. Thatcher may be using the defense mechanism of:

- 1. Rationalization.
- 2. Introjection.
- 3. Overcompensation.
- \* 4. Displacement.
- 5. Intellectualization.

111. What intervention is best used by the nurse when a client such as Mr. Thatcher has a potential for violence?

- 1. Arranging for distraction by exposure to constant stimuli.
- 2. Staying close to client so that client does not feel people are afraid of him.
- \* 3. Removing stimuli that appear to frighten client.
- 4. Placing client in total seclusion.

112. Mr. Thatcher later said, "I'm feeling calmer now. I don't know what got into me the other night. You all must think I'm crazy." The best response by the nurse to Mr. Thatcher's statement would be:

- 1. "That's all right. We're here to help you."
- 2. "Why would you think that?"
- 3. "You think your behavior was crazy?"
- \* 4. "How were you feeling the other night?"

The doctor orders chlorpromazine for Mr. Thatcher.

113. The nurse should be aware that side effects of chlorpromazine most often include:

- A. Altered libido.
  - B. Blurred vision.
  - C. Diarrhea.
  - D. Dry mouth.
  - E. Increased WBC.
- 1. A, E
  - 2. B, C
  - 3. C, D, E
  - \* 4. A, B, D

114. Clients who remain on high dosages of chlorpromazine have the potential of developing side effects. One of the most serious consequences that would be likely from chlorpromazine is:

1. Excessive bleeding even with minor trauma.
2. Generalized ecchymosis on exposed areas of the body.
- \* 3. Tardive dyskinesia.
4. Extreme prostration.
5. Parkinsonian tremor.

115. Mr. Thatcher states that the headlines in the city newspaper carried a private message for him. This is an example of:

1. A compulsion.
2. A hallucination.
- \* 3. An idea of reference.
4. An obsession.
5. An egocentric neologism.

116. If Mr. Thatcher said to you, "I am Prime Minister Mulroney", your best response would be:

1. "I will call you Mr. Mulroney."
2. "That is not your real name."
- \* 3. "Your name band says you are Len Thatcher."
4. "A lot of people would like to be prime minister."

\* \* \* \* \*

Charlie Wells, age two, lives with his mother, who is divorced, and her boyfriend in the downtown area of a large city. Charlie liked to explore cupboards and was constantly into everything. He was a difficult child to keep track of and frequently his mother became upset with him. One day Charlie opened a cupboard and ate half a bottle of ferrous sulfate tablets. Items 117 to 121 refer to this situation.

117. Charlie's mother called the hospital. Which of the following should the nurse advise her to do first?

- \* 1. Bring Charlie to the hospital immediately.
2. Observe Charlie over the next several hours for any unusual signs.
3. Give Charlie burnt toast with milk.
4. Not do anything because iron pills are not harmful.

118. Childhood poison ingestions occur most often when:

1. The mother is out of the home frequently.
2. There is an extended family situation with several generations living together.
3. Babysitters do not comprehend the child's developmental level.
- \* 4. There is illness or discord in the family.

119. When Charlie arrives at the emergency room, the nurse notes that there are bruises all over Charlie's body. In assessing the possibility of child abuse, the nurse knows that over 50 percent of the children who are abused are:

1. Under one year of age.
- \* 2. Under three years of age.
3. From three to six years of age.
4. From six to ten years of age.

Following Charlie's treatment for poisoning the nurse asks Charlie's mother how he got the bruises. She replied that he is always falling down and hurting himself.

120. The next action the nurse should take is to:

1. Report the suspected child abuse to the authorities immediately.
- \* 2. Continue assessing the circumstances.
3. Ask the psychiatrist to talk with Mrs. Wells.
4. Ask Mrs. Wells to bring her boyfriend in for a conference.

121. Later, when child abuse has been ruled out, you sit down with Mrs. Wells to talk a bit about accident prevention. In teaching how to prevent poisoning, which of the following is the best household protection measure?

1. Medication is stored in a high cabinet, out of the child's sight.
2. Use childproof containers.
- \* 3. Medication is stored in a locked cabinet.
4. Store daily medication in the purse or drawer, but tell the child not to touch.

\* \* \* \* \*

Mrs. Jean King, a 59-year-old widow, has been admitted to the hospital with a diagnosis of Alzheimer's disease. Items 122 and 123 refer to this situation.

122. During the admission procedures which of the following initial approaches by the nurse would be most helpful to Mrs. King?

1. "Mrs. King, let me introduce you and your daughter to the staff here before you get acquainted with our ward policy and routine."
2. "Jean, you are somewhat disoriented now, but do not worry. You will be all right in few days."
3. "Mrs. King, do not be frightened. I am the nurse, and everyone here in the hospital will help you get well."
- \* 4. "Jean, I am the nurse. You are at the hospital; your daughter can stay with you for a while."

123. Mrs. King's daughter approaches you crying and asks when her mother will be better. Your best response would be:

1. "Although your mother appears confused now, you will see a significant improvement after she has been here for a while."
2. "It is doubtful that your mother's condition will improve. Perhaps you should speak to her doctor."
3. "Your mother repeatedly needs to be brought back to reality. You can play a very significant part in her treatment."
- \* 4. "It must be very upsetting for you to see her like this. What do you know about Alzheimer's disease?"

\* \* \* \* \*

Paula, a 3-year-old with exzema of the face and arms, has not heeded her nurse's warnings to "stop scratching--or else!" The nurse finds Paula scratching so intensely that her arms are bleeding. It is the evening shift and the Pediatric Ward is very busy. The nurse ties Paula's arms to the crib side. As a result of the tight restraints, Paula sustains nerve damage to both arms. Her parents sue the hospital.

124. Legally, who is responsible for the damage done to Paula?

- \* 1. The nurse, for tying the restraints too tightly.
2. The hospital for not providing special nurses.
3. The parents for not assisting in her care.
4. The Head Nurse for not providing sufficient staff on evenings.

\* \* \* \* \*

Mrs. Jansen, 43 years old, has had a subtotal thyroidectomy. Items 125 to 130 refer to this situation.

125. During Mrs. Jansen's immediate post-operative period the priority of care would be to:

1. Turn her from side to side every hour.
2. Encourage passive R.O.M. to neck.
3. Place her in supine position.
- \* 4. Suction oropharyngeal secretions as needed.

126. In checking Mrs. Jansen shortly after her return to the ward, the nurse noted that although she was not experiencing pain or dyspnea, there was noticeable swelling of the neck tissues above the wound dressing. The nurse's priority would be to:

1. Remove the neck dressing and apply an ice collar.
- \* 2. Notify the doctor of the neck swelling.
3. Lower the head of the bed completely.
4. Record the observation on the chart.

127. Which one of the following medications should the nurse anticipate the physician will order if Mrs. Jansen develops tetany?

1. Sodium phosphate.
2. Phosphaline iodide.
- \* 3. Calcium gluconate.
4. Sodium bicarbonate.

128. Mrs. Jansen should be observed during the early post-operative period for symptoms of thyroid crisis (storm) which include:

- A. Elevated temperature.
  - B. Severe tachycardia.
  - C. Dehydration.
  - D. Restlessness and delirium.
1. A, B
  2. B, C, D
  3. A, C, D
  - \* 4. All of the above.

129. The nurse places a tracheostomy set at the bedside because Mrs. Jansen may develop:

- A. An elevated temperature.
  - B. Edema of the glottis.
  - C. Hoarseness when speaking.
  - D. Hemorrhage.
1. C, D
  - \* 2. B, D
  3. A, B, D
  4. A, B, C

130. If the surgeon had accidentally removed Mrs. Jansen's parathyroid glands, she would likely demonstrate which of the following signs and symptoms:

- A. Painful muscle spasms.
  - B. Paralytic ileus.
  - C. Tachycardia.
  - D. Positive Chvostek's sign.
1. A, D
  2. B, C
  3. A, B, C
  - \* 4. A, B, D

Mr. Mudd is a 54-year-old Caucasian with a longstanding history of angina pectoris. He is being admitted to the hospital with a diagnosis of severe angina. Mr. Mudd has morphine ordered q. 3-4 hours for chest pain, and nitroglycerine, to be left at the bedside. Items 131 to 140 refer to this situation.

131. When Mr. Mudd is admitted to the unit, the maximum rate at which you set the ordered oxygen via nasal cannula would be:

1. 2 liters/minute.
- \*2. 6 liters/minute.
3. 10 liters/minute.
4. 15 liters/minute.

132. The pain in angina is due to:

1. Spasms of the coronary arteries causing back pressure in the myocardium.
- \*2. Inability of coronary arteries to meet oxygen needs of the myocardium.
3. Rubbing of epicardium against pericardial sac causing inflammation.
4. Irritation of nerve endings of the myocardium and endocardium.

133. Mr. Mudd asks if it is possible to predict when pain might occur. It is appropriate for you to tell him that the pain of angina is brought on by many things, but it occurs most often when a person:

1. Is at rest.
2. Makes a sudden change in position.
- \*3. Is involved in physical exertion.
4. Is feeling severely depressed.

134. Following his morning bath, Mr. Mudd suddenly experiences constant, excruciating substernal chest pain radiating across the chest and down his left arm. As his nurse, you would first:

1. Give his prescribed dose of morphine.
2. Discuss the situation with the doctor on call.
- +3. Give the P.R.N. order of nitroglycerine 1/200.
4. Check his BP, pulse, and respiratory rate.

Mr. Mudd experiences a myocardial infarction.

135. In order to begin Mr. Mudd's plan of care, you recall that the major cause of death during the next month after an acute myocardial infarction is:

1. Shock.
2. Atrophy of the myocardium.
3. Reinfarction.
- \*4. Arrhythmias.

136. Over the next 3 weeks, Mr. Mudd begins recovering from his myocardial infarction. Lately, he has been making many requests for changes in his care; while he has never been a complaining person in the past, he now finds the care he is receiving incomplete and inefficient. A suitable initial response in caring for Mr. Mudd might be:

- ✓1. "It must be very frustrating to be in the hospital for so long."
2. "You have been angry lately because you are upset about being sick."
3. "You seem to be displacing your anger with the doctors to the nursing staff."
4. "Being dependent on the nurses often makes patients irritable."
5. "We've noticed that you don't seem pleased with your care, Mr. Mudd--what can we change?"

137. You are teaching Mr. Mudd about his restricted sodium diet. Listed below are four content areas which you plan to cover. Select the most appropriate sequence for this content.

- A. Allow him to choose a meal from several sample menus.
- B. Give him a list of foods high in sodium and therefore to be avoided.
- C. Help him to plan a week's menu.
- D. Show him typical meal patterns he may follow.
  - 1. A, B, C, D
  - \* 2. B, D, A, C
  - 3. C, B, D, A
  - 4. D, C, B, A

138. As you enter Mr. Mudd's room with his medications for his heart and blood pressure, he says, "I don't want those medications." Your most appropriate initial response would be:

- 1. "Mr. Mudd, I'm afraid you need them".
- 2. "Perhaps we should have the doctor come and speak to you."
- \* 3. "What is your reason for not wanting to take these medications?"
- 4. "Your doctor would not have ordered these medications if you didn't require them."
- 5. "O.K., Mr. Mudd. I understand that you choose to refuse these medications."

139. The doctor has ordered that Mr. Mudd receive Coumadin 10 mg po O.D. as one of his discharge medications. Based on your knowledge of this drug you would teach him that:

- A. It is essential that the drug be given before meals.
- B. The antidote protamine sulphate should be kept on hand.
- C. Any sign of bleeding should be reported to his doctor immediately.
- D. Broad spectrum antibiotics might alter his need for coumadin.
  - 1. A, B
  - 2. A, D
  - 3. B, C
  - \* 4. C, D

140. Nitroglycerine was ordered to help control Mr. Mudd's angina attacks. When you talk with him about taking this drug you will review with him that symptoms often experienced with nitroglycerine include:

- A. Double vision.
- B. Burning pain in hands.
- C. Dizziness.
- D. Headache.
- E. Tingling of tongue.
  - 1. A, B, C
  - 2. A, B, E
  - 3. B, C, D
  - \* 4. C, D, E

\* \* \* \* \*

Rob Taylor, 32 years old, is admitted with chronic renal failure. Items 141 to 146 refer to this situation.

141. When you check Rob's chart, which of the following lab results would you expect?

- 1. Hypocalcemia, hypokalemia, metabolic alkalosis.
- 2. Hypermagnesemia, hypophosphatemia, hypocalcemia.
- \* 3. Hyperkalemia, metabolic acidosis, hyperphosphatemia.
- 4. Hypercalcemia, hypomagnesemia, hypokalemia.



142. Rob was placed on Amphojel because it:
1. Combines with calcium to aid in its excretion.
  - ✗ 2. Chemically inhibits phosphorous absorption by the G.I. tract.
  3. Decreases edema by increasing the fecal output of water.
  4. Corrects acid-base balance by enhancing hydrogen ion excretion.
143. The best diet for Rob while he is in renal failure would be:
- ✗ 1. High in fat, low in protein.
  2. High in protein, high in carbohydrates.
  3. High in protein, high in fat.
  4. Low in fat, low in protein.
144. The anemia associated with renal failure is due to a deficiency of:
1. Iron.
  - ✗ 2. Erythropoietin.
  3. Folic acid.
  4. Vitamin B<sub>12</sub>.
  5. Intrinsic factor.
145. In carrying out a doctor's order, which of the following are legal requirements?
- A. The nurse follows all doctors' orders as written.
  - B. The order must be accepted medical practice.
  - C. The nurse must understand the effect of the order.
  - D. The nurse must have knowledge of the related nursing care.
    1. A, B
    2. C, D
    - ✗ 3. B, C, D
    4. All of the above.

Rob requires hemodialysis on a regular basis.

146. In assessing Rob's dietary intake, which of the following principles would be important to remember?
1. Clients on dialysis likely have fewer dietary restrictions than they did prior to dialysis.
  2. Fluid intake has to be increased between dialysis treatments, as the procedure itself causes dehydration.
  3. Low-calorie diet should be maintained because the client cannot metabolize complex carbohydrates.
  - ✗ 4. Foods such as dried fruits, juices, bananas, and green leafy vegetables should be encouraged on a daily basis.

\* \* \* \* \*

Susan Medieras, a fourteen-year-old, is admitted to the adolescent unit. She tells you that recently she has been very thirsty and hungry. She urinates frequently and has nocturia. After laboratory tests, she is given a tentative diagnosis of juvenile diabetes mellitus. Items 147 to 156 refer to this situation.

147. During her hospitalization, which of the following adolescent fears would likely be most significant to Susan?
1. Fear of being displaced.
  2. Fear of separation.
  - ✗ 3. Fear of loss of independence.
  4. Fear of the unknown.

148. She is placed on a combination of Regular and NPH Humalin insulin to be given 1/2 hour before breakfast. The advantage of Humalin over other insulins is that:

1. Periods of hypoglycemia will occur during waking hours only.
- \* 2. There is less chance of allergy.
3. Hyperosmolar, hyperglycemic, non-ketotic coma (HHNK) is prevented more readily.
4. Diabetic keto-acidosis can be treated promptly.

149. The physician wrote a dietary order for Susan, calling for 220 grams of carbohydrate, 100 grams of protein, and 90 grams of fat. How many calories would such a diet provide?

1. 1400
2. 1800
- \* 3. 2100
4. 2300
5. 2500

150. When teaching Susan about diabetes and giving herself insulin, the first step for the nurse should be to:

1. Begin the teaching program at Susan's present level.
- \* 2. Find out what Susan knows about her health problem.
3. Set specific and realistic short- and long-term goals.
4. Collect all the equipment needed to demonstrate giving an injection.

151. The peak action of the NPH insulin is about:

1. 2 - 6 hours.
2. 4 - 10 hours.
- \* 3. 8 - 12 hours.
4. 12 - 18 hours.

152. Which of the following symptoms would suggest that Susan has received an overdose of insulin?

1. Flushed skin, nausea, and vomiting.
2. Pallor, dyspnea, blurred vision.
- \* 3. Tremors, sweating, hunger.
4. Hyperpnea, drowsiness, and fever.

153. When teaching Susan about regulation of her diabetes at home, which of the following would NOT be included?

- \* 1. Limitation of vigorous exercise.
2. Restriction of sugar from diet.
3. Urine testing for sugar.
4. Urine testing for acetone.
5. Blood glucose monitoring.

Susan is discharged, but is readmitted in 3 weeks. She was brought to the emergency room after being found unconscious in the locker room at school. There is a strong odor of acetone to her breath.

154. Of the following actions, which would be the first for emergency room personnel to consider when this 14-year-old arrives in the department?

1. Begin treatment immediately.
- \* 2. Obtain parental consent.
3. Wait until Susan regains consciousness, then obtain her consent.
4. Get consent from the school nurse.
5. Have Susan's friend, who accompanied her in the ambulance, sign the consent.

155. A stat blood sugar is ordered. You would suspect her blood sugar would most likely be:

1. 30 mg %
2. 90 mg %
3. 200 mg %
- \* 4. 800 mg %

156. Susan's condition improves and she is nearly ready for discharge. After developing a relationship with the nurse, Susan tells her that she had not been adhering to her diabetic regimen. As a first step in helping Susan develop some understanding of the importance of a diabetic regimen, the nurse should:

1. Give her printed material about diabetes in teenagers.
2. Impress on the parents that it is their responsibility to help and understand Susan.
- \* 3. Allow Susan to express her feelings about diabetes.
4. Consider that Susan had not been properly taught previously.
5. Get Susan to attend monthly meetings of adolescents with diabetes.

\* \* \* \* \*

Mr. Cohen, 42 years old, has just been admitted to the hospital with recurrent nausea and vomiting, abdominal pain, weight loss, and anorexia. His lab work shows serum potassium of 5.8, serum Na<sup>+</sup> of 124, hematocrit of 48, and pH of 7.32 (arterial blood gas value). His diagnosis is Addison's Disease. Items 157 to 162 refer to this situation.

157. The nurse knows that the primary intervention must be to treat which of the following problems?

1. Dehydration and hypernatremia.
2. Metabolic acidosis and hypokalemia.
- \* 3. Dehydration and hyperkalemia.
4. Abdominal pain and metabolic alkalosis.

158. If Mr. Cohen were to undergo any severe emotional or physical stress, he would probably develop an acute Addisonian crisis. In such a situation, the nurse's first priority would be which one of the following interventions?

1. Prepare to give a fluid challenge via the intravenous route.
2. Insert a nasogastric tube to prevent nausea and vomiting.
3. Draw blood specimens to determine serum electrolyte values.
- \* 4. Prepare to administer an intravenous hydrocortisone medication.

159. Six months later, Mr. Cohen is readmitted to the hospital for evaluation. He shows many of the side effects of chronic steroid administration. Which of the following would NOT likely be evident?

- \* 1. "Pill-rolling" tremor.
2. Facial edema.
3. Peripheral muscle wasting.
4. Central obesity.

160. Mr. Cohen is put on a maintenance dose of steroids to help prevent the return of the symptoms he had at admission. As his nurse, you know it is important that Mr. Cohen be taught about which of the following concepts?

- \* 1. It is very important not to stop taking his medication without a doctor's supervision.
2. If he is going to increase his physical work, he should increase the amount of medication he takes for that period of time.
3. He should watch for the signs and symptoms of hypoglycemia and report them to the physician immediately.
4. He should limit his fluid intake at meals.

161. Mr. Cohen has recently had a severe upper respiratory infection. What effect on medication dosage will an infectious process have for a person who is on steroid replacement therapy?

- \* 1. Increased dosage needed.
- 2. Decreased dosage needed.
- 3. Decreased then increased dosage needed.
- 4. No change in dosage needed.

162. Knowing Mr. Cohen's diagnosis and history, to which of the following patients' rooms would it NOT be appropriate to assign Mr. Cohen?

- 1. Mr. R., a forty-five-year-old male, five days post-operative gastrectomy.
- 2. Mr. S., a thirty-four-year-old male, ten days post-operative craniotomy.
- \* 3. Mr. T., a fifty-eight-year-old male, diabetic, admitted yesterday, leg ulcer with drainage.
- 4. Mr. U., a thirty-year-old male, with prostate cancer.

\* \* \* \* \*

Mr. James, a sixty-year-old retired tool-and-die maker, has been admitted to your ward, a short-term acute center for the care and treatment of psychiatric disorders. His symptoms are fatigue, an inability to concentrate, and an inability to complete everyday tasks. Mr. James is assigned to you and refuses to care for himself, doesn't eat, and prefers to sleep all day. Items 163 to 165 refer to this situation.

163. An important first intervention would be to:

- 1. Develop a good nursing care plan.
- 2. Talk to his wife for cues to help him.
- 3. Encourage him to join activities on the unit.
- \* 4. Develop a structured routine for him to follow.

164. Mr. James, while talking with you, becomes very dejected and states that life isn't meaningful and no one really cares what happens to him. The best response from the nurse would be:

- 1. "Of course, people care. Your wife comes to visit every day."
- \* 2. "I care about you, Mr. James, and I am concerned that you feel so down."
- 3. "At times it may seem that life isn't meaningful, but over time, things will change."
- 4. "Tell me, who doesn't care about you?"

165. Electroconvulsive therapy is ordered for Mr. James. Two main drugs (a curare-like drug and a barbiturate) are given to clients before ECT, to reduce which of the following potential problems that ECT can cause?

- 1. Cardiac arrest and loss of memory.
- 2. Convulsions and fractures.
- \* 3. Fractures and anxiety.
- 4. Anxiety and loss of memory.

\* \* \* \* \*

Mr. Nash, 48 years old, was in a MVA and sustained a complete spinal cord injury at C-5. Items 166 to 170 refer to this situation.

166. Injury to which segment of the spinal cord would most likely result in severe respiratory distress?

- 1. Lumbar 1-2
- 2. Thoracic 5-8
- 3. Thoracic 8-12
- \* 4. Cervical 1-4
- 5. Cervical 5-7

167. Nursing care related to urinary bladder function immediately following spinal cord injury includes:

1. Initiation of bladder training.
- ✦ 2. Prevention of bladder distention.
3. Catheterization every 4 - 6 hours.
4. Restriction of daily fluid intake.

168. Mr. Nash has paralysis of his lower extremities. In caring for Mr. Nash, a nurse should:

1. Provide hot-water bottles for his feet.
2. Elevate both his legs on a pillow.
- ✦ 3. Inspect his legs daily for signs of skin irritation.
4. Observe his legs for increased perspiration.
5. Keep him off his back.

169. Mr. Nash later develops an "automatic bladder". Which of the following statements accurately describe this condition?

- A. The bladder is hypotonic.
  - B. Emptying of the bladder is spontaneous.
  - C. It is also known as "lower motor neuron bladder".
  - D. There is no sensation of the need to void.
  - E. The reflex arc of micturition is functional.
1. A, B, C
  2. B, C, D
  3. C, D, E
  4. A, B, D
  - ✦ 5. B, D, E

170. Mr. Nash, develops a severe headache, hypertension, bradycardia, flushing and profuse diaphoresis affecting the upper half of his body. This is most likely due to:

- ✦ 1. Autonomic hyperreflexia.
2. Increased intracranial pressure.
3. Damage to the hypothalamus.
4. An emotional reaction to the injury.
5. Severe spinal, or vasomotor, shock.

\* \* \* \* \*

171. Mireille, age 18 months, has acute Laryngotracheobronchitis and is rushed to the emergency department. Her mother is anxious and upset and says to you, "Mireille got sick so fast, what did I do wrong?" Your most appropriate reply would be:

1. "How quickly did she become ill?"
- ✦ 2. "You must have been very frightened to see her so sick."
3. "Let me help you to discover where you went wrong."
4. "Do you have someone to help you in these situations?"

\* \* \* \* \*

Tommy Corwin, a nine-year-old with cystic fibrosis, is hospitalized for a week to undergo evaluation. His history indicates that he has frequent severe respiratory infections. Items 172 and 173 refer to this situation.

172. As a part of your nursing knowledge, you know that the test most commonly used in the diagnosis of cystic fibrosis is:

- ✦ 1. Sweat chloride.
2. Blood glucose.
3. Sputum culture.
4. Examination of stools for fat content.
5. Serum amylase level.

173. Which of the following instructions would be correct regarding the administration of pancreatic enzymes, which the child should take three times a day?
1. The child should take them at intervals of eight hours with a large glass of milk.
  2. The medication should be given following breakfast, lunch, and dinner.
  3. The child can take them at any time from six to eight hours apart. The timing should depend on what is most convenient for the family schedule.
  - \* 4. The medication should be taken with meals.

\* \* \* \* \*

174. When teaching a new mother about introducing solid foods to her baby's diet, the nurse should include which of the following guidelines:
- A. Introduce one new food at a time.
  - B. Give milk before the new food.
  - C. Add a little sugar or salt to improve palatability.
  - D. Watch for allergic reactions.
    1. A, B
    2. C, D
    - \* 3. A, D
    4. B, C

175. Four-year-old Kim is admitted for surgical repair of Tetralogy of Fallot. Observations in the playroom indicate that Kim frequently squats during play. The nurse should interpret this behaviour as meaning that Kim:
1. Tires easily and needs frequent rest periods.
  - \* 2. Is increasing venous return to the heart.
  3. Is having temper tantrums when she can't get her own way.
  4. Is withdrawing from the other children because she's frightened in this strange environment.

176. The most characteristic patient problems associated with hiatal hernia are:
- A. Dysphagia.
  - B. Regurgitation.
  - C. Noticeable abdominal protrusion.
  - D. Excessive mucus production.
  - E. Heartburn.
    1. A, B
    2. C, D
    - \* 3. B, E
    4. All of the above.

177. Which of the following medical interventions would be indicated for a patient with a hiatal hernia?
- A. The overweight patient should be encouraged to reduce.
  - B. The drugs of choice include antacids and anticholinergics.
  - C. The foot of the bed should be elevated on blocks.
  - D. The patient should be taught to avoid constricting clothing.
  - E. The patient should avoid eating within two hours of bedtime.
    1. A, C
    - \* 2. A, D, E
    3. B, C
    4. A, B, D, E
    5. All of the above.

178. Which of the following statements is the most accurate interpretation of a decision to withhold "extraordinary care" for a newborn with severe, life-threatening abnormalities? The decision is:
1. The same as pediatric euthanasia.
  - \* 2. One in which the newborn is allowed to die.
  3. A presumption that the newborn has no rights.
  4. Unethical and illegal medical and nursing practice.
179. When a patient is in isolation or is sensory-deprived, which behaviour is most likely to develop?
- \* 1. Regressive behavior, replacing reality with fantasy.
  2. Aggressive behavior, attacking those in attendance.
  3. Passive behaviour, avoiding interaction with others.
  4. Controlled behaviour, assuming an attitude of indifference.
180. If a patient had developed a fulminating case of viral hepatitis type B which resulted in permanent parenchymal cell damage, administration of Vitamin K would result in which of the following effects on the prothrombin time?
1. Prothrombin time would return to normal.
  2. Prothrombin time would remain decreased.
  - \* 3. Prothrombin time would remain prolonged.
  4. No change at all in prothrombin time.
181. Mrs. Johns, 36 years old, has been admitted through emergency at 0300 with a diagnosis of abdominal pain NYD. When making your morning assessment, which of the following signs or symptoms would be most important to report immediately?
- \* 1. Temperature of 39.2°C.
  2. Anorexia.
  3. Tenderness in the abdomen.
  4. Nausea with vomiting of 150 cc.
182. Ms. Allison, a 42-year-old neurotic patient with obsessive-compulsive tendencies, says to you, "You make me angry. None of you understand what my real problem is." Your best reply would be:
1. "I know what your problem is; you have no insight."
  - \* 2. "You have a right to be upset when people don't understand."
  3. "All of us have problems that are difficult for others to understand."
  4. "I'm upsetting you. I'll leave now and return later when you are calmer."
  5. "I think your real problem is that your obsessive thoughts lead to compulsive behavior."
183. Following three weeks of hospitalization during which time Ms. Allison has participated in occupational therapy, recreation, group meetings and outdoor activities, Ms. Allison says, "I'm so nervous. I have a chance to go home for the weekend. Do you think I'm ready?" Your best reply would be:
1. "Yes, you have been ready for some time, haven't you?"
  2. "You must be nervous because you don't know what to expect."
  3. "What is happening at home that makes you so nervous?"
  - \* 4. "Let's talk about what you would really like to do."
  5. "No, if you are feeling nervous, it's best for you to stay in the hospital."
184. Three-week-old Marli has gastro-enteritis. The nursing care plan should include observations based on the knowledge that the loss of fluids in diarrhea results in:
1. Metabolic alkalosis.
  2. Hypokalemia.
  - \* 3. Metabolic acidosis.
  4. Hyperkalemia.

185. Sixty-two-year-old Mr. Long, a depressed patient, stated he cannot help but think about the illness and death of his wife two years ago. What would be the best reply of the nurse?

1. "Mr. Long, would it be helpful if you told me a bit about your wife . . . what she was like before her illness?"
2. "You must try to forget all of this if you are going to get better."
3. "Perhaps it would be helpful for you to tell me all about your wife's illness, to get it off your mind."
- \* 4. "I know it's difficult to lose someone close to you, but let's talk about you and your goals."

\* \* \* \* \*

Mr. Washington, a 30-year-old married man, has been informed that he has a terminal illness. Items 186 and 187 refer to this situation.

186. During a conversation with Mr. Washington, he exclaims bitterly, "They have taken my future away!" Which of the following responses would encourage him to continue to discuss his feelings?

1. "Who do you mean by 'they'?"
2. "You seem upset today."
- \* 3. "I'd like to hear more of how you feel."
4. "What do you mean you don't have a future?"

187. One day Mr. Washington says to you, "Well, I've given up all hope. I know I'm going to die soon." What would be the most therapeutic response?

1. "Now, Mr. Washington, one should never give up all hope. We are finding new cures every day."
- \* 2. "Mr. Washington, what are your feelings about your situation?"
3. "You've given up all hope?"
4. "You know, your doctor will be here soon. Why don't you talk to him about your feelings?"
5. "It's not how long you live that matters, Mr. Washington, but the quality of your life."

\* \* \* \* \*

188. Your 10-month-old patient with Tetralogy of Fallot developed circumoral pallor during feeding. The most appropriate nursing action would be to:

- \* 1. Continue the feeding, allowing for periods of rest.
2. Finish the feeding as quickly as possible then put the baby to bed.
3. Stop the feeding and notify the doctor.
4. Stop the feeding and return the baby to bed.

\* \* \* \* \*

Mrs. Louise Smyth, age 67, was scheduled for removal of a senile cataract from her left eye. Items 189 and 190 refer to this situation.

189. Pre-operative preparation for Mrs. Smyth should include:

1. An opportunity to adjust to the thick convex cataract glasses she will be required to wear after surgery.
2. Instructions and practice in deep breathing and coughing to prevent pulmonary complications.
3. Instructions and demonstration in performing aseptic eye irrigations.
- \* 4. A description of post-operative restrictions on her activities of daily living.



190. Immediately following surgery, Mrs. Smyth is confused and disoriented. Which of the following statements best explains why it is important to avoid the use of restraints?

1. Restraints would only tend to frighten the patient.
2. Restraints foster post-operative pulmonary atelectasis.
3. Struggling against restraints produce skin breakdown.
- \* 4. Struggling against restraints increases intraocular pressure.
5. Restraints would cause embarrassment and humiliation.

\* \* \* \* \*

191. Mr. Peterson, aged 44, has had a Bilroth II operation. He is now nine (9) days post-operative and is on a soft diet. The nurse would assess him for early evidence of "dumping syndrome" which would most likely include:

- A. Vertigo and sweating.
- B. Pallor and palpitations.
- C. Temperature elevation and acute respiratory distress.
- D. Nausea and diarrhea.
  1. A, B
  2. C, D
  - \* 3. A, B, D
  4. All of the above.

192. An infant with asymmetric Moro reflexes should be assessed for:

1. Cerebral or cerebellar injuries.
2. Cranial nerve damage.
- \* 3. Brachial plexus, clavicle, or humerus injuries.
4. Down's syndrome.
5. Autonomic nervous system damage.

193. Mr. Thomas, age 48, has bleeding esophageal varices and requires a Sengstaken-Blakemore tube. The primary purpose of the stomach balloon of a Sengstaken-Blakemore tube is to:

- \* 1. Prevent dislodging.
2. Control bleeding.
3. Aspirate contents.
4. Obtain tissue specimens.
5. Suppress acid formation.

194. Mr. Miller, 78 years old, is hospitalized with a complete bowel obstruction. A Cantor tube is inserted and attached to an intermittent, low-pressure intestinal suction machine. After the tube has drained for several hours, you observe that there is no additional drainage being removed. The light on the machine is blinking on and off and the tubing is not kinked. What do you do?

1. Check that the plug is secure in the electrical outlet.
2. Call the central supply department to come and replace the malfunctioning machine.
- \* 3. Obtain an order to irrigate the tube.
4. Do nothing since this is expected; record that there is no new drainage evident.

195. Five-year-old Roger is admitted to the Pediatric Unit with a diagnosis of nephrosis. As Roger gets older and has repeated attacks of nephrosis, which of the following would be most important for the nurse to help him develop?

1. His cognitive ability.
2. Acceptance of possible sterility.
- \* 3. A positive body image.
4. The ability to test his own urine.

196. Mr. Ray, 46 years old, is scheduled for a gastrectomy in a few days. During the night shift, the nurse notices that each time she makes rounds until 0300 hrs Mr. Ray is awake, pacing the halls, or sitting in the patient lounge watching T.V. He has no requests but invites her to have a cigarette with him. Based on her understanding of Mr. Ray's behaviour, which of the following would be the best response of the nurse?

1. Send in a nurse's aide to keep him company while he smokes.
2. Point out to him the advantages of quitting smoking.
3. Light his cigarette and tell him to call her again if he wishes.
4. Explain that smoking will make his stomach problem worse.
- \* 5. Sit down with him and indicate she has noticed his inability to sleep.

197. Mrs. Elkins, age 22, is one day post-Caesarian section. You find her lying in bed crying. When questioned as to whether she was having pain, the patient stated, "No, I wanted the baby normally--and I didn't have it that way. I feel like such a failure." The patient is displaying:

- \* 1. A normal reaction to loss.
2. Anxiety over body image.
3. Difficulties in bonding.
4. Need for information about caesarian sections.

198. Cindy is a three-year-old admitted to children's hospital with fever of unknown origin. Which of the following would you expect Cindy to exhibit in response to being hospitalized?

- A. Crying each time her mother leaves the ward.
  - B. Throwing toys from the bed to the floor.
  - C. Responding to her mother's fear with increased anxiety.
  - D. Demonstrating fear of being abandoned.
1. A, C
  2. A, B, D
  3. B, D

- \* 4. All of the above.

199. Mr. Dennison, a 78-year-old post-operative patient, had an order for 40 meq of KCl IV. The nurse administered the potassium into the IV tubing over a 30 second time period. Five minutes later, the patient was found dead. Which of the following statements applies to the legality of this situation? The nurse:

1. Made an error in judgement in not questioning the dosage.
2. Acted as a reasonable and prudent nurse in following orders and had no way of knowing the patient would have a drug allergy.
- \* 3. Was negligent in that she failed to check in sufficient detail the method of administering IV potassium.
4. Cannot be held responsible for the patient's death since the patient was elderly and had recently undergone a severe stress; the nurse's action and the patient's death must be assumed coincidental unless proven otherwise.

200. Miss Mai-Li Wong is a 32-year-old diabetic admitted to diabetic day care. She lives in a small rented townhouse with her parents, grandparents, one married sister and her husband and four nieces and nephews. She works as a secretary for a Chinese law firm in Chinatown. If you were the nurse responsible for patient teaching, which of the following factors would you consider most in adapting your teaching to meet Mai-Li's individual learning needs?

1. Age.
2. Occupation.
- \* 3. Culture.
4. Socioeconomic status.
5. Intellectual ability.

ACKNOWLEDGEMENT

The multiple choice questions in this practise comprehensive nursing examination have been adapted, with permission, from the following sources:

- Dawson College Nursing Program, Selby Campus, Montreal, Quebec, Examination Question Bank.
- Lagerquist, S. L. (Ed.). (1982). Addison-Wesley's Nursing Examination Review (2nd ed.). Menlo Park, CA: Addison-Wesley Publishing Co.
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- Smith, S. F. (Ed.). (1982). Sandra Smith's review of nursing for state board examinations (3rd ed.). Los Altos, CA: National Nursing Review, Inc.
- Vancouver Community College Nursing Program, Langara Campus, Vancouver, B.C., Examination Question Bank.
- University of British Columbia School of Nursing, Vancouver, B.C., Examination Question Bank.

PRACTISE  
COMPREHENSIVE  
NURSING  
EXAMINATION

PART B

DIRECTIONS:

1. Do not make any marks on this test paper.
2. Use the answer sheet provided.
3. Use pencil only, and clearly erase any errors.
4. For each question, completely fill in the circle that surrounds the number of the best response.

Julie Syms, a 1-year-old girl, is admitted to the hospital with a diagnosis of failure to thrive. Her weight is below the third percentile, her development is retarded and she shows signs of neglect. Items 1 to 6 refer to this situation.

1. Based on this assessment, what behaviours might also support the possibility of parental deprivation?
  1. Infant is cuddly, responsive to touch and wants to be held.
  - ✓ 2. Infant is stiff, unpliant and uncomforted by touch.
  3. Infant is a poor eater, sleeps restlessly and cries for attention.
  4. Infant is responsive to adults, rarely cries but shows no interest in her environment.
2. A plan of care that would best meet the needs of this child should include:
  1. A vigorous schedule of stimulation geared to the infant's present level of development.
  2. A plan to have all staff members pick her up and play with her whenever they can.
  3. A schedule of care that allows the infant stimulation and physical contact by several staff members.
  - ✗ 4. As consistent a caregiver as possible, with stimulation that is moderate and purposeful.

During assessment of Julie, the nurse observes that the child has good head control, can roll over, but cannot sit up without support or transfer an object from one hand to the other.

3. Based on these facts, the nurse concludes that Julie is developmentally at age:
  1. 2 to 3 months.
  - ✗ 2. 3 to 5 months.
  3. 5 to 7 months.
  4. 7 to 8 months.
4. Which toys would be UNSUITED for Julie, based on her present developmental age?
  1. Brightly coloured mobiles.
  2. Soft stuffed animals that she can hold.
  3. Small rattle that she can hold.
  - ✗ 4. Coloured plastic blocks that snap together.
5. According to Erikson, Julie should be in which developmental stage?
  1. Autonomy vs. trust.
  - ✗ 2. Trust vs. mistrust.
  3. Dependency vs. mistrust.
  4. Initiative vs. autonomy.
  5. Trust vs. shame and doubt.
6. The nurse's responsibility in relation to suspected parental neglect is to:
  - A. Document the objective evidence related to parental neglect in Julie's chart.
  - B. Do nothing unless neglect can be proven beyond doubt.
  - C. Confront Julie's parents during a meeting arranged by the nurse.
  - D. Report her observations and assessments to the doctor.
  - E. Make certain that the proper authorities have been notified.
    1. A only
    2. B only
    3. A, C, D
    - ✗ 4. A, D, E
    5. D only

Mr. Green, age 83, is admitted with Meniere's disease. He is complaining of nausea and vertigo. Items 7 to 12 refer to this situation.

7. While caring for Mr. Green, you are called away for a minute by the head nurse. When you reenter Mr. Green's room, you find that he has fallen out of bed. The side rails were not up. You can be sued for negligence if:

1. Your head nurse tells Mr. Green's family.
- \*2. Mr. Green has been injured.
3. The head nurse doesn't admit calling you out of the room.
4. You never instructed Mr. Green to stay in bed.
5. The reason you left the bedside was not important.

8. Unfortunately, an x-ray supports the diagnosis of intracapsular fracture of the right hip. Mr. Green is placed in traction preoperatively. Care of patient with skin traction includes:

1. Assess for signs and symptoms of osteomyelitis.
2. Release weights for 5 minutes every hour to prevent skin excoriation.
3. Position leg in internal rotation to prevent hip deformity.
- \*4. Check cords for fraying to prevent accidental breaks.
5. Cleansing the pin sites with  $H_2O_2$ .

9. Preoperatively, Mr. Green appears confused and disoriented. You would:

1. Recognize this as senility.
2. Request an order for a tranquilizer.
- \*3. Evaluate patient for pain.
4. Place patient in wrist restraints for safety.
5. Apply a jacket restraint.

10. In planning care for Mr. Green, the nurse considers that it is characteristic of the older adult to:

- A. Adapt to stress more slowly than a younger adult.
  - B. Have the capacity for learning.
  - C. Display regressive behavior most of the time.
  - D. Prefer being left alone for long periods in quiet solitude.
  - E. Function best when in a relaxed atmosphere, without pressure for an immediate response.
- \*1. A, B, E
  2. B, C, D, E
  3. A, B, D, E
  4. A only
  5. All of the above.

11. Mr. Green is 3 days post-operative and is progressing well. He is on "Diet as Tolerated". In order to help meet his need for nutrition, which of the following lunches would be best?

1. Clear beef broth, 2 plain crackers, jello, tea with sugar.
2. Ham on rye bread, coleslaw, tomato juice, fresh apple.
3. Cold sliced roast beef, carrots and celery sticks, whole wheat bun, milk and oatmeal cookie.
4. Chicken drumstick, potato salad, tomato and lettuce salad, coffee and pecan pie.
- \*5. Toasted tomato sandwich with a slice of ham, chicken soup, glass of milk, rice pudding with raisins, tea.

12. According to Erikson, the principal task of old age is:

1. Generativity.
2. Intimacy.
3. Autonomy
- \*4. Integrity.
5. Industry.

\* \* \* \* \*

Jill Adams, 12 years old, is admitted with a diagnosis of a possible brain tumor. She recently complained of severe headaches, problems with her vision, and weight loss. Items 13 to 21 refer to this situation.

13. According to Piaget, which one of the following cognitive-ability stages is characteristic of the twelve-year-old?

1. Sensorimotor; coordinating reflexes and senses.
2. Preoperational; symbolism, reporting dreams.
- \*3. Formal operations; formulating hypotheses.
4. Concrete operations, mastering quantities and relations.
5. Conquest of object; developing intellectual skills.

14. Jill would have likely accomplished the major developmental tasks for the school age child which are:

- A. To develop intellectual and academic skills and motivation.
  - B. To crystallize sex-role identification.
  - C. To increase autonomy and independence.
  - D. To develop moral standards and conscience.
  - E. To develop a clear sense of self-identity.
1. A, C
  - \*2. A, B, C, D
  3. C, D, E
  4. A, D
  5. All of the above.

15. Diagnosis of a brain tumor near the hypothalamus is confirmed. Which one of the following clinical manifestations might be exhibited by Jill?

- \*1. Inability to regulate body temperature.
2. Bradycardia.
3. Visual disturbances.
4. Inability to perceive sound.
5. Reduced kinesthetic sense.

16. Jill should be assessed for the presence of which of the following reflexes that suggest neurological pathology?

1. Homan's.
- \*2. Babinski.
3. Gag.
4. Moro.
5. Grasp.

17. While walking in the hall, Jill fell to the floor and exhibited both tonic and clonic muscle contractions. Of the following nursing actions, which would NOT be appropriate for Jill?

1. Administer anticonvulsant medications as ordered by the physician.
2. Move wheelchairs and other equipment in the hall away from Jill.
3. Turn head to the side and point chin downward to facilitate drainage.
- \*4. Insert a plastic airway between the teeth to protect tongue.

18. Two days after admission, Jill became increasingly confused and disoriented. In assessing Jill's neurologic status, you would look for which of the following changes in vital signs as an indication of increasing intracranial pressure?
1. Decrease in blood pressure and increase in pulse and respiration.
  2. Decrease in pulse, increase in respiration, and a narrowing pulse pressure.
  3. Decrease in pulse and respiration and increase in blood pressure.
  - \* 4. Decrease in pulse, increase in respiration, and a widening pulse pressure.
19. Increased intracranial pressure is best described as:
1. An increase in cerebrospinal fluid.
  2. The presence of cerebral edema.
  3. The occurrence of intracranial hemorrhage.
  - \* 4. An increase in bulk within the cranium.
20. Early signs of increasing intracranial pressure include:
- \* 1. Restlessness, irritability, and gradual decrease in level of consciousness.
  2. Sluggish pupillary reaction, hyperthermia, and rapid decrease in level of consciousness.
  3. Projectile vomiting, bilateral dilated fixed pupils, and gradual decrease in level of consciousness.
  4. Hemiparesis, sluggish pupillary reaction, and decrease in level of consciousness over 2-4 hours.
21. Jill lapses into a coma and dies. The parents enter the room for the last time. Jill's mother slumps in the chair by the bed, crying inconsolably, "My girl, my girl." Mr. Adams is trying to help his wife, but is also weeping. What do you initially do?
1. Go get another nurse because you are crying also.
  2. Wait outside until the parents are finished with their grief.
  3. Escort them outside the room; there will be less pain that way.
  - \* 4. Stand quietly nearby in the room and wait.
  5. Get the hospital chaplain immediately.

\* \* \* \* \*

Mrs. Michelle Jamison, age 22, has missed two menstrual periods and is making her initial visit to the antepartum clinic. Her obstetrical history reveals two abortions and the birth of her 2-year-old daughter at the thirty-eighth week of gestation. The present pregnancy has been confirmed. Her LNMP was April 22. Questions 22 to 47 refer to this situation.

22. Mrs. Jamison can be described as:
1. Para III gravida IV
  2. Para II gravida II
  3. Para I gravida III
  - \* 4. Para I gravida IV
  5. Para II gravida III
23. Michelle's EDC would be:
1. January 15.
  - \* 2. January 29.
  3. February 2.
  4. February 15.
  5. March 1.
24. The physician performs a pelvic examination and discovers that Mrs. Jamison has a normal female pelvis, with the sacrum:
- \* 1. Well hollowed, coccyx movable, spines not prominent, pubic arch wide.
  2. Flat, coccyx movable, spines prominent, pubic arch wide.
  3. Deeply hollowed, coccyx immovable, pubic arch narrow, spines not prominent.
  4. Flat, coccyx movable, spines prominent, pubic arch narrow.



25. Following the pelvic exam, Mrs. Jamison says to the nurse that she overheard the doctor mention that "Chadwick's sign was present." She continues, "Tell me nurse, what was the doctor talking about?" Which of the following responses made by the nurse would be most appropriate?

- \* 1. "The doctor noticed bluish discoloration of your vagina which is due to the increase in blood supply."
- 2. "The doctor was able to feel the softness of the top of your womb."
- 3. "This is a sign that indicates that you are pregnant."
- 4. "The neck of your womb has now softened and feels somewhat like your lips."

26. Which of the following foods would provide Mrs. Jamison with the greatest amount of calcium?

- 1. 1/4 cup of cottage cheese.
- 2. 8 ounces of milk.
- 3. 1/2 cup of broccoli.
- \* 4. 2 ounces of cheddar cheese.
- 5. 1 fresh peach.

27. Physiologic anemia during pregnancy is a result of:

- \* 1. Increased blood volume of the mother.
- 2. Decreased dietary intake of iron.
- 3. Decreased erythropoiesis after first trimester.
- 4. Increased detoxification demands on the mother's liver.
- 5. Increased fetal demands for iron.

28. Anemia in the second trimester of pregnancy may be minimized by iron supplements and increasing the dietary intake of iron. Which of the following foods would you recommend for Mrs. Jamison?

- \* 1. Beef heart, whole wheat bread, dried apricots.
- 2. White fish, milk, peaches.
- 3. Avocado, spinach, watermelon.
- 4. Eggs, tomatoes, peas.

29. Mrs. Jamison is now experiencing frequent episodes of "heartburn" and is asking the nurse for suggestions for their relief. Which of the following suggestions made by the nurse would be best?

- 1. "Lie on your right side about 2 hours after each meal to enhance the emptying of your stomach."
- \* 2. "Try drinking a glass of skim milk between your meals."
- 3. "Take a tablespoon of soda bicarbonate to neutralize the acid contents of your stomach."
- 4. "Try chewing Tums whenever you have the discomfort."

30. Good sources of vitamin A in her diet include all of the following EXCEPT:

- 1. Sweet potato and asparagus.
- \* 2. Orange juice and roast beef.
- 3. Milk and cream.
- 4. Poached egg and cantaloupe.

31. When Mrs. Jamison is 6 months pregnant, she asks the nurse if she can continue to have sexual relations. The nurse's response is based on the knowledge that coitus during pregnancy would be contraindicated only in the presence of:

- 1. Leukorrhea.
- 2. Gestation of 30 weeks or more.
- \* 3. Premature rupture of membranes.
- 4. Increased fetal heart rate.
- 5. Braxton Hick's contractions.

32. During the third trimester, Mrs. Jamison is assessed for early signs of preeclampsia. The most common early signs are:

- \* 1. Increased blood pressure, proteinuria, edema.
- 2. Decreased blood pressure, proteinuria, edema.
- 3. Increased blood pressure, glucose in the urine, weight gain.
- 4. Hypertension, hyperreflexia, edema.

33. Indications of progression of the preeclampsia to a more severe state would be presence of:

- 1. Severe hypertension, glycosuria, polyuria.
- \* 2. Hyperreflexia, oliguria, epigastric pain.
- 3. Hypertension, weight loss, diuresis.
- 4. Hypertension, convulsions, polyuria.

At 40 weeks, Mrs. Jamison goes into labor. On admission, she is having 3 to 5 minute contractions, she has a bloody show, and her membranes are intact. On vaginal examination the cervix is fully effaced and 6 cm dilated, the vertex presenting at a + 1 station.

34. According to these data, Mrs. Jamison is in what phase of the first stage of labor?

- 1. Latent phase.
- \* 2. Active phase.
- 3. Transition phase.
- 4. Accelerated phase.
- 5. Prodromal phase.

35. Station + 1 indicates that the presenting part is:

- \* 1. Slightly below the ischial spines.
- 2. Slightly above the ischial spines.
- 3. High in the false pelvis.
- 4. Above the level of the sacral promontory.
- 5. Below the level of the sacral promontory.

36. Following examination, the fetus is found to be in ROA position. During vaginal examination, the nurse can expect to feel the:

- 1. Chin.
- \* 2. Posterior fontanel.
- 3. Forehead.
- 4. Acromion process.
- 5. Occiput.

37. Mrs. Jamison is uncomfortable and asks for medication. Demerol, 50 mg, and Phenergan, 50 mg are ordered to be administered intramuscularly. This combination of medication would:

- 1. Induce sleep until the time of delivery.
- \* 2. Increase her pain threshold, resulting in relaxation.
- 3. Act as an amnesic drug.
- 4. Act as a preliminary to anesthesia.
- 5. Eliminate the sensation of uterine contractions.

38. A few hours later Mrs. Jamison becomes very restless, her face is flushed, she is irritable, perspiring profusely, and feels she is going to vomit. These symptoms are indicative of:

- 1. Second stage.
- 2. Late stage.
- \* 3. Transition phase.
- 4. Third stage.
- 5. Active phase.

Mrs. Jamison delivers a baby boy.

39. The Apgar scoring is done on Baby Jamison mainly to:

- \* 1. Assess his cardiac and respiratory adaptations to extrauterine life.
- 2. Determine his need for resuscitative measures.
- 3. Assess gestational age.
- 4. Evaluate his behaviour and his responses to his environment.
- 5. Obtain a baseline of neurologic functioning.

40. An infant's intestines are sterile at birth, therefore lacking the bacteria necessary for the synthesis of:

- \* 1. Vitamin K1
- 2. Bile salts.
- 3. Intrinsic factor.
- 4. Bilirubin.

41. Seven hours following delivery, you note that Mrs. Jamison's fundus is firm, 3 finger breadths above the umbilicus and displaced to the right. What immediate nursing action would you take?

- 1. Administer an oxytocic drug.
- 2. Notify the physician.
- 3. Massage the fundus.
- \* 4. Employ nursing measures to induce voiding.
- 5. Check the lochia and give perineal care.

42. Mrs. Jamison decides to breast feed. She asks about the difference between cow's milk and the milk from her breasts. The nurse should respond that cow's milk differs from human milk in that cow's milk contains:

- \* 1. More protein, more calcium, and less carbohydrate.
- 2. Less protein, less calcium, and more carbohydrate.
- 3. Less protein, more calcium, and more carbohydrate.
- 4. More protein, less calcium, and less carbohydrate.
- 5. More protein, more calcium, and more carbohydrate.

43. The hormone that stimulates milk secretion is:

- \* 1. Prolactin.
- 2. Oxytocin.
- 3. Progesterone.
- 4. Estrogen.
- 5. Follicular stimulating hormone.

44. During the taking-hold phase, the nurse would expect Mrs. Jamison to:

- 1. Be concerned with her own needs.
- 2. Touch the baby with her fingertips.
- \* 3. Call the baby by name.
- 4. Talk about the baby.
- 5. Talk about her labor.

45. Nursing assessment of the infant for hyperbilirubinemia would include checking for all of the following EXCEPT:

- 1. Dehydration.
- \* 2. Flushing.
- 3. Progressive jaundice.
- 4. Lethargy.
- 5. Hgb and bilirubin levels.

46. Baby boy Jamison weighed 3250 gm at birth. If this baby progresses in development at a typical rate, what will you expect him to weigh at 1 year of age?

1. 7 kg
- \*2. 10 kg
3. 13 kg
4. 16 kg

47. The nurse has noted all of the following during her assessment of Baby Jamison. Which should be reported to the pediatrician?

1. Nystagmus and strabismus.
2. Acrocyanosis, apical pulse 135, respiration 46.
3. Epstein pearls and milia.
4. Equal gluteal folds, enlarged scrotum, and engorged breasts.
- \*5. None of the above.

\* \* \* \* \*

Susan Barber is a 24-year-old housewife who has been admitted to the psychiatric unit for the first time, because of hyperactive behavior. She appears much younger than her age, wears her hair in pigtails, and dresses like a 10-year-old. Items 48 to 57 refer to this situation.

48. During admission, Susan tells the nurse, "My husband can't keep up with me; he's getting older and I'm getting younger. He just brought me here to slow me down to his pace." The best reply of the nurse to this statement is:

1. "That sounds a bit unrealistic to me. Why would he want to slow you down?"
- \*2. "Can you tell me what's been happening that led up to his bringing you here?"
3. "What are your feelings about your husband bringing you here?"
4. "Don't you think you need help?"

49. On the unit, Susan talks constantly. She is in and out of everyone's rooms, plays the radio loudly, and sings along adding her own versions of the songs she hears. In planning care for Susan, the most important of the following concepts that the nurse must consider is that:

1. It is beneficial for her to expend her excess energy through activity.
2. Curtailing Susan's activities will lead to frustration and anger.
3. As long as other patients are not bothered by Susan's behavior, it should be allowed to continue.
- \*4. Susan's hyperactivity can lead to exhaustion.

50. Susan is unable to concentrate on any activity for very long. She frequently interrupts other patients' activities and they have complained about her. To intervene, the nurse should make use of which one of the following characteristics of Susan?

- \*1. Distractibility.
2. Sense of responsibility.
3. Hyperactivity.
4. Love of music.
5. Intellectual ability to reason.

51. The nurse observes Susan during meals. She notes that Susan often leaves much of her food untouched as she moves about, talking with other patients. In order to assess further Susan's nutritional status, which of the following would be most helpful?

1. Have Susan keep a record of what she eats and drinks each day.
2. Have a staff member record what Susan eats and drinks.
- \*3. Weigh Susan on a daily basis.
4. Give Susan supplemental feedings.

52. Susan is to receive lithium carbonate 300 mg qid. The nurse must recognize the early signs of lithium toxicity, which include:
- \* 1. Sluggishness, ataxia, nausea, vomiting, and diarrhea.
  2. Sluggishness, seizures, and cardiac impairment.
  3. Semiconsciousness, hyperreflexia, and tremors.
  4. Ataxia, anuria, nausea, and vomiting.
53. Susan's hyperactive behavior is considered to be an example of the defense mechanism of:
1. Projection.
  2. Sublimation.
  3. Undoing.
  - \* 4. Denial.
  5. Rationalization.
54. Susan has been restricted to her room for most of the day for about a week. It is decided by the team to begin reintroducing her to unit activities. An appropriate first choice would be:
1. Attending her best friend's birthday party.
  - \* 2. Participating with an art group.
  3. Participating in a gymnastics competition.
  4. Doing a jigsaw puzzle with another patient.
  5. Playing in a volleyball game.
55. Susan is now permitted to attend ward meetings. During today's meeting, a party is being discussed. Susan has interrupted several times and when asked to wait her turn, she becomes angry and louder. At this time the nurse should:
1. Remain quiet since peer pressure will probably be more effective in controlling Susan's behavior.
  2. Tell Susan to return to her room.
  - \* 3. Take Susan from the meeting and remain with her in her room.
  4. Be accepting of Susan's outbursts since they are due to her illness.
  5. Ask Susan if she would like to leave the meeting.
56. The nurse notices that Susan is still unable to converse rationally and changes the subject frequently. This is an example of:
1. Delusions.
  2. Associative looseness.
  - \* 3. Flight of ideas.
  4. Echolalia.
  5. Confabulation.
57. Susan makes good progress and will be going home soon. In planning for her discharge, the nurse should carry out patient teaching about lithium that includes encouraging Susan to:
1. Decrease her sodium intake.
  2. Increase her sodium intake.
  - \* 3. Have monthly blood levels drawn.
  4. Avoid becoming dependent on the medication.
  5. Take the medication whenever she feels hyperactive.

\* \* \* \* \*

Cynthia Byron, age 7, fractured her tibia in a bicycle accident. A long leg cast is applied. Items 58 to 62 refer to this situation.

58. The top of the cast is a bit rough and irritates the skin. Which nursing measure will help with this problem?

1. Layer squares of gauze inside the cast.
2. Soften the edge with water and smoothe it out.
3. Trim the edges of the cast a bit lower.
- \* 4. Petal the edges of the cast with adhesive tape.
5. File the edges with an emery board until smooth.

59. Which of the following toys would be most appropriate for Cynthia to play with?

1. Fingerpaints.
- \* 2. Potholder weaving kit.
3. Knitting needles and yarn.
4. Blocks.
5. Teddy bear.

Crutches are ordered for Cynthia.

60. Which of the following instructions is NOT appropriate when teaching Cynthia to use crutches?

- \* 1. Utilize axilla to help carry weight.
2. Use short strides to maintain maximum mobility.
3. Keep feet slightly apart to provide a wide base for support.
4. If she should begin to fall, throw crutches to the side to prevent falling on them.

Cynthia is discharged.

61. Mrs. Byron returns with Cynthia the day after discharge, stating that the child feels numbness and pain in the arms. The best response would be:

1. Reassure her that it is common for the arms to be bothered by additional weight bearing.
- \* 2. Check the height of the crutches.
3. Encourage the child to do additional excercises to strengthen the hands.
4. Recommend that the child rest more and walk a bit less for a while.
5. Suggest that she use a wheelchair.

62. Mrs. Byron mentions that her niece has chicken pox. She wants to know when the contagious period is over, so that the children can visit. How do you respond?

- \* 1. "Once the eruption has changed to scabs--about 6 to 7 days after the onset of the eruption."
2. "Not until every scab has fallen off."
3. "You should ask your doctor."
4. "As soon as the fever is gone."
5. "Once the vessicles have changed to macules--about 1 week after the onset of illness."

\* \* \* \* \*

Mr. Jones is a 29-year-old PhD student in Biology. He is in his last year at school and has the promise of an interesting job in research on mosquito control. He is married and has a girl and boy, four and five years old. He was admitted to your ward with a diagnosis of acute myeloblastic leukemia. Items 63 to 79 refer to this situation.

63. When you enter his room with his breakfast tray, he yells loudly at you. "If you can't be quicker with the meal trays, don't bother coming in here." As his nurse you realize which of the following statements best describe the basis for his behavior?

- A. Mr. Jones is denying the graveness of his illness.
  - B. He is becoming aware of the seriousness of his illness.
  - C. He has accepted the fact that he has a serious illness.
  - D. His behaviour is not directed at you personally.
- 1. A, B
  - 2. A, D
  - \* 3. B, D
  - 4. C, D

64. While Mr. Jones is having his bed bath, he says, "Why couldn't it have been my brother? He never did a good thing in his life?" Which response would be most likely to allow him to express his feelings?

- \* 1. "Are you wondering why this is happening to you?"
- 2. "You are thinking about your brother?"
- 3. "But you are fond of your brother, are you not?"
- 4. "Things for you are not so good right now; I can understand."

65. Nursing care for Mr. Jones at this point will include which of the following:

- 1. Making frequent brief contacts to show that you are available.
- 2. Encouraging him to cry to relieve guilt.
- \* 3. Scheduling time to listen to Mr. Jones and hear his concerns.
- 4. Maintaining an atmosphere that is as cheerful as possible.

66. Which of the following are correct concerning the denial stage of the grieving process:

- 1. It is needed only in the initial reaction to loss.
- \* 2. It serves as a buffer against the pain evoked by loss.
- 3. It lasts no longer than a few days.
- 4. It is a reaction to the guilt feelings aroused by the loss.

67. When you assess Mr. Jones to be in the depression stage of grief which of the following interventions are appropriate?

- A. Stress the positive aspects of his life.
  - B. Spend time to talk with Mr. Jones frequently during your shift.
  - C. Allow him to express his sadness.
  - D. Inform the family that Mr. Jones is grieving.
- 1. A, B, C
  - 2. A, B, D
  - 3. A, C, D
  - \* 4. B, C, D

68. Mr. Jones is started on methotrexate. Which of the following would you consider the most serious complication that tends to occur with the use of this drug?

- \* 1. Leukopenia.
- 2. CNS depression.
- 3. Diarrhea.
- 4. Hyperuricemia.
- 5. Fluid retention.

69. Prior to administering methotrexate, the nurse should plan to:

- \* 1. Administer a P.R.N. antiemetic medication.
- 2. Check urine pH and specific gravity.
- 3. Provide mouth care with bland solution.
- 4. Administer p.o. antacid tablets.
- 5. Check fluid balance for past 24 hours.

70. Mr. Jones' nutritional needs can best be met by:

- \* 1. Cool, high-protein, high-caloric liquids.
- 2. A regular diet from which he can choose suitable foods.
- 3. Low-residue foods served piping hot.
- 4. Intravenous hyperalimentation.
- 5. A pureed regular diet.

71. A ward secretary transcribed the Doctor's order incorrectly on Mr. Jones' chart and he received the wrong dosage of a medication. If Mr. Jones' condition had become significantly worse due to this error, he or his family could have successfully sued:

- A. The doctor who wrote the medication order.
- B. The head nurse who countersigned the transcribed orders.
- C. The hospital where the incident occurred.
- D. The nurse who gave the wrong dosage.

- \* 1. B, C, D
- 2. B only
- 3. C, D
- 4. All of the above.

72. Mr. Jones' Hgb report is 7.6 gm. The doctor orders 2 units of whole blood. When you explain to him he requires blood, he tells you he is a Jehovah's Witness and cannot accept blood. He seems very sure of his decision, understands the consequences and is not confused. The nurse should:

- 1. Try to convince him that God would forgive him if he accepted the blood.
- 2. Understand that Mr. Jones is committing "rational" suicide.
- \* 3. Accept Mr. Jones' religious convictions.
- 4. Teach him that his methotrexate will not work as effectively if his hemoglobin is so low.
- 5. Ask Mr. Jones to consider the effect of this decision on his wife and children.

73. Mr. Jones has a platelet count of 68,000 following 10 days of chemotherapy. Therefore, which of the following is an important aspect of his nursing care?

- 1. Reverse isolation.
- \* 2. Avoid I.M. injections.
- 3. Increase fluid intake.
- 4. Oxygen therapy.
- 5. Good mouth care.

Mr. Jones does not respond to chemotherapy and he is now in the terminal stage of his illness.

74. Which of the following statements would indicate that Mr. Jones has accepted his impending death?

- 1. "Everyone here has been so helpful. I know they've done everything they could for me."
- 2. "Some day they will find a cure for cancer. It will be too late for me."
- 3. "It will be difficult for my wife to take care of the children, but I know they will be all right."
- \* 4. "I've had my share of ups and downs, but, on the whole, my life's been pretty good."



75. Mr. Jones has been on oral morphine on a p.r.n. basis to control his pain. Since his pain was not being controlled, the order was changed to "Morphine solution 20 mg q. 2-3 hrs". The best nursing action in this situation is to:

1. Refuse to carry out the order as this dosage may cause respiratory depression.
2. Question the doctor, as this frequency of administration will lead to addiction.
3. Give the medication, but encourage Mr. Jones to hold out the full three hours.
- \* 4. Give the morphine every two to three hours to keep Mr. Jones comfortable.
5. Refuse to carry out the order as euthanasia is not legal in Canada.

76. Mr. Jones continues to deteriorate; he is now only 40 kg and has only short periods where he seems aware that others are around. Mr. Jones' wife was observed pacing the floor outside her husband's room. When approached, she sobbed, "I just can't go in. I can't face him this way." Which of the following actions would be most helpful immediately?

1. Refer her to the hospital chaplain.
2. Advise her to return tomorrow.
3. Encourage her to 'pull herself together', as her husband needs her.
- \* 4. Suggest she accompany you for coffee.

Mr. Jones dies 6 weeks after his admission to hospital.

77. When told of her husband's death, Mrs. Jones sits quietly staring directly ahead. Which of the following statements demonstrates the best understanding of this behaviour?

1. Mr. and Mrs. Jones did not have a close relationship.
- \* 2. Her response indicates shock and disbelief.
3. Mrs. Jones does not understand that her husband is dead.
4. Mrs. Jones is apathetic about her husband's death.
5. Her response indicates acceptance of her husband's death.

78. At this time, which of the following nursing actions would be the most effective for Mrs. Jones in coping with her husband's death?

1. Administer sedative as ordered by physician.
2. Provide a private place for Mrs. Jones.
- \* 3. Permit her to cry and verbalize her feelings.
4. Reassure Mrs. Jones that her husband's death was painless.
5. Help her to realize that everything possible had been done.

79. Following her initial reaction, Mrs. Jones asks your assistance in helping her to explain his death to their children. With your knowledge of growth and development, you are aware of which of the following about children in their age group (age 4 and 5)?

1. They understand death as a permanent and irreversible loss.
- \* 2. They understand death as a temporary separation.
3. They see the dead person as someone who is unable to move, but still able to feel.
4. They are intrigued by the process of dying.

\* \* \* \* \*

Mrs. Sam, forty-five years old, has just been admitted to the hospital for an abdominal hysterectomy. She is quite fearful and dreads the operation, but states she will be glad to get it over with since she has been experiencing long painful periods and the doctor has recently found fibroid tumors in the uterus. Items 80 to 88 refer to this situation.

80. Results of lab tests indicate that Mrs. Sam's white blood cell count is 9,800/mm<sup>3</sup>. What is your most appropriate intervention?

1. Call the operating room and cancel the surgery.
2. Notify the surgeon immediately.
- \*3. Take no action as you recognize that it is a normal value.
4. Call the lab and have the test repeated.

81. While you are orienting Mrs. Sam to her surroundings, she states she is afraid of what will happen the next day. Which of the following would be the most appropriate response?

1. Assure her that the surgery is very safe and problems are rare.
- \*2. Let her talk about her fears as much as she wishes.
3. Explain that her doctor is very capable and will take care of her.
4. Explain that worrying will only prolong her hospitalization.

82. In teaching Mrs. Sam deep breathing and coughing exercises, which of the following points would you include?

- A. Breathe out through pursed lips.
  - B. Concentrate on apical lung expansion.
  - C. Hold each inhalation for 8 seconds.
  - D. Precede a cough by deep inhalation.
1. A, B
  - \*2. A, D
  3. C, D
  4. All of the above.

83. Mrs. Sam's signed consent would be considered INVALID if:

- A. The patient had been given Demerol 75 mg IM 1 hour prior to signing the consent.
  - B. The patient was not sound in her mind.
  - C. The nurse only had one person witness that the patient's signature was correct.
  - D. The patient told the nurse she no longer wanted her surgery performed.
  - E. The surgeon had not informed her of every side effect and risk.
- \*1. A, B, D
  2. B, D
  3. A, C, D
  4. A, B, C, D
  5. All of the above.

84. During surgery it was found that Mrs. Sam needs whole blood transfusions immediately. Her type and cross match blood is not ready; therefore, which of the following blood groups would most likely be administered?

- \*1. O
2. A
3. AB
4. B

85. Mrs. Sam develops thrombophlebitis. Which of the following signs and symptoms would indicate thrombophlebitis?

1. Bluish discoloration along vein.
- \*2. Severe cramping pain in the calf.
3. Varicosities.
4. Diminished pedal pulses.

86. Thrombophlebitis can occur following surgical intervention. A thrombus in the calf of the leg can be identified by which one of the following signs?

1. Doll's sign.
2. Kernig's sign.
3. Hegar's sign.
- \* 4. Homan's sign.
5. Chvostek's sign.

Mrs. Sam recovers from thrombophlebitis. She is soon to be discharged.

87. During discharge teaching the nurse should include which of the following instructions:

- \* 1. Avoid sitting for long periods of time.
2. Evacuate bowels daily.
3. Restrict sexual activity for six months after hysterectomy.
4. Avoid all household chores for two months.

88. Other postoperative instructions to Mrs. Sam would include all of the following EXCEPT:

1. Monitor vaginal drainage and report any bright blood.
2. Expect that vaginal discharge will diminish and cease gradually.
3. Expect that menses will no longer occur.
4. Avoid heavy lifting for at least six weeks.
- \* 5. Maintain contraception measures, since ovaries remain, to prevent ectopic pregnancy.

\* \* \* \* \*

Janice Barlow is a nineteen-year-old who comes into the clinic where you are working, tells you that she has missed two periods and thinks she might be pregnant. Following the laboratory test results it is determined that she is three months pregnant. You receive the results of her serology test which indicates she also has syphilis. Items 89 to 103 refer to this situation.

89. Pregnancy and birth are often considered crises because:

- \* 1. They are periods of change and adjustment to change.
2. There are hormonal and physiologic changes in the mother.
3. There are mood changes during pregnancy.
4. Narcissism in the mother affects all her relationships.
5. These times in life are usually associated with health problems.

Janice requests information about abortion.

90. The nurse tells Janice she feels abortion is immoral and that in her opinion many women have permanent guilt feelings following an abortion. The patient leaves the clinic in a very disturbed state. Which one of the following statements is most important from a legal point of view?

1. The nurse has a right to state feelings provided she identifies them as such.
- \* 2. The patient has a right to correct, unbiased information.
3. The nurse's statements are based on her value-system.
4. The nurse believes the fetus' right to life is more important than Janice's rights.

Janice decides to continue with the pregnancy.

91. She is being treated for syphilis with penicillin. Which statement regarding this treatment is most accurate in counseling Janice?

- \* 1. Unless she is reinfected later, the infant will not be affected by the syphilis.
- 2. She is likely to become reinfected based on her social history.
- 3. Although treatment will cure the mother, the infant has still been affected.
- 4. Treatment of the mother is assured but the infant will have to be checked for six months.

92. A nurse discusses Janice Barlow with her nursing colleague on another ward. During this discussion she mentions that Janice has just been treated for syphilis. Disclosure of this information would have been appropriate if:

- A. The nursing colleague from the other ward was going to be looking after Janice.
  - B. The patient had given her consent for the nurse on the other ward to be given this information.
  - C. The nursing colleague from the other ward didn't personally know Miss Barlow.
  - D. No non-nursing personnel overheard the conversation.
- \* 1. A, B
  - 2. A, B, D
  - 3. C, D
  - 4. All of the above.

93. Janice tells you that she smokes two packs of cigarettes a day. In counseling, you encourage Janice to stop smoking because you know that newborns of mothers who smoke cigarettes during pregnancy exhibit which of the following?

- 1. Higher incidence of congenital anomalies.
- 2. Symptoms of withdrawal.
- \* 3. Small size for gestational age.
- 4. Large size for gestational age.
- 5. Cephalopelvic disproportion.

94. Janice is now 24 weeks pregnant. In assessing Janice, which of the following would be considered a positive sign of pregnancy?

- 1. Goodell's sign.
- 2. Positive pregnancy test.
- \* 3. Auscultation of fetal heart tones.
- 4. Outline of fetus by abdominal palpation.
- 5. Quickening.

At 32 weeks, Janice develops severe pre-eclampsia.

95. She is given Magnesium Sulphate by intravenous infusion. The nurse must know that this drug is discontinued when:

- 1. Pulse pressure is greater than 40 mg Hg.
- \* 2. Respirations are less than 10 per minute.
- 3. The client has epigastric pain.
- 4. A convulsion has occurred.
- 5. Reflexes are brisk.

Two weeks later, Janice delivers a 34-week, 1550 gm female infant. The infant demonstrates nasal flaring, intercostal retractions, expiratory grunt, and slight cyanosis.

96. The baby is placed in a heated isolette because:
1. The premature infant has a small body surface for her weight.
  2. Heat increases flow of oxygen to extremities.
  - \* 3. Temperature control mechanism is immature.
  4. Heat within the isolette facilitates drainage of mucus.
  5. Heat will increase her metabolic rate.
97. Blood gases and electrolyte studies of the baby are ordered immediately to assess:
1. The infant's leukocyte count.
  - \* 2. The infant's oxygen, carbon dioxide and pH levels.
  3. The infant's antibody titer for Rh.
  4. The infant's glucose level.
98. Which one of the following would an infant with respiratory distress NOT exhibit?
- \* 1. Respiration between 30-40.
  2. Cyanosis.
  3. Expiratory grunt.
  4. Increased  $pCO_2$ .
  5. A  $pO_2$  of 64. <sup>2</sup>
99. It is important in planning care for the nurse to make careful note of the infant's oxygen level because the  $O_2$  could:
1. Produce kernicterus.
  2. Cause damage to corneas.
  - \* 3. Lead to retrolental fibroplasia.
  4. Cause reduced respiratory rate.
  5. Lead to heart damage.
100. Hyperbilirubinemia occurs in Rh incompatibility between mother and fetus because:
- \* 1. The mother's blood does not contain the Rh factor; she produces anti-Rh antibodies that cross the placenta and cause hemolysis.
  2. The mother's blood contains the Rh factor and the infant's blood does not; antibodies are formed in the fetus which lead to hemolysis.
  3. The mother has a history of antibody formation caused by a blood transfusion, which is passed to the fetus through the placenta.
  4. The infant develops antibodies shortly after birth that cause the destruction of red blood cells.
101. In situations where RhoGam is indicated, which of the following describes appropriate administration of this drug?
1. It must be given by the sixth day postdelivery.
  - \* 2. It should be given after each pregnancy or abortion.
  3. It should be given once sensitization occurs.
  4. It may be given to the infant.

102. Janice visits her baby every day. One day the nurse asks her if she would like to feed her. The mother says, "Oh, no, you do it so well. I want my child to be well cared for." The nurse should interpret this as:

1. A compliment to the nurse's ability.
2. A sign that the mother is still tired from the delivery and is not yet ready to care for the child.
- \* 3. An expression of her sense of inadequacy in caring for her own child.
4. An admission of her inexperience in dealing with premature infants.

103. The most appropriate response by the nurse to Janice would be:

1. "I'll feed her today. Maybe tomorrow you can try it."
2. "It's not difficult at all. She is just like a normal baby, only smaller."
3. "You can learn to feed her as well as I can; I wasn't good when I first fed a premature infant either."
- \* 4. "It's frightening sometimes to feed an infant this small, but I'll stay with you to help."

\* \* \* \* \*

Elaine Bennet, age 31, has just given birth to a 3203 gm boy who is diagnosed with Down's syndrome. Her pregnancy was normal and both parents anticipated the birth of their first child with great joy. Items 104 to 107 refer to this situation.

104. Several hours after delivery, the nurse enters Mrs. Bennet's room to find both Mrs. Bennet and her husband, Sam, in tears. The most helpful intervention at this time would be to:

1. Leave them alone so that they can express their grief in privacy.
2. Explain to them that many Down's syndrome children do very well with their handicap.
3. Suggest to Mr. Bennet that he leave for a while so that his wife can get some much needed rest; there will be time to talk later.
- \* 4. Stand nearby and remain quiet while they express their sorrow.
5. Arrange for a member of the Association for the Mentally Handicapped to visit the Bennets.

105. The day after delivery, while you assist Mrs. Bennet with morning care, she angrily remarks: "Why did this happen to me? We only wanted one child and look what we got. The doctors should have known that something was wrong." Your response is:

- \* 1. "Your anger and disappointment are very normal feelings, Mrs. Bennet."
2. "No one knows why things like this happen. You'll have to learn to adjust to it."
3. "Have you discussed this with your doctor, Mrs. Bennet?"
4. "You will learn to love your son once these feelings pass."
5. "Are you now wishing your doctor had done an amniocentesis?"

106. While Mr. Bennet stands at the nursery looking at his son, he tells you: "I knew it was going to be a boy. I wanted to teach him baseball, fishing, woodwork--you know, all those father-son things. I never dreamed things would turn out like this." Your most appropriate reply at this time would be:

1. "Your son can learn how to do all those things with your love and understanding."
- \* 2. "It sounds like you had a great many plans for you and your son."
3. "Are you feeling responsible for what happened?"
4. "There are still a great many things you will be able to do with your son. In time, you will see this."

107. A week after discharge, the Bennets are visited at home by a public health nurse. Mrs. Bennet reports that things seem to be going well except that her husband doesn't hold, feed, or change the baby. He likes to be with her during the care, and to play with the baby in the crib. Mrs. Bennet doesn't know what is wrong. In assessing what was said, the nurse's best response is:

1. "It sounds like Mr. Bennet is having difficulty in forming an attachment to his son."
2. "Do you think that Mr. Bennet is jealous of the time you are spending with the baby?"
3. "I think that Mr. Bennet is as attentive as he can be toward the baby. Give him more time."
- \* 4. "Do you think that Mr. Bennet may feel unsure about his ability to care adequately for the baby?"

\* \* \* \* \*

Larry Potts, a 21-year-old single male, is admitted to the psychiatric unit. He was brought in by his parents, who had become frightened by his bizarre behavior over the past few weeks. They report he often locks himself in his room for days, shouting and cursing periodically. He sleeps with his hat and coat on, and he keeps all drapes closed to "keep the devil out of his room." Items 108 to 111 refer to this situation.

108. Larry has refused to eat the hospital food. When questioned about it, he states: "I can only eat food prepared by my mother's lily-white hands. I have promised God I will stay pure and I cannot eat this devil poison." The nurse should initially handle this situation by:

1. Explaining to Larry that the hospital food is pure and nutritious and allow him to visit the kitchen.
2. Allowing him to continue to refuse his meals, realizing that when he is hungry enough, he will eat on his own.
3. Explaining to Larry that if he continues to refuse to eat, he may need to be tube-fed.
- \* 4. Discussing with Mrs. Potts the feasibility of her bringing food for her son.

109. Larry's ideas about poisoned food are referred to as:

1. Illusions.
- \* 2. Delusions.
3. Hallucinations.
4. Ideas of reference.
5. Autistic thinking.

110. During a visit by his parents, Larry suddenly stands up and shouts angrily: "Get out of here, you agents of the devil. You put me in here so they could kill me." Mrs. Potts comes to the nurses' station crying: "We thought we were helping him by bringing him here, but now he hates us." The best reply by the nurse to Mrs. Potts at this time is:

- \* 1. "It must be very difficult for you to see your son so angry at you."
2. "You know, you did the best thing for him. He really doesn't hate you."
3. "It probably would be best if you and your husband didn't visit for a while, Mrs. Potts."
4. "I'm sure he loves you very much. That's his illness talking, not him."

111. The nurse recognizes that Larry's thinking is a product of the exaggerated use of the defense mechanism of:

1. Introjection.
- \* 2. Projection.
3. Disassociation.
4. Repression.
5. Regression.

\* \* \* \* \*

Martha Dan, age 47, is admitted to the hospital for observation following a fall. Her breath smells of alcohol but when questioned she states that she "had a drink or two for the pain while waiting for the ambulance." Items 112 to 117 refer to this situation.

112. The nurse identifies the need to assess for early symptoms of alcohol withdrawal, which include:

- \* 1. Tremors, diaphoresis, anorexia, anxiety.
2. Visual hallucinations, agitation, vomiting.
3. Tactile hallucinations, disorientation.
4. Tachycardia, insomnia, convulsions.

113. Two days after admission, there's a loud crash and yelling from Mrs. Dan's room. The nurse rushes in to find Mrs. Dan frantically struggling to get out of the bed and the bedside table is knocked over. Mrs. Dan is yelling: "Get those bugs off of me! Help! They are all over me!" The best action of the nurse would be to:

1. Recognize that Mrs. Dan is in the delirium tremens and go get the doctor.
2. Take hold of Mrs. Dan and say firmly: "You are hallucinating; there are no bugs. Try and calm down."
- \* 3. Say: "Mrs. Dan, I'm Mrs. Smith, your nurse. I can see that you are frightened. There are no bugs. I will stay with you."
4. Put up her side rails, get a jacket restrain and medications to calm her down.

114. Nursing care of Mrs. Dan during the acute stages of severe alcohol withdrawal syndrome should include all of the following EXCEPT:

1. Administration of prescribed sedation.
2. Encouraging fluid intake.
3. Providing a quiet, well-lighted environment.
- \* 4. Restraining the patient in bed.
5. Orienting her to reality.

115. In assessing Mrs. Dan's vital signs during the acute stage of her alcoholic withdrawal syndrome, which of the following symptoms are commonly found?

1. Hypotension and tachycardia.
2. Hypothermia and hypotension.
3. Bradycardia and dyspnea.
- \* 4. Tachycardia and hypertension.

116. While experiencing acute alcohol withdrawal, another goal of Mrs. Dan's care is to provide rest. One of the medications most frequently used for this goal is:

- \* 1. Chlordiazepoxide (Librium).
2. Disulfiram (Antabuse).
3. Phenytoin (Dilantin).
4. Chlorpromazine (Thorazine).
5. Sodium Luminal.



117. Mrs. Dan recovers from the acute stage of alcoholic withdrawal and you are now planning for her discharge in a few days. Which of the following nursing interventions is appropriate for Mrs. Dan at this time?

1. Tell her she must stop drinking alcohol.
2. Explain to her the problems that alcohol can lead to.
3. Refer her to AA.
- \* 4. Explore the extent of her drinking problem.

\* \* \* \* \*

Joseph Muller, age 2 years, has cerebral palsy and has been referred to the orthopedic clinic for evaluation and treatment. He demonstrates spasticity and motor dysfunction of both legs and has difficulty with tongue control. Items 118 to 127 refer to this situation.

118. After a complete assessment, the main goals of care are to:

1. Correct muscle imbalances, provide muscle relaxation and promote emotional health.
2. Correct the motor disabilities and maintain nutrition.
3. Help the child and parents accept the disorder and live within the limitations of the disability.
- \* 4. Establish improvement in locomotion; work toward self-care and ability to communicate.

119. In the multiple areas of assessment that are needed, you talk with Mrs. Muller about Joseph's ability to eat. You expect that Joseph probably:

1. Can hold a spoon and feed himself as a milestone of the toddler age.
- \* 2. Will drool and have difficulty swallowing.
3. Is unable to swallow solid or semisolid food.
4. Feeds best when in a reclining position in the mother's lap.

120. Mrs. Muller says: "I get so tired of Joseph's endless problems. I know I shouldn't feel this way but right now I wish Joseph were a normal child." The best response for the nurse would be:

1. "As he begins to respond to all of his care, you will see a big difference and life will be easier for you."
2. "Once Joseph is older he will become less dependent on you. Time goes by quickly."
- \* 3. "It's normal to feel frustrated and discouraged at times because progress seems slow."
4. "Joseph has many problems, so he is going to need all your support and understanding."

121. Mrs. Muller is admitted to the hospital several months later, with a suspected peptic ulcer. In working with a patient who has some psychological distress, which of the following is the most important principle the nurse must consider?

1. When the psychological needs are met, the physical disorder is resolved.
- \* 2. Control of the physical symptoms is a priority.
3. The disorder is anxiety-related, with no organic change.
4. Psychological stress is always the precipitating factor.
5. Psychosomatic illnesses respond best to psychotherapy.

122. The doctor decides to pass a nasogastric tube and attach it to intermittent low-pressure suction (Gomco suction). An important nursing responsibility related to this procedure is:

1. Warm tube to make it more flexible.
2. Lubricate tube with petroleum jelly.
3. Have patient placed in supine position.
- \* 4. Aspirate stomach contents to ensure proper placement.

123. A duodenal ulcer is confirmed and Mrs. Muller is placed on cimetidine (Tagamet) by IV route. The N/G tube continues to function. After several days of this therapy, you should observe for which of the following results of the drug's effectiveness?

1. Mild sedation and tranquility.
2. Drainage negative for blood.
- \* 3. Diminished drainage from the N/G tube.
4. Onset of metabolic alkalosis.

124. Mrs. Muller is recovering but she is somewhat anemic. The physician orders iron dextran (Imferon) 2 ml IM. Z-track technique is performed by:

1. Grasping the skin bunched between thumb and forefinger to provide maximum depth for the injection.
2. Maintaining the patient in prone position.
3. Placing the needle deep in the gluteus muscle.
- \* 4. Displacing the skin laterally prior to injection.

125. Miss Grave, a new nurse, will be giving the imferon. She reads the order, identifies the medication, draws up 2 cc of iron dextran, caps the needle with the sterile cover, rechecks the order, and prepares to go give the medication. Why must you stop her?

1. The dose is excessive and must be questioned with the physician.
2. She should use two syringes with 1 cc in each one.
- \* 3. She should change the needle.
4. The patient has not been tested for allergy prior to administration.

126. When the nurse approaches Mrs. Muller and explains she is going to give her an iron injection, Mrs. Muller states she does not want this injection, as she had one before and it hurt a lot and also stained her skin. The statement that best relates to this situation from a legal point of view is:

- \* 1. The patient has the right to refuse treatment.
2. The nurse has a legal responsibility to follow doctors' orders.
3. The nurse should not have told the patient the name of the drug.
4. The patient should comply with the doctor's orders or seek a different doctor.

127. A bland diet has been ordered for Mrs. Muller. Foods acceptable on a bland diet would include all of the following, EXCEPT:

1. A milkshake.
- \* 2. A donut.
3. A slice of white bread.
4. Rice pudding.
5. Baked custard.

\* \* \* \* \*

Lyla Hansen, 68 years old, has been hospitalized for investigation. Studies confirm a diagnosis of cancer of the rectum. An abdominal perineal resection is scheduled. Items 128 to 139 refer to this situation.

128. As a registered nurse you are about to witness Mrs. Hansen signing a surgical consent, when she tells you that her doctor didn't explain about the surgery. Your best plan of action would be to:

- \* 1. Notify the doctor that additional explanation is needed before witnessing the consent.
2. Explain the procedure, then witness the consent.
3. Tell Mrs. Hansen that additional explanation will be given, but consent is necessary now.
4. Document that you are unable to get a written consent at this time.

129. While caring for Mrs. Hansen, two nurses gave her an enema as ordered by the doctor even though Mrs. Hansen clearly stated she did not want this procedure done. The nurses' action could constitute the offense known as:

- \* 1. Assault and battery.
- 2. Invasion of privacy.
- 3. Malpractice.
- 4. Negligence.
- 5. Incompetence.

130. Neomycin is commonly ordered prior to bowel surgery because this drug:

- \* 1. Remains in the G.I. tract.
- 2. Is well absorbed from the G.I. tract.
- 3. Maintains normal flora balance.
- 4. Systemically reduces bacteria.
- 5. Helps to prevent post-operative lung infection.

131. Mrs. Hansen receives Demerol 75 mg and Atropine 0.4 mg one hour pre-operatively. These medications are given to:

- A. Create a feeling of well-being to counteract anxiety.
  - B. Minimize vomiting during anaesthesia.
  - C. Reduce amount of tracheobronchial secretions.
  - D. Reduce the pain of the surgical procedure.
- \* 1. A, C
  - 2. B, C
  - 3. B, D
  - 4. All of the above.

132. With Mrs. Hansen undergoing an abdominal perineal resection she should expect:

- 1. Urinary flow from her ileal-conduit.
- \* 2. A permanent colostomy.
- 3. A temporary "wet colostomy".
- 4. An ileostomy.
- 5. An end-to-end anastomosis.

133. Mrs. Hansen returned from PAR 4 hours ago. Her pre-op vital signs were: BP 140/70, P 84, T 37.2°C. The nurse monitoring her post-op condition suspects hypovolemic shock. Which of the following manifestations are indicative of hypovolemic shock?

- 1. BP 110/70, temperature 38.8°C, face flushed.
- 2. BP 120/80, pulse 68, irritability and restlessness.
- \* 3. BP 100/80, pulse 120, urinary output 15 ml/hr.
- 4. Pulse 120, lethargy, urinary output 35 ml/hr.
- 5. BP 100/80, pulse 88, urinary output 25 ml/hr.

134. The doctor is contacted regarding Mrs. Hansen's condition. Which of the following would indicate that Mrs. Hansen is responding favorably to the interventions you carry out?

- \* 1. Increased pulse pressure.
- 2. Increased pulse.
- 3. Hourly urines of at least 10 cc.
- 4. Increased thirst.
- 5. Reduced tissue turgor.

135. The stress response on the first post-operative day following major surgery may produce:
- Decreased metabolic rate.
  - Increased ACTH, ADH.
  - Tachycardia.
  - Vasodilation and hypotension.
    - A, B
    - A, C
    - \* 3. B, C
    4. C, D
136. Nursing care for Lyla for the first 2-3 days post-operative would include:
- Providing bed rest in semi-Fowler's position, with an air ring cushion.
  - Changing abdominal and rectal dressings as necessary.
  - Encouraging deep breathing but not coughing to protect the suture line.
  - Being accepting of Lyla's psychologic response to the surgery.
    - A, C
    - \* 2. B, D
    3. A, B, C
    4. B, C, D
137. Mrs. Hansen may have a higher risk of post-operative infection primarily because older individuals tend to:
- Have frequently not kept immunizations up to date.
  - Have a slower physiological response to stress.
  - Have reduced cardiovascular circulation.
  - Observe careless habits of health.
    - A, B
    - \* 2. B, C
    3. C, D
    4. A, B, C
138. On her fourth post-operative day, Mrs. Hansen develops gas pains. You should: \*
- Administer the prescribed Tylenol #3, tab 1.
  - Advise her to rest in bed until the pain subsides.
  - Encourage her to ambulate.
  - Encourage her to drink fluids.
  - Insert a rectal tube.
    - A, B, D
    - \* 2. A, C, D
    3. B, E
    4. A, C
139. Mrs. Hansen has been taught to manage her colostomy. Mr. Hansen has been included in her teaching. During a pre-discharge teaching session, Mr. Hansen states, "Don't worry, I'll be sure that she obeys the doctor's orders to the letter." The best response of the nurse would be to say:
- "Mr. Hansen, I can see that with your help, Mrs. Hansen should do just fine."
  - "Are you worried?"
  - "I'm not worried, you both have a lot of common sense."
  - \* 4. "This has been a difficult period for both of you. Can you foresee any problems with these instructions?"
  - "Mrs. Hansen, I am sure you will do as your husband tells you."

Two-year-old Mike Cox is admitted to the hospital for the second surgical repair of his clubfoot. Items 140 to 146 refer to this situation.

140. In planning care for Mike, the nurse knows that play provides an important aspect in fostering growth and development. The type of play which is characteristic of the toddler age group is:

- \* 1. Parallel play.
- 2. Cooperative play.
- 3. Aggressive play.
- 4. Dramatic play through vicarious experience.
- 5. Competitive, creative play.

141. Which one of the following behaviors demonstrates the characteristic eating habit of the toddler?

- 1. Anticipating mealtime as play time.
- 2. Presenting a willingness to eat what is given to him to seek attention.
- \* 3. Exhibiting unpredictable behavior when offered food.
- 4. Having a positive attitude toward new types of food, especially finger foods.
- 5. Imitating his parents' likes and dislikes in specific foods.

142. Which of the following suppers would most likely be best for Mike?

- 1. Coleslaw, baked potato with sour cream, small steak with mushrooms and onions, tomato juice, lemon pie.
- 2. Weiner with whole wheat bun, baked beans, celery sticks, orange freshie, chocolate cake and ice cream.
- \* 3. Hamburger pattie on a whole wheat bun, french fries, broccoli, tomato slices, milk, apple crisp.
- 4. Liver, mashed turnip, spinach, alfalfa sprouts, sesame seed bread, orange juice, nuts and raisins.
- 5. Roast beef and gravy, boiled potato, carrot sticks, tossed salad, milk, strawberries and whipping cream.

Mrs. Cox cannot stay overnight with her son. On the morning after admission, Mike is standing in his crib crying. He refuses to be comforted and calls for his mother.

143. The nurse approaches Mike to bathe him and he screams louder. She recognizes this behaviour as the stage of protest. The best nursing action would be to:

- 1. Pick him up and walk with him around the room.
- \* 2. Sit by his crib and bathe him later when his anxiety decreases.
- 3. Decide he really does not need a bath when he is this upset.
- 4. Fill the basin with water and proceed to bathe him.
- 5. Call Mrs. Cox and request that she come to the hospital to bathe Mike.

144. During his third week of hospitalization, Mike smiles easily, goes to all the nurses happily and no longer cries when his mother goes home. After leaving Mike's room, Mrs. Cox tells the nurse she is pleased that Mike is adjusting well. Before responding to Mrs. Cox, the nurse understands Mike's behaviour and realizes that he:

- \* 1. Is repressing his feelings for his mother.
- 2. Has established a routine and feels safe.
- 3. Feels better physically so his behaviour has improved.
- 4. Has given up fighting and accepts the separation.
- 5. Is showing behaviour that is typical of an earlier stage of development.

145. The nurse explains the meaning of Mike's behaviour to Mrs. Cox and tells her that after he goes home she should expect that:

1. Mike will miss the nurses and hospital routine.
2. It will be easier for Mike to adjust to his home situation.
3. Mike will continue his happy, normal behaviour.
- \* 4. It will take some time before the mother-child relationship is reestablished.
5. Mike will likely have long-lasting emotional problems.

146. The characteristics of the personality development of the two-year-old as described by Erikson are:

1. Developing a sense of basic trust; beginning to see himself as separate from others.
2. Struggling to express needs; accepting what is given with a feeling of comfort.
3. Developing a sense of industry; distinguishing between fantasy and reality.
4. Asserting self and challenging authority; experimenting socially.
- \* 5. Developing a sense of autonomy; beginning to identify and assert self.

\* \* \* \* \*

Marjorie Hadley, a 55-year-old accountant, was admitted to the hospital with a diagnosis of pulmonary embolism. Ms. Hadley had been bedridden for two months with a broken femur. Items 147 to 154 refer to this situation.

147. A pulmonary embolism is:

1. An obstruction of a pulmonary vein by a thrombus originating in the venous circulation.
- \* 2. An obstruction of a pulmonary artery by a thrombus originating in the venous circulation.
3. An infarction of lung tissue due to a thrombus originating from the arterial circulation resulting in respiratory difficulty.
4. A failure of the left side of the heart due to an obstruction resulting in pulmonary stasis.

148. In assessing the nursing needs of Ms. Hadley, the nurse should remember that a pulmonary embolism:

1. Is a chronic degenerative disorder.
2. Requires little expert nursing care.
3. Is a mild acute disorder.
- \* 4. Is an acute medical emergency.
5. Is usually fatal.

149. The greatest predisposing factor in Ms. Hadley developing a pulmonary embolism is:

1. Age.
2. Heredity.
- \* 3. Immobility.
4. Occupation.
5. Shallow respirations.

150. A Heparin infusion is ordered for Ms. Hadley. Responsibilities in relation to this drug include:
- A. Using an infusion controller such as an IVAC.
  - B. Checking the PTT.
  - C. Report any bruising to the doctor immediately.
  - D. Observe for any signs of bleeding.
  - E. Teach the patient to observe for and report any bleeding.
    1. A, B, C
    2. B, C, D
    - \* 3. A, B, D, E
    4. D, E
    5. All of the above.
151. Since Ms. Hadley is on bed rest, to reduce skin breakdown, the nurse knows that nutrients needed for skin integrity would include:
- A. Vitamin C.
  - B. Iron.
  - C. Vitamin D.
  - D. Calcium.
  - E. Protein.
    - \* 1. A, C, E
    2. A, D
    3. B, C
    4. B, D, E
152. When doing a chest assessment on Ms. Hadley, you note that the lateral diameter of her chest is greater than the anterior-posterior diameter. You would:
1. Report this to the doctor as soon as possible.
  2. Chart your findings and check it again in one hour.
  - \* 3. Know this is normal and chart it as usual.
  4. Have her take several deep breaths and cough.
153. In assessing a patient's respiratory status by auscultation, the nurse would listen:
- \* 1. For rales on inspiration.
  2. For tracheal sounds in all lobes.
  3. For rhonchi on inspiration.
  4. For pleural friction rub.
154. In planning care for Ms. Hadley, the nurse is aware that successful adjustment at mid-life is associated with:
- A. Acceptance of oneself.
  - B. Mental flexibility.
  - C. Ego differentiation.
  - D. Body transcendence.
  - E. Body satisfaction.
    1. B only
    2. A, C, D, E
    3. B, D, E
    4. C, E
    - \* 5. All of the above.

\* \* \* \* \*

Mr. Warner, a 57-year-old printer, was seen in the pulmonary clinic for chronic obstructive lung disease. Mr. Warner has experienced progressive shortness of breath and has a history of smoking one to two packs of cigarettes a day for 35 years. Mild exercise now produces fatigue and severe shortness of breath. Physical examinations and pulmonary function studies were consistent with both emphysema and chronic bronchitis. Items 155 to 159 refer to this situation.

155. Mr. Warner would benefit from pursed lip exhalation because:

1. It strengthens the diaphragm and reduces the residual volume.
2. It facilitates the expulsion of sputum from the bronchi.
3. It enhances  $CO_2$  retention which stimulates respiration.
- \* 4. It lengthens expiration which slows the respiratory rate and facilitates emptying the lungs.

156. When administering oxygen therapy to a patient with C.O.P.D., caution must be taken not to depress his stimulus to respiration. With this condition, the stimulus for respiration is:

- \* 1. Low  $pO_2$
2. High  $pCO_2$
3. Low  $pCO_2$
4. High  $pO_2$

157. Intermittent positive pressure breathing (IPPB) is ordered for Mr. Warner. The most important effect of IPPB is:

1. Mobilization of bronchial secretions.
- \* 2. Increased alveolar ventilation.
3. Prevention of atelectasis.
4. Decreased airway resistance.

Antibiotics are ordered for Mr. Warner's bronchitis.

158. To help evaluate the effectiveness of therapy, the nurse should refer to the results of which of the following diagnostic tests?

1. Pulmonary function studies.
- \* 2. Culture and sensitivity of sputum.
3. Bronchoscopy.
4. Lung scan.
5. Chest x-ray.

159. Upon discharge, which of the following points should be included in Mr. Warner's teaching?

- A. That prescribed antibiotics should always be taken with meals to prevent gastric irritation.
- B. Avoid fatigue and overexertion.
- C. Eat foods high in protein, calories and vitamins.
- D. Monitor his temperature each morning.
  1. A, B, C
  2. A, D
  - \* 3. B, C
  4. All of the above.

\* \* \* \* \*



Mr. Bill Brounley, age 36, is admitted with a gunshot wound of the left lower lobe of his lung. A lobectomy is performed on Mr. Brounley, and he is now on your nursing unit postoperatively. Items 160 to 164 refer to this situation.

160. Your responsibilities in caring for Mr. Brounley's chest tubes are:
1. Empty bottles and measure amount of drainage every 8 hours.
  - \* 2. Milk chest tubes if clots occlude the tubing.
  3. Clamp chest tubes every other hour to increase pleural pressure.
  4. Raise chest bottles over chest to check patency.
  5. Take the glass rod out of the water-seal bottle periodically to assess for adequacy of suction.
161. The doctor has ordered Mr. Brounley's chest tubes clamped for a chest X-ray. What observations will you need to make, during this time period?
1. Signs of vasogenic shock.
  2. Signs of tension pneumothorax.
  3. Whether fluid is ascending into the chest cavity from the chest tubes.
  4. Whether air leaks are present in the water-seal bottle.
162. As Mr. Brounley recovers, he reveals that he is a high school dropout, with a long arrest record beginning at age 13. He admits multiple-drug use. He says to the nurse: "I really want help this time, nurse; can you help me straighten out my life?" The best response to him would be:
1. "What kind of help do you think you need, Mr. Brounley?"
  2. "We can only help you if you want to be helped."
  3. "With your history I really doubt your sincerity, Mr. Brounley."
  4. "I'll have to get to know you better before I can tell you that."
163. Mr. Brounley may not leave the unit, which is hospital policy with patients under police custody. He has been a model patient for the past week--helping several patients and complying with unit rules. He asks the nurse if she could walk him to the coffee shop as "time off for good behavior." The nurse's response should be:
1. "You certainly have been good this week, Mr. Brounley; I'll see if I can arrange it."
  2. "Rules are rules; I'm afraid there are no exceptions."
  3. "You are not supposed to leave the unit, but you ask the head nurse and see if she will give you permission."
  4. "I wish I could; do you want me to go get you some coffee or cigarettes?"
164. The nurse notes that Mr. Brounley has been sending other patients to the coffee shop to get him things. To her knowledge he had no money when he was admitted and has had no visitors. What should the nurse do about this observation?
1. Ask "How have you managed to get everyone to treat you to coffee and cigarettes?"
  2. Say "I hope you haven't been stealing money from the other patients, Mr. Brounley."
  3. Say nothing at this time but alert the staff to watch him closely.
  4. Say "You had no money when you came in, Mr. Brounley, yet you are getting cigarettes and coffee; how is that?"

\* \* \* \* \*

Mrs. Park, age 24, gravida I para 0, was admitted to General Hospital with a diagnosis of abruptio placenta. Items 165 to 173 refer to this situation.

165. Which of the following measures would take precedence when admitting a patient with a bleeding problem during the third trimester?

- \* 1. Check vital signs, FHR, and determine the amount and consistency of the bleeding.
- 2. Notify the physician and shave the abdomen and perineum.
- 3. Check the FHR and prepare for IV infusion.
- 4. Assess the fundal height, check her blood pressure, and call the physician.

166. Mrs. Park is receiving a blood transfusion. She complains of a headache and feeling chilly. As the nurse, you would first:

- 1. Give Mrs. Park an analgesic and notify the doctor.
- \* 2. Clamp off the blood and keep the vein open with normal saline solution.
- 3. Give an antihistamine and apply extra blankets.
- 4. Take Mrs. Park's temperature and blood pressure.
- 5. Slow the transfusion and apply extra blankets.

167. Mrs. Park's rights in the hospital situation include the legal right to:

- A. Refuse treatment and to be informed of the medical consequences of this action.
- B. Read her own medical records (i.e., chart) at any time.
- C. Expect that records pertaining to her care should be treated as confidential.
- D. Refuse to participate in research projects.
- E. Attend all meetings where her case is being discussed.
  - 1. A, B, C
  - \* 2. A, C, D
  - 3. D, E
  - 4. A, B, C, D
  - 5. All of the above.

Mrs. Park develops disseminated intravascular coagulation. Although she is delivered by emergency Cesarean section, the infant has an apgar of 2, resuscitative measures fail and the infant dies. Mrs. Park begins to cry. The nurse who was with her throughout her admission and labor is in the delivery room.

168. The nurse feels tears in her eyes as she tries to comfort Mrs. Park. The best action by the nurse at this time would be to:

- 1. Leave the delivery room and compose herself.
- 2. Ask the other nurse in the delivery room to relieve her.
- 3. Remain in the delivery room but avoid any contact with Mrs. Park.
- \* 4. Stay with Mrs. Park, although she is finding it difficult.

169. One hour following delivery, the nurse's assessments indicate that Mrs. Park is hypovolemic. Which of the following observations would confirm the nurse's assessment?

- 1. Hourly urine output of 30 cc.
- \* 2. CVP reading of 3.
- 3. Increase in pulse pressure.
- 4. Dyspnea.

170. Hypofibrinogenemia is a common complication of abruptio placenta. Which of the following data would confirm this in Mrs. Park?

- \* 1. Saturation of two pads within 30 minutes.
- 2. Decreased BP, elevated pulse, dyspnea.
- 3. Restlessness, increased sweating, oliguria.
- 4. Thirst, cool skin, and boggy uterus.

Mrs. Park's condition stabilizes.

171. Which of the following locations would be best suited for Mrs. Park following the delivery?

1. A four-bed room in the maternity unit with mothers who have recently delivered.
2. A single room on the maternity unit close to the nursery.
3. A double-bed room in the gynecological unit with a woman who has just had a saline abortion.
- \* 4. A single room in the gynecological unit.
5. No need for hospitalization; allow her to go home 8 hours after delivery.

172. During Mrs. Park's postpartal period, she asks the nurse: "If you were me, would you try to get pregnant again?" Which of the following responses would be most appropriate?

1. "Mrs. Park, I am not you, so how could I possibly answer that question?"
- \* 2. "How do you feel about the possibility of another pregnancy?"
3. "You're young, you could have many more. I probably wouldn't, but that's me, not you."
4. "Would you want to put yourself through this again?"

173. Mrs. Park wants to be refitted for a diaphragm before she leaves the hospital. Which of the following would be most appropriate?

1. Tell her to ask her obstetrician during rounds later, as she is almost ready to be discharged.
2. Suggest the pill because it is the most effective method of contraception.
- \* 3. Tell her that she cannot be refitted for a diaphragm until her 4 to 6 week postpartum visit.
4. Suggest that she consider a tubal ligation before she leaves the hospital.
5. Suggest she not use any birth control.

\* \* \* \* \*

Fifty-seven-year-old Mr. Bernard Miller, who describes himself as a "heavy social drinker" has been admitted to the hospital with cirrhosis of the liver. His liver function studies are abnormal and he has advanced ascites. Items 174 to 178 refer to this situation.

174. A liver biopsy is to be performed. As the needle is inserted, the patient is instructed to hold his breath on expiration. The reason the biopsy is completed in this phase of the respiratory cycle is:

1. The liver will be lower in position and more accessible.
2. The ribs and diaphragm will be elevated and not obstruct the path of the needle.
3. The patient will be distracted by the instructions, and anxiety will diminish.
- \* 4. The diaphragm will be elevated and minimize the risk of puncture.

175. The results of his liver biopsy show severe cirrhosis. Mr. Miller had been alert on admission but two days later he becomes disoriented, drowsy and quite restless. What would be the most appropriate nursing measure for his change in behavior?

1. Administer Thorazine for restlessness.
- \* 2. Elevate the padded side rails.
3. Restrain his wrists and ankles.
4. Lower the head of the bed.
5. Turn Mr. Miller to the prone position.

176. Lactulose p.o. is initiated:

- \* 1. To help reduce the ammonia level.
- 2. To reduce the bacteria count.
- 3. To promote diuresis of toxic wastes.
- 4. To provide an additional source of nourishment.

177. When the physician feels Mr. Miller is able to eat he would put him on a diet which would be:

- 1. Low carbohydrates, high fats, low protein.
- \* 2. High carbohydrates, low protein, low fat.
- 3. Low protein, low fats, low carbohydrates.
- 4. High carbohydrates, high protein, and high fat.
- 5. High carbohydrates, high protein, low fat.

178. Mr. Miller finally stabilizes, is alert, and able to participate in his care. While you are helping him, he says: "I think I will have to limit my drinking to the weekends from now on." How would you respond?

- 1. "If you start drinking again, it will kill you."
- 2. "Alcoholics who start drinking again will go out of control."
- 3. "I think you should join Alcoholics Anonymous to help you stop completely."
- \* 4. "Can you tell me what your thoughts are about your drinking?"
- 5. "It is better to quit 'cold turkey'."

\* \* \* \* \*

Tommy, age 7, was admitted to the hospital with a diagnosis of acute glomerulonephritis. While taking an admission history, the mother explains to the nurse that Tommy had a sore throat two weeks previously. Items 179 to 181 refer to this situation.

179. His sore throat was likely due to which of the following organisms?

- 1. A virus.
- 2. An acid-fast, typical mycobacterium.
- \* 3. Type A beta hemolytic streptococci.
- 4. Type B alpha hemolytic staphylococci.
- 5. Pseudomonas.

180. Nursing care provided for Tommy during the early acute stage of disease will include which of the following?

- A. Monitoring vital signs.
  - B. Forcing fluids.
  - C. Ambulating and performing exercises to promote renal function.
  - D. Keeping Tommy cool to depress pyrexia.
  - E. Recording of fluid intake and output.
- \* 1. A, E
  - 2. A, C, D, E
  - 3. B, E
  - 4. A, B, C
  - 5. All of the above.

181. Tommy's blood chemistry laboratory report indicates a BUN (blood urea nitrogen) level of 35 mg/100 ml. Which one of these meals would be nutritionally therapeutic for him?

- \* 1. Scrambled egg, mashed potatoes, apple juice sweetened with sugar.
- 2. Baked beans with pork, lettuce and tomato.
- 3. Fillet of haddock, canned peas, instant potatoes.
- 4. Peanut butter sandwich, milk.
- 5. Turkey (white meat), spinach, rice.

\* \* \* \* \*

Mr. Lawson, 56 years old, is diagnosed with chronic renal failure. Items 182 to 184 refer to this situation.

182. Hyperkalemia tends to occur in chronic renal dysfunction because:

- \* 1. As metabolic acidosis increases, the kidneys selectively secrete more H<sup>+</sup> than K<sup>+</sup> in exchange for Na<sup>+</sup>.
- 2. As edema forms, sodium diffuses into the interstitial space and is balanced by increased serum potassium.
- 3. Respiratory compensation for metabolic acidosis tends to increase K<sup>+</sup> reabsorption by the kidneys.
- 4. The nausea and vomiting that occur with metabolic acidosis tend to increase serum potassium to compensate for chloride losses.

183. Kayexalate reduces hyperkalemia by:

- \* 1. Exchanging sodium ions for potassium ions in the GI tract, thereby increasing potassium excretion in the feces.
- 2. Inhibiting potassium absorption sites in the GI tract.
- 3. Promoting diarrhea, thereby decreasing potassium absorption from the gut.
- 4. Altering the effects of aldosterone in the kidney tubules.

184. In assessing Mr. Lawson's acid/base status, which of the following would be most likely with chronic renal failure?

- 1. Hyperreflexia, paresthesias, and tetany.
- 2. Giddiness, irregular respiratory pattern, and moist, cool skin.
- 3. Muscle weakness and numbness and tingling in the extremities.
- \* 4. Lethargy, disorientation, and increased rate and depth of respirations.

\* \* \* \* \*

Mr. Jasper, a 48-year-old man with choledocholithiasis, has a T tube which drains his bile into a collection device. Items 185 to 186 refer to this situation.

185. Mr. Jasper will likely have difficulty absorbing which of the following vitamins?

- 1. A, B, C, K
- \* 2. A, D, E, K
- 3. C, D, E
- 4. A, B, C, E, K

186. Which problem may Mr. Jasper develop if his condition is prolonged?

- 1. Pelagra.
- \* 2. Bleeding tendency.
- 3. Poor peripheral vision.
- 4. Berri-berri.
- 5. Scurvy.

\* \* \* \* \*

Marie Claire, 5 years old, has tetralogy of Fallot. Items 187 to 190 refer to this situation.

187. Congenital defects in the heart constituting tetralogy of Fallot are:

- \* 1. Pulmonary stenosis, ventricular septal defect, right ventricular hypertrophy, dextroposition of the aorta.
- 2. Coarctation of the aorta, patent foramen ovale, left ventricular hypertrophy, transposition of the great vessels.
- 3. Aortic stenosis, patent ductus arteriosus, right ventricular hypertrophy, dextrocardia.
- 4. Interatrial septal defect, coronary arterial fistulas, right atrium hypertrophy, prolapsed aortic valve cusps.
- 5. Pulmonary stenosis, transposition of the great vessels, atrial septal defect, left ventricular hypertrophy.

188. Which of the following toys would best help Marie Claire to handle feelings of anxiety?

- 1. Tinker toys.
- 2. Scissors and construction paper.
- 3. Story book from home.
- \* 4. Doctor or nurse's kit.
- 5. Cutouts.

189. As you prepare Marie Claire and her parents for the surgery, which of the following nursing interventions would be most appropriate?

- A. Ensure Marie Claire is on bed rest to rest her heart.
- B. Anticipate Marie Claire's needs so she's less irritable.
- C. Have Marie Claire eat small amounts slowly.
- D. Reassure Marie Claire's parents that she will be feeling well soon.
- E. Have her exercise each hour during the day to increase her tolerance.
- 1. A, B
- \* 2. B, C
- 3. C, D
- 4. A, B, C, D
- 5. D, E

190. One of the best ways to prepare Marie Claire for the surgery is to:

- 1. Use a diagram of the heart to show the location of the defect.
- 2. Show the Dacron patch to be used in the repair.
- \* 3. Use a doll or drawing of a child to show the location of the tubes and incision.
- 4. Avoid any distressing topics that will make the child fearful.
- 5. Have Marie Claire's mother prepare her for the surgery, to reduce anxiety.

\* \* \* \* \*

191. You are an industrial nurse for a large company. Mr. Rever is 30 years old. His health history indicates that he smokes 2 to 2-1/2 packs of cigarettes daily, drinks 8 to 10 cups of coffee per day, usually works overtime, and is 40 pounds overweight. In attempting to help Mr. Rever make changes in his lifestyle, the nurse should begin by:

- \* 1. Asking Mr. Rever which factors he is willing to change.
- 2. Asking Mr. Rever why his health and well-being haven't been important to him.
- 3. Telling Mr. Rever that he must go on a strict diet and stop smoking immediately.
- 4. Providing Mr. Rever with a diet and exercise plan.
- 5. Accepting that likely little can be accomplished.

\* \* \* \* \*

You are the nurse working in a public health clinic. Items 192 to 200 refer to Public Health situations.

192. Lisa, 18 months of age, is now ready for her booster of DPT vaccine. The student nurse working with you prepares the buttock for injection. What do you do?

1. Speak soothingly to the child, to maintain security and trust.
2. Hold the legs firmly so that the child won't kick.
3. Check with the mother that there is no history of recent fever.
4. Check that Lisa has not had oral polio vaccine recently.
- \* 5. Stop the procedure.

193. Lisa's sister, Marcia, is 3 months old and weighs 7.3 kg. In the assessment of the 3-month-old child's development, which physical characteristics and abilities should be evident?

1. Posterior fontanel closed, Babinski reflex disappears.
2. Recognizes familiar faces, discovers feet.
3. Palmar grasp reflex absent, cries to be picked up.
- \* 4. Eyes focus, neck is controlled.

194. Marcia would most likely be receiving immunization for which diseases?

- A. Tetanus.
  - B. Whooping cough.
  - C. Diphtheria.
  - D. Red measles.
  - E. German measles.
1. A, B
  2. C, D
  - \* 3. A, B, C
  4. A, D, E
  5. None; her weight is not high enough.

195. Larry, age 9, is brought into the clinic after stepping on a nail in a sand lot. Three years ago Larry received active immunization to tetanus. Therefore, the nurse would administer which of the following substances to provide immunity for Larry now?

1. Tetanus immune globulin (human).
- \* 2. Tetanus toxoid.
3. Tetanus antitoxin.
4. Hyperimmune serum.
5. BCG vaccine.

196. In planning your approach to children, the nurse is aware that stranger anxiety appears in human beings at approximately what month?

1. 2 months.
2. 5 months.
- \* 3. 8 months.
4. 12 months.
5. 18 months.

197. Eight-year-old Mary Benjamin possibly has diphtheria. Her mother brings her to the clinic for a:

1. Dick test.
- \* 2. Schick test.
3. Wasserman test.
4. Agglutinin titer test.
5. Complement fixation test.

198. While talking, Mrs. Benjamin mentions that she has a 12-month-old girl, Sally, at home. In discussing the feeding routine, you learn that Sally takes a nighttime bottle of milk to bed. Why do you advise discouraging this habit?

1. The child will be more difficult to wean to the cup.
- \* 2. She will be more prone to develop cavities.
3. She will eat fewer solid foods.
4. Dependency becomes a problem with excessive sucking opportunities.
5. She is too old to be drinking from a bottle.

199. Sally has infantile eczema. Which one of the following toys would be the most appropriate to suggest for Sally?

1. Her special woolen security blanket.
2. A stuffed teddy bear.
- \* 3. A rubber duck.
4. A Barbie doll.
5. A push-pull toy.

200. 15-month-old Billy Wyler has had no vaccinations. Mr. Wyler says he does not believe in them. The nurse's best response would be:

1. "Scientific evidence proves you wrong."
2. "Have you discussed this with a doctor?"
3. "How can you risk the life of your child?"
- \* 4. "Do you think they may be harmful?"
5. "Think of how you will feel if Billy contracts a serious illness that could have been prevented."



ACKNOWLEDGEMENT

The multiple choice questions in this practise comprehensive nursing examination have been adapted, with permission, from the following sources:

Dawson College Nursing Program, Selby Campus, Montreal, Quebec, Examination Question Bank.

Lagerquist, S. L. (Ed.). (1982). Addison-Wesley's Nursing Examination Review (2nd ed.). Menlo Park, CA: Addison-Wesley Publishing Co.

McMorrow, M. E., & Malarkey, L. M. (Eds.) (1983). R.N. review manual for state board examinations (2nd ed.). Englewood Cliffs: Prentice-Hall.

Saxton, D. F. (Ed.). (1984). Mosby's comprehensive review of nursing (11th ed.). Toronto: Mosbysystems, Inc.

Smith, S. F. (Ed.). (1982). Sandra Smith's review of nursing for state board examinations (3rd ed.). Los Altos, CA: National Nursing Review, Inc.

Vancouver Community College Nursing Program, Langara Campus, Vancouver, B.C., Examination Question Bank.

University of British Columbia School of Nursing, Vancouver, B.C., Examination Question Bank.

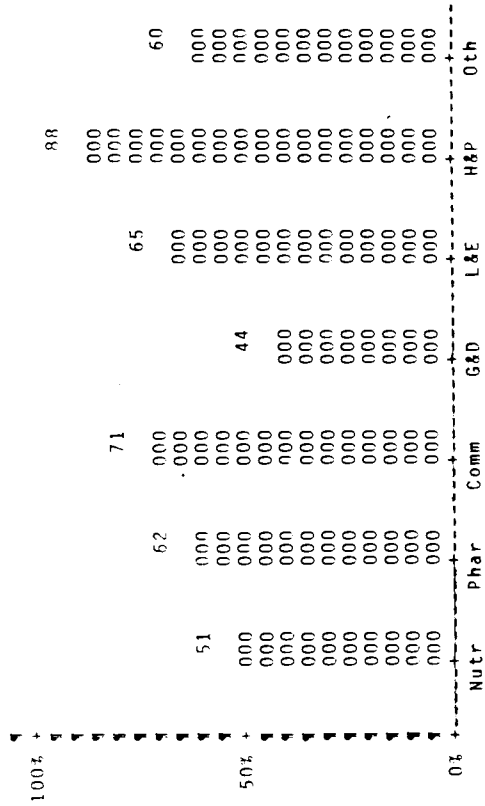
APPENDIX D

COMPUTER PRINTOUT: FEEDBACK OF PRACTISE TEST RESULTS

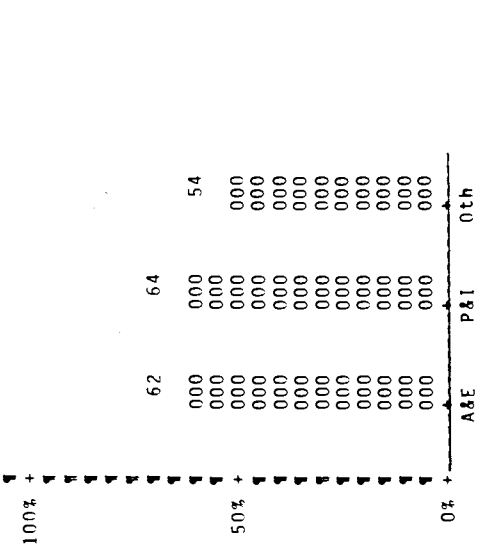
NURSING DIAGNOSTIC ASSESSMENT TEST REPORT

Student Name :  
 Student ID :  
 Student Score : 250

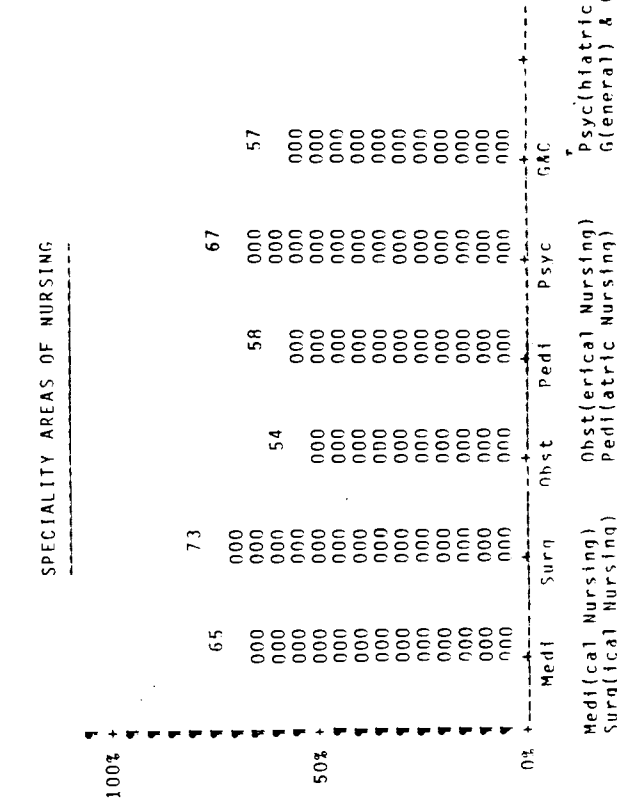
NURSING CONTENT



NURSING PROCESS



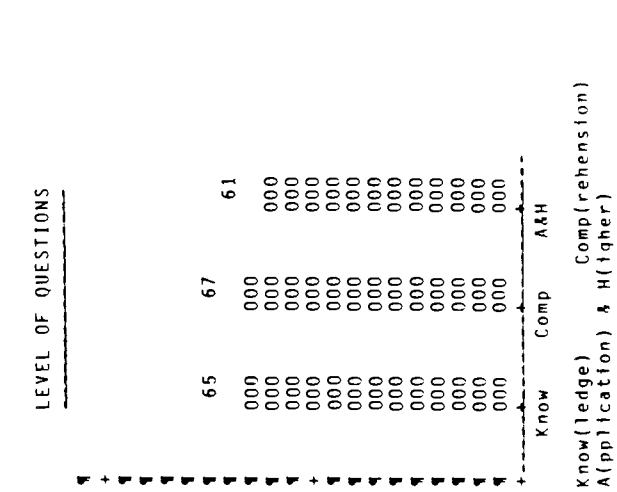
SPECIALTY AREAS OF NURSING



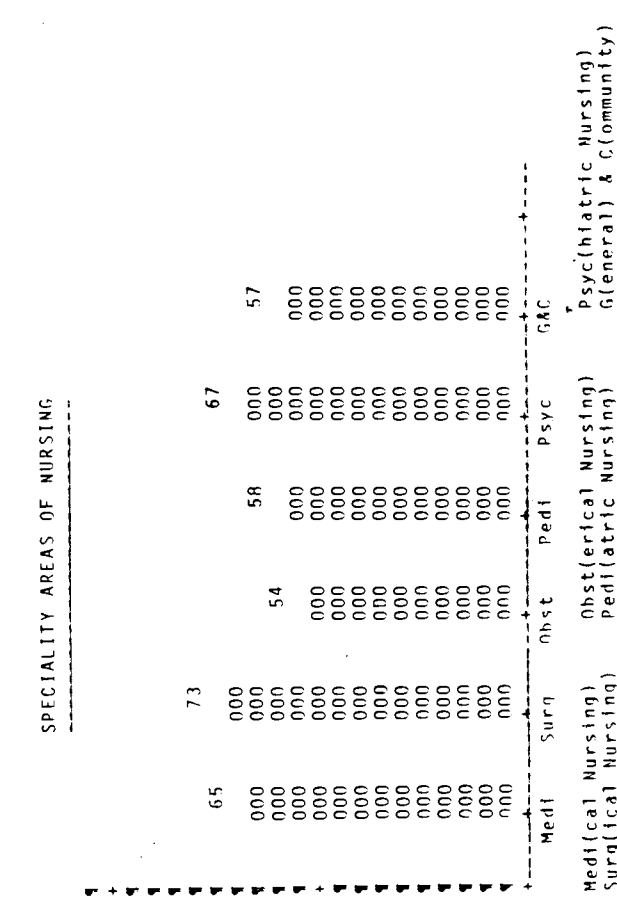
LEVEL OF QUESTIONS



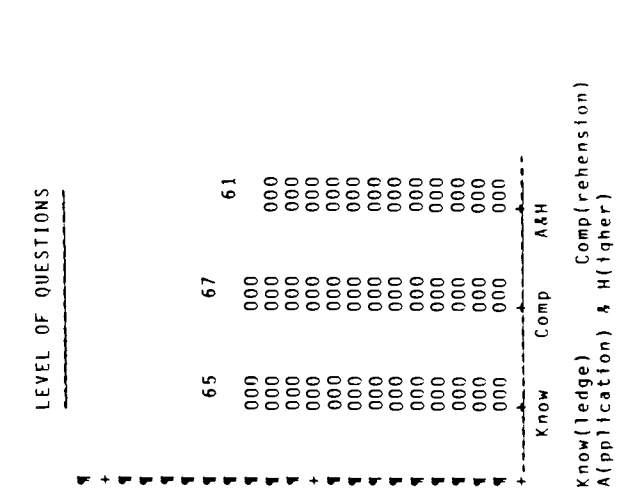
NURSING PROCESS



SPECIALTY AREAS OF NURSING



NURSING PROCESS



APPENDIX E

CRITERIA USED BY FACULTY MEMBERS  
TO CRITIQUE THE PRACTISE TEST

APPENDIX E**CRITERIA USED BY FACULTY MEMBERS TO CRITIQUE THE PRACTISE TEST**Preliminary Criteria:

1. "N" is for "not nursing." If you feel an item is not sufficiently related to nursing, put an "N" in the margin. Go to the next question.
2. "S" is for "significance." If you think an item tests knowledge that is so insignificant that it's not worth testing, put an "S" in the margin. Go to the next question.

Specific Criteria: (to apply to items that are not "N" or "S")

1. "A" is for "accuracy of the answer." If you disagree with the answer that is marked as correct (i.e., best), put an "A" in the margin. Also, tell me what you would select as best.
2. "B" is for "bad practise." If you think that item tests outdated information, or anything you think is not good practise, indicate with a "B".
3. "C" is for "clarity." If the item is not clear and unambiguous, mark it with a "C".
4. "D" is for too "difficult."
5. "E" is for too "easy."
6. "F" is for too "foolish."
7. "G" is for "grammar," including sentence structure, spelling. Underline any errors and put "G" in the margin.

Summary Criteria:

1. "O" is for omission. If you think an important aspect of knowledge has not been tested, indicate with an "O" and indicate what has been omitted. (If you happen to have such a question, any contributions would be much appreciated.)
2. Any other constructive comments that I receive will be considered.

APPENDIX F

LETTER OF REQUEST AND  
QUESTIONNAIRE FOR EVALUATION

APPENDIX F

## LETTER OF REQUEST AND QUESTIONNAIRE FOR EVALUATION

6206 Butler Street,  
Vancouver, B.C.  
V5S 3K4

August, 1985

Dear VCC Graduate Nurse,

Now that you have written the registration examination, I am sure you are experiencing a welcome relief!

As you no doubt recall, my Masters thesis for Simon Fraser University involves developing and evaluating ways to help nursing students prepare for the RN exam. The purpose of this letter is to ask you to respond to some questions about the preparation for this exam.

Could you please take a few minutes of your time to complete the attached questionnaire, and return it to me in the addressed envelope provided? Even if you did not participate in any of the planned activities, I would still be interested in any general comments you have to make.

I will be using your responses to help me to improve and expand upon the materials I am developing. I am hoping for 100% of the questionnaires to be returned so that I can truly represent the opinions of the graduating class of 85/2 when I write the evaluation section of my thesis.

I have the questionnaires numbered only to be able to telephone a reminder to those who do not respond by August 23. You can be assured that your responses will remain anonymous and I will treat all comments with confidentiality.

Thank you for your participation.

Yours sincerely,

*Lynda Christie*

Lynda Christie, RN, BSN,  
MA (Education) Candidate

## QUESTIONNAIRE ON RN EXAMINATION PREPARATION

Please check in the appropriate space or write in your response to the following items. (Use the back of this paper if needed.)

### Section I: Class on RN Exam Preparation

A) Did you attend the class on R.N. exam preparation?

No  ----> then go directly to Section II.  
Yes

B) To what extent did the class motivate you to study?

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
not at all	fair	moderate degree	quite a bit	a great deal

C) How helpful would you rate this class?

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
not at all helpful	a bit helpful	somewhat helpful	quite helpful	very helpful

D) What recommendations do you have for improving this class? Please answer on the back of this paper.

### Section II: Manual on RN Examination Preparation

A) Did you read all or parts of the manual for R.N. Exam preparation?

No  ----> then go directly to Section III.  
Yes

B) Consider how you actually prepared yourself for the RN exam. Which of the following phrases describe your use of the strategies discussed in the manual? (Check as many as you think appropriate.)

1 <input type="checkbox"/>	I don't need to use any strategies.
2 <input type="checkbox"/>	Strategies for study don't make sense.
3 <input type="checkbox"/>	I studied the same way that I always do.
4 <input type="checkbox"/>	I used some of the strategies.
5 <input type="checkbox"/>	I tried to use all the strategies discussed.
6 <input type="checkbox"/>	Other _____

C) Overall, how helpful did you find the manual?

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
not at all helpful	a bit helpful	somewhat helpful	quite helpful	very helpful

D) What recommendations do you have for improving the manual? Please answer on the back of this paper.



Section I:

D Suggestions for improving the class:

---

Section II:

D Suggestions for improving this manual:

Section III: Practise RN Examination

- A) Did you write the practise exam?  
 No  ---> then go directly to Section V.  
 Yes
- B) To what extent did the practise exam motivate you to study?
- |                            |                            |                            |                            |                            |
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 1 <input type="checkbox"/> | 2 <input type="checkbox"/> | 3 <input type="checkbox"/> | 4 <input type="checkbox"/> | 5 <input type="checkbox"/> |
| not at<br>all              | a little                   | moderate<br>degree         | quite<br>a bit             | a great<br>deal            |
- C) How helpful was the practise aspect of this exam for preparing you to write the actual exam?
- |                            |                            |                            |                            |                            |
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 1 <input type="checkbox"/> | 2 <input type="checkbox"/> | 3 <input type="checkbox"/> | 4 <input type="checkbox"/> | 5 <input type="checkbox"/> |
| not at<br>all              | a little                   | moderate<br>degree         | quite<br>helpful           | very<br>helpful            |
- D) What recommendations do you have for improving the practise exam? Please answer on the back of this paper.

Section IV: Practise RN Exam Review

- A) Did you attend the practise exam review?  
 No  ---> then go directly to Section V.  
 Yes
- B) To what extent did the computer printout give you helpful feedback on areas of strength and weakness?
- |                            |                            |                            |                            |                            |
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 1 <input type="checkbox"/> | 2 <input type="checkbox"/> | 3 <input type="checkbox"/> | 4 <input type="checkbox"/> | 5 <input type="checkbox"/> |
| not at all<br>helpful      | a bit<br>helpful           | somewhat<br>helpful        | quite<br>helpful           | very<br>helpful            |
- C) The exam review gave you the opportunity to see the correct answers and ask questions about rationale. How beneficial was the exam review to you?
- |                            |                            |                            |                            |                            |
|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 1 <input type="checkbox"/> | 2 <input type="checkbox"/> | 3 <input type="checkbox"/> | 4 <input type="checkbox"/> | 5 <input type="checkbox"/> |
| no benefit                 | slightly<br>beneficial     | somewhat<br>beneficial     | quite<br>beneficial        | very<br>beneficial         |
- D) What recommendations do you have for improving the review of the practise exam? Please answer on the back of this paper.

Section III:

D Suggestions for improving the practise exam:

---

Section IV:

D Suggestions for improving the practise exam review:

Section V: General

Which of the following suggestions do you think would help nursing graduates to perform well on the registration examination? (Check as many as you think appropriate.)

- 1  More clinical experience, less theory
- 2  More theory, less clinical experience
- 3  More community-based experience
- 4  More time between the end of the program and RN Exam
- 5  Practise tests throughout the program
- 6  Comprehensive test in semester VI to count for grades
- 7  Teach learning strategies in semester I
- 8  Make support courses more applied to nursing
- 9  Increase nursing content; reduce support course content
- 10  Other \_\_\_\_\_

APPENDIX G

GUIDELINES FOR EVALUATION OF THE WORKSHOP

APPENDIX G

## GUIDELINES FOR EVALUATION OF THE WORKSHOP

(A) Class

How effective was the overall organization of content?  
How well did the class stimulate student participation?  
How well did the writer respond to students' questions?  
Was the writer able to present the content in a motivating manner?  
Was the pace of presentation optimal for most students?  
How helpful was the content presented?  
How well-timed was the content related to the registration examination?  
How well-timed was the content related to learning strategies?

(B) Manual

How effective was the organization of content?  
How appropriate are the examples to illustrate the intended meaning?  
How clearly is the content presented?  
How concisely is the content presented?  
How well did the review questions meet their intended purpose?  
How well did the appendices meet their intended purposes?  
How appropriate was the reference list?  
Was the format and aesthetic appearance appropriate?

(C) Practise Test

Is the length of the practise test optimal?  
Are the test situations representative of the content to be tested?  
Are the questions clearly worded and unambiguous?  
Are the questions testing at an appropriate level of difficulty?  
Is the test reliable?  
Are the subscales a reliable indicator of knowledge in that particular area?  
Are the questions coded for each subscale in a consistent and logical manner?  
Have the principles for good multiple choice construction been applied?  
Is the time allotted for the test realistic?  
Are the subscales measuring discrete content?

(D) Practise Test Review

Has the timing between the practise test and the review been optimal?

Does the feedback seem to be helpful to students?

How well was the computer printout understood by students?

To what extent was the feedback to students congruent with students' perceptions of areas of strengths and weaknesses?

Was sufficient time allowed for the practise test review?

To what extent have students felt free to ask questions concerning rationale for correct answers?

How easy was it for students to determine which answers were correct and which were not?

To what extent did students use the practise review to ask for help regarding their examination writing process?

(E) General

What is the effect of the omission of the content that formerly was included in the curriculum, prior to the inclusion of this preparation for the registration examination?

Based on the experience of this study and on student feedback, are there additional curriculum changes that should be explored to assist students in relation to the registration examination?

How does the amount of time between the end of the program and the registration examination seem to influence the results?

Would a comprehensive examination during semester VI that would count for grades be a better motivator for study than a practise test?

Would comprehensive practise tests given to students in semesters II-V reinforce content presented in an earlier semester and therefore help students retain such information?

Based on any of the results of this study and on student feedback, are there additional ways to assist students to prepare for the registration examination to consider?

APPENDIX H

STUDENT RESPONSES TO THE QUESTIONNAIRE  
REQUESTING EVALUATION OF THE WORKSHOP



## APPENDIX H

### STUDENT RESPONSES TO THE QUESTIONNAIRE REQUESTING EVALUATION OF THE WORKSHOP

#### Section I: Presentation on RN Exam Preparation

##### D) Suggestions for improving the class:

- The questions in this preparation class were not like the ones on the RN exam.
- Perhaps having the class in semester 3 and 4 as well.
- Good content and presentation.
- Make it faster paced.
- Present this class earlier in the term. (x 2)
- The class was good.
- The hints about the organization of time and so on were good.
- I'm afraid for someone like myself the class was not particularly interesting. I need a little more motivation, 'fear of God' perhaps. Being basically quite lazy, a class is not enough to make me study.

#### Section II: Manual on RN Examination Preparation

##### B) Description of strategy use:

One student checked: "I don't need to use any strategies."

Seven students checked: "I studied the same way that I always do."

Eight students checked: "I used some of the strategies."

##### D) Suggestions for improving the manual:

- Most of the strategies discussed I had learned in a study skills class.
- Many of these strategies I already used. (x 2)
- I tried to concentrate on the areas that seemed to be tested more which I found in the manual.
- Add an appendix with the answers to the quiz sections.
- The method of scoring the RN exam remains confusing.
- I enjoyed the content.
- Very big manual and I had too much to do and study for when you brought it to us.
- Too lengthy. I always study my own way and I don't want to change it.
- Interesting to read; it conceptualized strategies I already used.
- No suggestion for improvement, but I found the manual not too useful. By now I have found out what study habits work best for me and I have no intentions of trying new strategies when the old ones work fine. (x 2)

- The manual was good for hints on studying.
- One idea would be to introduce the strategies at the beginning of the program. Then people can use them for the class exam . . . then they would automatically use them for the RN exam.

### Section III: Practise RN Examination

Suggestions for improving the practise examination:

- The RNs contain a lot of problems relating to growth and development; more of this should be on the practise exam. (x 2)
- It gave us a good idea what the RN exam was like.
- Helpful; no need to improve it. (x 2)
- Focus more on psychological aspects.
- Case studies were longer with 15-20 questions for each one. (x 3)
- Ask more questions on therapeutic communication. (x 3)
- It reflected quite accurately knowledge in all areas.
- The practise exam was excellent. For me it was a test of my "unstudied knowledge."
- It helped me to get used to the idea of how the RN exam would be written.
- Allow us to write on the paper. (x 3)
- Need more questions with multiple answers (i.e., correct answer is A, B, E).
- Practise exam was too rushed.

### Section IV: Practise RN Exam Review

Suggestions for improving the practise exam review:

- The computer printout results were excellent to let you know how much a person knows. (x 2)
- More time to review.
- I like knowing the correct answers and rationales.
- I'd like to be able to take it home to review the correct answers.
- The RNs are so different it's hard to be ready for them. No matter how much you study, the chance of studying the right thing is slim so you do the same as if you hadn't.
- The way the class was organized was good.
- Once the computer printout was given out, I felt the rest of the class was not useful. I do not find it helpful going over multiple choice questions . . . you will never get that question again. (x 3)
- I liked the computer printout; it gave a clear picture of where you needed to study. For me it proved what I essentially knew already. It helped me to centre a big part of my study time on areas I hadn't done well on.
- The printout was excellent.

Section V: General

## Other:

- Teach learning strategies in semester I and review in later semesters. (x 2)
- I feel the program prepared us very well for the exam.
- The exam really isn't that bad if students try hard throughout the program.
- Practise tests throughout the program could keep up a review of previous semesters, such as maternity and material taught in psychiatry.
- More emphasis on obstetrics in the RN exam than in the program; add a semester to the program to allow for more obstetrics and pediatrics theory time.
- Devote more time in the program to specialties eg., maternity.
- Semester VI students should review in depth growth and development, psychiatry and communication skills.
- More theory, but keep clinical the same.
- Have our class exams set up like the RN exam in procedure.
- Give longer involved case study questions on exams dealing with multiple aspects of nursing.
- Students should try using review books to practise for the RNs.
- English and psychology should be completed prior to entry to the nursing program.
- I don't think any extra study time would have made any difference with an exam such as this one.

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