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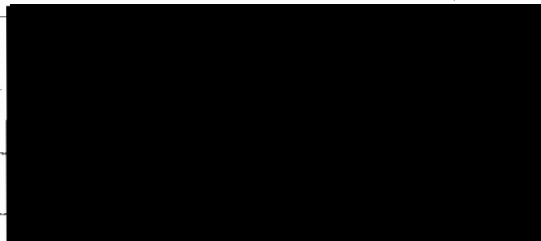
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INCENTIVES AND HINDRANCES IN CONTINUING EDUCATION

FOR NURSES

by

Shirley Jean Patz

B.N., McGill University, 1968.

A THESIS SUBMITTED

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF

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INCENTIVES AND HINDRANCES IN CONTINUING

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ABSTRACT

Nurses recently have experienced pressure to meet challenges of rapid technological change, increasingly sophisticated consumerism, and professionalization, through education. One proposal to meet these challenges is that nurses enter the profession only if they have a baccalaureate degree. An alternative is that nurses pursue continuing education either voluntarily or mandatorily. This thesis examines factors influencing nurses' voluntary participation in continuing education.

Two hundred twenty-seven practicing nurses from three hospitals responded to a questionnaire about incentives and hindrances to participation in continuing education, and about conditions that promoted or inhibited their participation. Demographic data about these nurses, descriptions of their jobs, and of their prior participation in continuing education also were obtained.

Five major questions were addressed. Firstly, is nurses' participation in continuing education related to personal factors such as age or level of nursing education? Secondly, what factors serve as particularly important incentives or hindrances to participation in continuing education? Thirdly, does absence of a given incentive pose a hindrance and vice versa? Fourthly, does the importance attached to various incentives and hindrances vary

according to factors such as age, nursing education and area of work? Lastly, do selected incentives and hindrances to continuing education as rated by nurses match factors in Herzberg's motivation-hygiene theory of work?

The study revealed that only area of work was related to hours of participation in continuing education. The single most important incentive to continuing education was increased skill in patient care. The single most important hindrance was lack of flexible course times. Absence of an incentive did, in fact, pose a hindrance and vice versa, although the rank orders of the two differed dramatically, incentives being much more highly ranked. Importance attached to various incentives and hindrances did vary according to selected demographic data, but trends were not strong. Lastly, incentives and hindrances to continuing education did match Herzberg's theory of motivation-hygiene factors, although some question was raised in relation to Herzberg's proposition that hygiene factors could not be motivation factors.

This study identifies the need for further research about continuing education for nurses. About one-half of the sample reported no involvement in continuing education last year. Moreover, few incentives or hindrances were reported as strongly affecting nurses' pursuit of continuing education. Thus, if non-mandatory continuing education is to enhance patient care and professionalism, substantial efforts must be devoted to identifying how nurses can be more actively involved in continuing education.

I would like to dedicate this work to the many nurses whom
I have met who strive to be excellent practitioners and kind
persons in the science and art of their craft.

"An education isn't how much you have committed to memory or even how much you know. It's being able to differentiate between what you do know and what you don't. It's knowing where to go to find out what you need to know; and it's knowing how to use the information once you get it."

William Feather

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PREFACE

The impetus for this study came from many comments of nurses about their frustrated need to continue learning facts and skills necessary to their safe practice. These comments came from young and older nurses, from ambitious and less ambitious nurses, but, most especially, from conscientious nurses. As a nursing teacher, I felt compelled to investigate this issue in order to better prepare graduates for their careers as life-long learners.

CHAPTER I
BACKGROUND AND PROBLEM

Nurses face many stressors in their work environment. The knowledge explosion in medical and technical fields alone greatly increases the demand for continuous upgrading of both knowledge and skills for nurses.

A highly sophisticated form of consumerism, one that combines increased awareness of medical advances and a pursuit of patient's rights to the most up-to-date medical treatment, has resulted in extreme pressure on all health care workers. Increases in the complexity of technology and corresponding increases in the complexity of patient care have added certain advanced techniques to nursing practice. While many nurses retain much responsibility for patient care, they do not often have the authority necessary to back up that responsibility. As medical knowledge and technology expand professional nursing associations update the acceptable parameters of dependent and independent nursing functions. Not addressed directly in such documents is the attitudinal component of the assumption of expanded nursing roles. Some nurses do not appear prepared to assume additional autonomy; other nurses are struggling for more autonomy. This difference in needs and aspirations among nurses hampers the development of internal solidarity among nurses that could foster the support they need to cope with their high stress jobs.

Nurses are also being faced with the challenge of professionalization.

Many high level nursing leaders see the road to professionalism as originating

from the university. In contrast, many general duty nurses see the university as a road away from the direct patient care that they believe to be the essence of nursing. In all of this, most nurses remain employees of large institutions which they see as having aims and interests different from their own. Many nurses report wide discrepancies between stated philosophies of hospitals and the operationalization of objectives derived from those philosophies for quality patient care. In addition the individual nurse finds herself constantly fighting against additional pressures of reduced supplies, insufficient and inappropriate staffing and lack of control over policies and procedures.

Continuing education is seen by educators and legislators alike as a means of providing nurses with the up-to-date information necessary to maintain a high level of patient care. The secondary, but no less important, function of continuing education is seen to be that of preparing nurses to deal more adequately with their role change. While many states in the United States have now made continuing education mandatory for nurses for relicensure (re-registration), little attention has been paid to the quality of that continuing education and its possible effect on the whole concept of nursing role and practice.

While both university programs and continuing education programs have increased over the past ten years, many Canadian nurses find either or both

of these educational options closed to them. Numerous studies have been done in the United States to investigate various aspects of continuing education for nurses, but Canadian studies are limited. Noticeable by their absence are studies which attempt to assess factors which nurses, themselves, consider important as incentives or hindrances to their continuing education. This study focuses on incentives and hindrances to continuing education and investigates possible relationships between such incentives and hindrances and changes in the nurse's role.

Definitions

For the purposes of this paper the following definitions are presented.

1. A nurse is a person deemed eligible by an official provincial or state nursing association to practice as a registered nurse in Canada or the United States.
2. General nursing is nursing care carried out in hospitals for patients being treated for conditions which are described as medical, surgical or geriatric in nature.
3. Specialty nursing is nursing care carried out in hospitals for patients being treated for conditions which are described as other than general medical, general surgical or geriatric in nature.
4. Continuing education is any structured learning activity engaged in after basic nursing education and directly related to nursing care. The definition does not include total programs such as degree programs offered at universities. It does include workshops, short courses and longer courses designed to augment or update nursing information for practicing nurses. It does include health-related courses, such as nutrition or psychology courses, offered in the community.
5. Professional growth (Nursing 78, 1978, p. 67) is the chance to sharpen old skills, learn new disciplines and, most important, to qualify for more responsibility and more respect on the health care team.
6. An incentive is a perceived benefit that encourages a person to engage in a particular action.
7. A hindrance is a perceived obstacle that discourages a person from engaging in a particular action.

8. Authority-power to influence or command thought, opinion or behaviour.
9. Responsibility-the state of being liable to legal review or in case of faults or penalties.

Limitations of this Study

This study set out to investigate possible incentives and hindrances to continuing education for nurses. It did not investigate the policies and practices of the individual hospitals from which participants were chosen, to assess for the operationalization of philosophical commitments to continuing education. It did not examine the number of applications by nurses to hospitals for continuing education benefits, nor did it investigate the numbers of requests which were granted or denied by those hospitals. It did not investigate actual continuing education opportunities available in the various communities. This study focused on attitudes of nurses in relation to factors which they saw as encouraging or discouraging their participation in continuing education. No attempt was made to match attitude with performance.

Many nurses claimed involvement in self-directed continuing education activities such as reading of nursing journals. This particular aspect of continuing education was not addressed directly in this study. In addition, sampling techniques resulted in a small sample size for university-educated nurses. Due to discrepancies in sample sizes, it is difficult to compare accurately university-educated nurses with those educated in other settings.

Organization of the Thesis

Chapter I outlines general background information for this study and presents definitions of key terms used throughout the thesis. It also presents the purpose of the study in the form of five major questions.

Chapter II describes a review of the literature related to continuing education, professionalization and the concept of burnout, showing the inter-relationship of these ideas. Its main purpose is to provide background information to substantiate the validity of the questions addressed in this study, and to provide the reader with information useful in the discussion and analysis of the data collected.

Much of the literature related to continuing education and nursing describes conditions in the United States. It is recognized that the Canadian situation may differ dramatically in some areas. It is also recognized, however, that nursing trends set in the United States eventually become Canadian trends. The cultural proximity of the two countries suggests that these patterns of trend-setting and trend-adoption will continue.

Chapter III describes the methodology employed in this study. Participants are described in terms of method of selection. The hospitals at which participants were employed are also described. The survey instrument used to collect data is discussed in terms of its items, format, and the

instructions given to participants. Procedures related to gaining permission to survey participants also are described.

Chapter IV presents results from the statistical analysis of data collected in the survey. A brief description of the procedures and tables of statistics is followed by interpretation. Following presentation of demographic data describing the sample, the five major questions are discussed in order of presentation. Possible implications for practice resulting from this study and general conclusions follow the discussion of each question.

CHAPTER II
LITERATURE REVIEW

CONTINUING EDUCATION - WHO NEEDS IT?

In 1970, Alvin Toffler documented and analysed many of the tremendous changes taking place in society at that time. His widely read book, Future Shock, described the necessity for us all to adapt to the times or to suffer the psychological aftermath of maladaptation. The knowledge explosion, rapid technological change, and major changes in human communication patterns all have moved us into a new decade with more complex questions and fewer easy answers than we have had in the past.

These events have placed all of us in a race with time—a race that finds us always slightly out of step and sometimes running in the wrong direction. The 1980's find society at large with knowledge that may be incomplete or wrong, with skills that no longer fit the technology of the workplace, and with human relations skills that may be inadequate. Health care workers, in particular, face the dilemma of inadequate knowledge and skills in life and death situations. It is in this context that we must place the issue of continuing education.

Obsolescence and the Law

The question no longer can be, "Should health care workers participate in continuing education or not?". The courts (especially in the United States) have already been passing judgement on those who fail to carry out their responsibilities to their patients because of professional obsolescence. Holder (1973) reported the trend of courts to pass judgements based on a national U.S. standard of care, updated to reasonably meet the needs of patients by the application of current knowledge and skills. Raised in the famous Darling vs. Charleston Community Memorial Hospital Case (200 N.E. 2nd ed 149, Ill., 1964) was the question of the hospital's liability for failure to require medical staff members to keep abreast of developments in the health care field. Numerous other court decisions (Reed vs. Church (8 S.E. 2nd 285, Va., 1940), Naccarato vs. Grob (180 N.W. 2nd 788, Mich., 1970) underline the move towards protection of the public by prosecution of hospitals and doctors in the United States who fail to maintain and improve their levels of competence through continuing education.

In Canada Padmore (1977) reported figures from the Canadian Medical Protective Association which showed awards and settlements against doctors sharply increasing in Canada. As early as 1957, the Council on Medical Education in the United States had established clear guidelines for the approval of continuing education programs for doctors (Willard, 1970).

Padmore (1977) also reported the approval of a recommendation by the British Columbia Medical Association calling for re-licensing of physicians every ten years. The procedure would require physicians to take a written exam. The question to continue education or not was thus to be taken out of the hands of individual doctors in British Columbia by their professional association. Doctors would be required to continue their education and the association would monitor their adherence to the plan. While this recommendation was not accepted by the College of Physicians and Surgeons of British Columbia or the physicians at large in the province, a standard had been raised. The public consciousness had also been raised.

Nurses, as well as doctors, are held responsible to maintain a level of competence which takes advantage of current information and procedures. Kubat (1977) reports a study in the United States in which it was found that most nurses from all age groups, employed and unemployed, were not sufficiently motivated to avoid professional obsolescence by means of self-directed learning activities. Many nurses in that study considered keeping up with changes in nursing practice a major burden. On the basis of the findings of that study, older nurses, nurses working part-time and residents of smaller communities in the U.S. were deemed incompetent by Kubat.

As with doctors, nurses have come under increasing censure in court decisions judging competency (Cushing, 1982). Sheffield (1979) outlines

recommendations concerning how nurses can avoid liability, one of which is that nurses should refuse to perform nursing procedures with which they are not familiar on the grounds of their lack of competence.

While hospitals in Canada are generally held liable for negligence of nurses employed by them (Sklar 1981), Wiley (1981) reports incidents in which nine nurses in the United States were tried for personal liability in the deaths of patients. Although none of these nurses was found guilty of the charges brought against him or her, the aftermath of these traumatizing events was personally and professionally far-reaching for each one. Colleagues of these nurses also became frightened as they considered the possible implications arising from these accusations for their own continued practice of nursing. In a Canadian case, Susan Nellis ("Nellis described at hearing", 1982, p. 5) was implicated in the deaths of several infants. The Nellis case was dismissed due to lack of evidence. Nurses are now realizing, however, the possibility of having to prove themselves both ethical and competent before the courts. One kind of evidence for the maintenance of competence is the pursuit of continuing education. The Registered Nurses' Association of British Columbia's position statement on continuing education for re-registration does not support mandatory continuing education. The association is active, however, in promoting the program of Safety to Practise adopted in 1974. This program is aimed at assuring competence of all registered nurses working in British Columbia by mechanisms to evaluate competence and to monitor the implementation of the disciplinary process when incompetence is demonstrated.

In addition, the RNABC in 1977 provided an approval standard and criteria for continuing education for nurses within the province. While participation in continuing education cannot be assumed to be fail-proof insurance against possible legal and professional action, or obsolescence, it can be seen to be an indicator of genuine interest in maintaining or promoting a level of knowledge and skill which the patient, as a consumer, both deserves and demands.

~~Obsolescence and the Rise of Consumerism~~

As general effects of the knowledge explosion filter through society, so does more sophisticated information about health, illness, and treatment. The nurse may expect to care for patients who have read extensively about their diseases and who have already thought about the pros and cons of the particular treatments and medications provided (Mendelsohn, 1979). This increase in knowledge of health-related subjects in the general public places an embarrassing pressure on nurses to prepare themselves at a level beyond that of ordinary citizens and to continuously upgrade their knowledge and skills.

The rise in consumer's demands for high-level care also places pressure on nursing schools to continually upgrade the knowledge and skills of nursing teachers (Lee, 1979). Teachers are even more prone than general nursing practitioners to suffer the knowledge lag since the lack of demands of everyday, complex hospital care do not require them to stay abreast of new developments. Because teachers are generally more highly educated, some

argue that the period spent at university away from direct provision of patient care further undermines their knowledge of changes in the system. In addition, it is sometimes more difficult for them to incorporate new knowledge when they have so much obsolete information to throw out — old information that in the past has been for them a sort of status symbol. Thus, two types of obsolescence plague the health care system. The first type is primary obsolescence which occurs when nurses have not received enough up-to-date knowledge and skills in their basic nursing education. Secondary obsolescence occurs when knowledge and skills, current at the time of basic nursing education, fall behind more recent information. Both educators and practitioners may suffer from some kinds of obsolescence. With rising levels of knowledge and increased expectations as important components of present day consumerism, nurses are being pushed towards continuing education.

Changes in Patient Profile

While the general consumer of health care is becoming wiser, the particular consumer of hospital care is becoming sicker. The present day hospital is a complex centre full of the latest health care technology and highly trained specialists. Only the very ill can be treated there with any economic sense. This change in hospitals and patients has become most dramatic within the last ten years. While nursing education has changed dramatically as well, it has not kept pace with the realities of the workplace; nor can it be expected to do so. With new equipment, new techniques, and ever-changing treatment

modalities; nursing education becomes an education for the future. The patient is sicker; the hospital system is more complex; the technology is more highly advanced; the knowledge base has doubled. In this setting the majority of nurses struggle to provide skillful care.

Who needs continuing education? The patient certainly needs to be continually educated to be an intelligent consumer of health care. The nurse needs to be continually educated to provide the level of care demanded in a more complex situation for more seriously ill patients. In the 1980's ignorance is not bliss. Rather being ignorant is dangerous, personally, professionally and legally (Kuramoto, 1979).

CONTINUING EDUCATION - WHO IS LIKELY TO PARTICIPATE?

Given, then the importance of continuing education for nurses, we must ask, are nurses interested in participating in this all important activity? If they are participating, why are they? If they are not participating, why not?

College Canada (March 1980, p. 5) reported reasons why working people in general don't further their education. These were:

- fatigue after work
- cost, since financial aid for part-time university and college students is limited. Companies which have tuition refunds generally make them available only if training is in a job-related course.
- family responsibilities
- it is common for employees to have to go elsewhere in order to have their new qualifications recognized
- lack of information regarding education opportunities for those wishing to further their education and skills
- distance from where a person lives and where a course is taught
- time, cost, and uncertainty of giving up a full-time job to return to school
- inconvenient hours, especially for people on shift work
- bureaucratic and curriculum barriers
- sparsity of educational programs which make use of new developments and methods of educational delivery
- the time required to complete post-secondary courses on a part-time basis (up to 12 years)

Matthews and Schumacher (1979) reported a study in which 88% of 150 nurses agreed that continuing education activities are necessary to

maintain professional competence. Nurses in this survey saw continuing education as beneficial in increasing knowledge and skills as well as their awareness of present nursing trends. Those respondents from university hospitals rated awareness of current trends more highly while community hospital nurses rated better patient care more highly. Factors considered least important in affecting participation in continuing education were academic credit, length of educational activity, and dollar cost. The most important factors in participation were found to be relatedness of topic to job, personal interest in topic, ones own perceived need for information, and the time of the activity.

Bell and Rix (1979) noted that Canadian nurses were spending more than twice as much time each month in self-directed activities as in other directed activities. In a breakdown of diploma and degree nurses, Bell and Rix found that degree nurses subscribed to more journals, read many more nursing articles, purchased more books and had a slightly greater number of hours of self-directed continuing education than diploma nurses. Diploma nurses, on the other hand, attended more than three times as many other-directed activities than did degree nurses. Bush (1978) reported 103 of 113 nurses agreed that voluntary continuing education has a positive effect on the improvement of patient care. While 57% of the subjects in this study were actually involved in continuing education, 65% said that they would be willing to be involved even if no units of credit were given. The area where nurses

were employed appeared to be related to participation in continuing education. While 72% of those in critical care units expressed definite willingness to participate only 47% were actually involved. On the other hand, only 53% of nurses in non-critical care settings said they were willing to participate, 47% said, "maybe" yet 72% were actually involved already. Older, more experienced nurses were more likely to match their stated willingness to participate in voluntary continuing education with actual participation.

Curren (1977) reported different findings with nurses working in critical care areas reporting greatest continuing education activity. Full-time workers were more likely to be registered in courses outside the hospital than part-time workers. Curren also found that nurses employed in different clinical areas, on a full or part-time basis, and in different positions had different learning interests.

Howard (1971) found new graduates primarily anxious to increase their skills in patient care by means of continuing education activities. While other topics, such as development of leadership skills, were of interest to them, new graduates stated their need to improve their skills as general duty nurses to be paramount.

Taristano (1971) found some hospital staff nurses dissatisfied with the nature of recognition given to those who participated in continuing education, the amount of time to attend programs of continuing education, regional workshops and conferences, and time during working hours allowed for use of

the library. She did find the staff nurses participated in continuing education less than higher levels of nurses. Sources of encouragement for continuing education came primarily from parents.

Berg (1973) found differences among participants and non-participants in continuing nursing education. Participants were greater users of books, journals, magazines, libraries, museums and were more often members of organizations than non-participants. More non-participants were married than participants. More participants than non-participants were encouraged by referent people to attend continuing education. Friends and relatives emerged as the strongest encouragers. Generally, participants showed greater willingness to extend effort in the form of money, energy and relinquishing of other activities than did non-participants.

In Canada, Clark (1975) found statistically significant correlations between total participation of nurses in continuing education (i.e. independent and dependent participation) and number of pre-school children. She also found statistically significant correlations between total participation and university education experience, total participation and employment status, and total participation and position. Clark's study explored the nature of the relationship between orientations and participation by adults in learning activities. These orientations were described as learning, sociability, occupational, professional, societal, interactive, relief from boredom and

frustration and an eighth orientation, not named. Of these, only the learning orientation yielded statistically significant correlations with participation in learning activities.

Connor (1979) found seven motivational factors underlying nurses' reasons for participation in continuing education: compliance with authority, improvement in social relations, improvement in social welfare skills, professional advancement, professional knowledge, relief from routine and acquisition of credentials. The 843 nurses participating in this study attached most importance to gaining of professional knowledge.

These studies demonstrate the diversity of reasons for nurses' participation or non-participation in continuing education in Canada and the U.S. A strong general tendency emerges, however, which emphasizes increase in professional skill and skill in patient care as being primary motivators. Usually, more than one-half of the nurses participating in these studies were engaging in continuing education. Since a higher percentage of nurses agreed with the importance of continuing education than the actual percentage of those who participated in continuing education, the question of motivation and availability must be further explored.

CONTINUING EDUCATION - VOLUNTARY OR MANDATORY?

Mandatory Moves

While availability of good continuing education courses and nurses' motivation to participate in them are being explored, many professional nursing associations in the United States have passed resolutions requiring a certain number of continuing education credits for re-licensure or re-registration. In December of 1979, these resolutions were law in California, Kansas and Nebraska. Florida, Iowa, Colorado, Kentucky, Massachusetts, Minnesota, Nevada, New Mexico, and South Dakota have set definite dates within two years to begin their programs of mandatory continuing education ("Continuing Education Roundup, 1979"). Other states have selective mandatory clauses for certain groups of nurses (Hochman, 1978).

While these moves towards enforcement of continuing education may seem to indicate leadership on the part of professional associations and governmental agencies, some informed nurses (Stuart, 1975) see mandatory continuing education as a premature reaction to grave public concern about professional obsolescence. Stuart quotes Malcolm S. Knowles' view that the hysterical rush to mandatory continuing education is a fairly realistic response to "future shock" ..

Credits

Part of the problem relating to continuing education credits is our outmoded way of measuring them. Traditionally, credits have been given in relation to courses taken and numbers of hours those courses encompass. While such a system may indirectly affect competence, it in no way guarantees direct assessment of competence. Briant (1977) advises nurses that no correlation has been found between attendance at continuing education activities and an increase in the quality of patient care. This limited method of assignment of credit does not take into consideration the concept of incidental learning, learning from colleagues and certain, other self-directed activities. Nor does such a system measure a person's level of competence before beginning any continuing education activity. Some hospitals in the United States have a system of in-house credits that focuses on nurses' ability to function according to standards set within specific institutions. This in-house credit system raises questions about the role of professional associations that have traditionally set standards for practice.

Will the Volunteers Please Stand Up

Flaherty (1977) speaks out against accreditation of continuing education programs for nurses in Canada on the basis that such accreditation has the potential to foster rigidity—a dangerous situation considering the heterogeneity of the nursing population in this country. She also sees the mandatory education push as a retrograde step for nursing at a time when nurses are being encouraged to become more self-directing in their professional activities.

The Manitoba Association of Registered Nurses' Position Paper on Continuing Education (1977), places responsibility for continuing education on each registered nurse and on the hospital employing that person—but this responsibility is to be taken up voluntarily. A few professional nursing associations in the United States, as well as those in Canada, have voted unanimously to continue voluntary continuing education for their members. The director of the Maryland Association expects this position will continue at least until there are programs of high quality and ready accessibility within each state of the union (Wolf, 1977).

Arguments for Legislation

Dorothy Novello, the then President of the National League for Nursing in the United States stated in an interview with R.N. Magazine (1977) that she is convinced continuing education will become mandatory in all 50 states of the United States within five or ten years. She also believes that the government will control this mandatory clause by cutting off reimbursements to hospitals who can not produce evidence that their employees have participated in a certain amount of continuing education for any given fiscal year.

Lorocco (1977, p. 12) attempts to answer some general objections by nurses to mandatory continuing education. First, she answers the question, "Why us? Doctors need it more than we do!" This question is challenged with a reminder

that nurses are separate from doctors and that nurses must establish and maintain their own credentials to practice. Second, to the objection that not enough programs/courses are available, she replies that poor enrollment in courses that are available jeopardizes improvement and expansion of course offerings for the future. "Many programs are useless," the nurses say. To this she replies, "This just demonstrates the need for closer monitoring of continuing education offerings." While some nurses say that there are not enough "qualified" nurses to teach such courses, Lorocco believes that many staff nurses could effectively share information with their colleagues and that other disciplines could exchange valuable information with nurses. The question of cost is met with the suggestion that patients will have to bear part of the cost.

While California law demands continuing education for re-licensure, registrants in that state may instead take a qualifying exam attesting to their general level of nursing knowledge. The seventeen nurses who chose this option before 1978 found the exam difficult. Cooper (1978) is reported to state that nurses will probably come to agree that a mandatory examination be required every five years for nurses seeking re-licensure. Rajabally (1980) concurs with Cooper's belief that most nurses require outside encouragement for continued learning.

A random sample of 900 subscribers to Nursing yielded a surprising 61% of nurses surveyed in favour of mandatory continuing education; 30% were opposed and 9% were undecided. Joyce Schowalter, an executive secretary of the Minnesota Board of Nursing, in an interview with Nursing 78, said, "I would hope that we can get out of continuing education and get into competency ratings—something that would tie in more directly with nurse's ability to nurse." (Schowalter in Hochman, 1978, p. 13)

A survey of 300 nurses (1981), conducted by the Registered Nurses Association of British Columbia, found 8% of those surveyed strongly opposed to the RNABC's taking the position that re-registration (re-licensure) should be based on regularly demonstrated competence and 16% were somewhat opposed to the Association's taking this position. It appears then that 76% of those surveyed were not against such a position. The RNABC's official position is against mandatory continuing education but for further investigation of competency ratings.

The controversy about mandatory continuing education vs voluntary continuing education and their relationship to competency rages still. Governments having to bear the costs of litigation for nursing error possibly attributable to obsolescence, will doubtlessly apply direct pressure on professional nursing associations to demand continuing education for their members. In the meantime, all provinces in Canada and some states in the United States seem, for now, to be far away from laws that make continuing education mandatory for nurses practising within their borders.

HIGHER EDUCATION AND PROFESSIONALIZATION

On Being a Professional

While all of this controversy about voluntary vs. mandatory continuing education rages, another movement, to define nurses professionalism in terms of "higher" education, is gaining support. Underlying this second movement is the belief that not all nurses are professional nor should they be considered so. In order to examine this question more fully, it is necessary to consider the tenets of professionalism and to assess their applicability to present nursing practice.

The relative state of professionalism of a given group can be described by two basic theories (Ritzer, 1972). The first theory postulates that discrete characteristics describe professionals. The second theory looks at professionalism on a continuum. These two theories may be seen to be congruent in that the discrete characteristics, themselves, can be rated in terms of the degree of attainment. Characteristics can also be located from most important to least important on a continuum.

The University Degree

Examination of the 'discrete characteristics' theory reveals the primary and single most important characteristic of a profession to be that

of a special, formalized body of knowledge. It was on the basis of this identified characteristic that Mussallem (1962) recommended again that nursing students be educated in colleges and universities rather than in hospitals. This study further delineated two categories of nurses, as suggested by Montag (1959), the "technical" nurse and the "professional" nurse. Musallem's needs analysis predicted that the 1960 ratio of one to twenty-five university to non-university trained nurses would need to be changed to a ratio of one to three in order to provide the level of nursing care demanded by complex health problems in both hospitals and the general community. Mussallem's projected ratio has not been met in Canada or even in the United States (Moses and Roth, 1979). Despite this fact, policy statements from nursing associations continue to reflect the belief that professionalization via the university is the most necessary and effective method by which patient care is to be improved.

The Board of Directors of the National League for Nurses in the United States passed a new position paper on February 3, 1982 calling for the baccalaureate degree in nursing as the academic preparation for professional nursing practice. This statement marked a major departure for the NLN from previous statements supporting all four levels of nursing. The statement, however, addressed entry into professional practice for the first time. (American Journal of Nursing, 1982, p. 358).

In Canada, the Canadian Nurses' Association Board of Directors passed a resolution in February, 1982, establishing its position in support of the baccalaureate degree in nursing as the academic preparation for professional nursing in Canada by the year 2000. Hurd (1979, p.39) speculates that the official position of such associations places unnecessary and potentially damaging stress on the general nursing population. She says of the executive bodies of the associations:

It is one thing for a minority to raise a standard and lead a discipline toward a worthwhile goal. It is quite another thing for this minority to raise the standard and then, without allowance for lead time, proceed to penalize the remainder of the discipline for not having already reached the goal towards which the few are supposedly leading it. (Hurd, 1979, p. 39)

Hurd calls this process a de-professionalization of the majority of nurses by the few. Bullough and Sparks (1976) speak openly of the stated philosophical stance of some of the most eminent figures in the profession to actively block movement of Associate Degree graduates into Baccalaureate programs in order to reinforce the difference between the technical and the professional nurse role. Further to this, some observers (Berrup and Good, 1979) believe that there is a sinister plot afoot to remove the professional nurse from the hospital setting, since she/he cannot compete effectively there with doctors and other professional health care workers. The de-emphasis of clinical skills and the socialization to administrative and community nursing practice in university programs is said to be evidence of such a plan. Of those nurses who do gain a baccalaureate degree, how many are able to apply their

"specialized body of knowledge" in ways that may be said to improve the quality of patient care? This question is not easily answered. Hogstel (1977) reports a study where it was found that Baccalaureate and Associate Degree nurses neither were used differently nor were perceived to function differently in general hospitals. Soules (1978) added to this finding the facts that promotion and salary differentials are not significantly different in the two groups. In a study carried out by RN Magazine (1978), it was found that in nine out of eleven nursing activity categories, graduates of hospital-based nursing programs scored higher than graduates of Baccalaureate programs. On registration examinations graduates from hospital-based programs obtained significantly higher scores than Baccalaureate graduates. Thus, the positive differentiation hoped for between university-educated registered nurses and other registered nurses in relation to knowledge does not seem to have shown itself.

As an indicator of a superior grasp of a specialized body of knowledge, particular to nurses, the baccalaureate degree in nursing has seemingly not provided its recipients with ability to apply that superior knowledge in a

concrete way in writing registration examinations or in working in hospitals.

Katz (1969) in his analysis of nurses' place on a continuum of professionalism calls them semi-professionals. While some nurses do meet the discrete criterion of an extended education, this education is not in fact seen by others (eg. hospital administrators, and ward supervisors) as indicative of a significant increase in skill.

An RN Magazine Survey (1979) shows 7 out of 10 nurses against the baccalaureate degree as the preparation for professional practice. Perhaps non-degreed nurses believe that they can do nursing as well or better than degreed nurses. Choinski et al (1978, p. 32) suggests that:

Nursing must not close the issue (of quality of health care) and mislead itself with the thought that requiring a BSN degree will, enhance the professionalism of nursing in the eyes of other health care providers, patients or the public.

Autonomy

A second important concept associated with professionalism is autonomy. Implicit in the concept of autonomy is the idea of being able to make independent decisions and then being held responsible for those decisions. This concept, as it applies to nurses, does not enjoy wide popularity in either Canada or the United States, especially among doctors. Independent practitioners in nursing constantly vie for control over areas of decision-making that have traditionally been held solely by or jointly with doctors ("Kentucky M.D.'s Abandon Attempt, 1982).

Bachand (1974, p. 29) declares that "the education of a nurse prepares her for service of a different kind than that of the physician. She accepts full responsibility for such service and she wishes to be held accountable for it."

Independent practitioners aside, nurses working as employees of hospitals face similar power struggles. A most recent dramatic case in point is Tuma vs Board of Nursing (593 P. 2 ed. 711, 1979) where a clinical nursing instructor was asked by a patient to supply alternate information about the treatment of her cancer (Bell, 1981). The provision of that information, while it was well within the scope of nursing knowledge, was deemed inappropriate for the patient without the doctor's consent. Ms. Tuma's nursing licence was revoked. While this decision was over-turned by the Idaho Supreme Court, the reason for that change was ironic. The Supreme Court ruled that the license could not be revoked since the Board of Nursing's rules and regulations did not adequately warn that interference with a physician-patient relationship was unprofessional conduct. This case demonstrates how far away nurses are in practice from autonomy. It is recognized that the struggle described was between a more powerful and a less powerful person in a vast health care system. Power, however, itself is a measure of professionalism. Nurses faced with daily reminders of their subordinate position within the system, often, assume dependent roles.

Watson (1981) observes that according to most theories of personality and development, dependency will cause conflict and stagnation in growth. While nurses can have certain accomplishments, she suggests, through acts of manipulation, authoritarian adherence and low-threat behaviours, the price they will have to pay is high.

A few decisions in health care are becoming indisputably linked with nurses and the term "nursing diagnosis" is gaining some acceptance. Collegiality among members of the health care team however remains a power struggle.

Collegiality

Another essential component of professionalism is that of collegiality. The search for collegiality intensifies the power struggle among various members of the health care team. Bachand (1974, p.26) asks the question, "What does the nurse want?" The answer, she suggests, is simple. The nurse wants "the right to practice her profession without sanction (sic). She wants to work cooperatively with the doctor and in harmony with other health professionals." While the idea of collegiality may remain attractive, the reality of the situation is that most nurses work as employees within a highly bureaucratic and hierarchical system. Most nurses were trained within that system and they, wittingly or unwittingly, pass on their reactions to the system to students and new graduates.

Nolan (1976) states that "only conformity to the subordinate-superordinate interactional pattern and adherence to standardized procedures and policies have been rewarded." Staff nurses, usually consult with doctors through the head nurse, she suggests, rather than seeking consultation directly with the clinical nursing specialist. This lack of ability to approach the clinical specialist is also based on the staff nurse's perception of the specialist as a superordinate. Such patterns are fostered in nursing schools as well, where adherence to strict policy and a demonstration of proper respect for the authority of teachers is the posture most rewarded. Yet there are factors which move even participants in the bureaucratic system towards more shared decision making. The most important of these factors is the seriousness of the condition of most patients. A sense of trust and a sharing of information must occur if the patient is to stay alive. But collegiality really flows from self-respect. Self-respect allows for respect of others. Unfortunately, nurses are not characterized by such self-respect. Watson (1981) comments on Adler's description of an inferiority complex, which results from deep wounds left by severe belittlement. She goes on to examine some of the forms of belittlement nurses have faced including less recognition, less pay, and less representation in the power structure.

McGee (1977) developed a model for examining attitudes of nurses affecting their interactions with one another. She talks about the institutionalized nurse who "feels secure and comfortable only with well-established habits and routines." The polemic nurse she describes as subjecting "her colleagues to an unending stream of carping criticism directed against 'the system' or the people she works with."

The kinetic nurse is the one who tries to encourage her colleagues, who listens, and shares, who looks for new and better ways to do her job and who attempts to gain her colleagues' cooperation in planning and carrying out patient care. This nurse must have effective skills that she can practice in relationships with all members of the health care team.

Rajabally (1977) asks nurses to carefully consider their relationships with doctors. He says,

I wonder, too, at our apparent desire to eradicate the influence the medical profession has upon us—doesn't this also indicate some irrationality in nursing? It seems to me that any such trend is unfortunate, because, medicine and nursing seem to go together like shirt and trousers (or skirt and blouse)—remove one part and embarrassment follows.
(Registered Nurses' Association News, 1977, p. 19)

Labelle (1977) in describing factors associated with authority in the nursing profession, cites interpersonal relationships as a cornerstone. The Registered Nurses' Association British Columbia includes the following in its statement of philosophy (1977):

Besides acting collectively, nurses as individuals can help foster well-being. All nurses—whether giving direct care or working as administrators, or educators, or researchers—have the opportunity to demonstrate in their relationships with colleagues and students the attitudes they wish to see reflected in the care of patients.

Whether nurses relate to one another or to those whose power and authority may seem to overlap their own, they must gain more and more skill in this quality called collegiality if they are to reach the professional ideal.

Outside Acknowledgement

While nurses struggle within the health care system for better education, autonomy and collegiality, they must also prepare to either accept or modify the public's view of their progress in professionalization. Holt (1981) in a passionate article to fellow nurses admonishes them to stop begging for professional status. The public will not see nurses as professional so long as they are willing to be walked on, bend to their task-masters, accept clerical responsibilities at the expense of patient care and lie down and quit rather than stand up and fight, she says. She lists reasons why some of these things may be happening in nursing practice. Nursing wages, she suggests, are very low in comparison with those available to persons in other careers. Nurses often work part-time, to supplement their family's income, and are, therefore, more likely to be without employee benefits and to be prone to quit if things get tough. Nursing leadership is divided as associations vie for union as well as professional support. Nursing educators are not preparing graduates who are efficient fighters and copers. Lee (1979) maintains that nurses need to foster centers of intellectual excellence in nursing to become highly visible to the public as professionals.

Yet the public does have some idea that nurses are professionals. In an RN Magazine Survey (1979) , 86% of the sample of the public surveyed in the United States considered nurses to be professionals. Sixty - six percent of the public backed the expanded role of the nurse while

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40% said "no". In their assessment of nurses' professionalism, however, 66% of members of the public saw nurses as assistants to doctors 22% saw them as colleagues and 12% described them as independent in their professional status.

Accountability

While the public seems unsure of the definition of professionalism, nurses recognize a central tenet of professionalism to be accountability directly to the patient. To foster accountability nurses have developed an international code of ethics. In addition, national associations have developed standards for nursing practise. Such codes and standards are forms of contracts between themselves and their patients and themselves and society at large. (Poulin, 1977)

Poulin suggests that standards of care produced by the Canadian Nurses' Association imply competencies of primary care professionals. The latest statement of standards (1980) requires that nurses fulfill their professional responsibilities in their independent, and dependent functions. Poulin's analysis of the history of the role of nurses points out that while nurses used to be short on knowledge, they were skilled in practice; whereas they had fewer, formal educational opportunities, they had much greater responsibility for total patient care. Now this situation appears to be absolutely reversed. Because the nurse is sharing responsibility for her

patients with a variety of other health care workers, the exercise of her accountability is threatened. Winning some of that responsibility back will cause conflict and will demand a high degree of political, and interpersonal skill on the part of the nurses involved.

In summary, nurses must agree with Katz (1969) who suggests they are semi-professionals. While a few of them have extended educational backgrounds in nursing, while all of them are struggling to gain some autonomy, to foster greater collegiality, to become more accountable to patients and the general public, society looks on giving only part of the answer they desire about its perceptions of nurses as professionals. Nurses have bits of all the discrete characteristics of professionalism and recognize that not all of the characteristics can be realized to the fullest extent by each nurse.

If, however nurses allow the pursuit of professionalism to rob them of their energy for nursing they risk losing their unique identity. Rajabally (1977) suggests that nurses have a tendency to complicate things in their search for themselves. Maybe the kind of complicated thinking to which he refers is just another reflection of effects of "future shock." It has happened all at once and some nurses are confused, others are frustrated and angry.

THE PATH TO BURNOUT

For all of the challenges which face nursing, there are many conflicts and stresses both from within and from without. Many nurses are confused, disappointed and angry. Many are leaving the practice of nursing. Rothwell (1974) suggests that the role of continuing education is not only to prepare nurses to deal with technological change but also to prepare nurses to assume new roles in the health care system. At present, nurses see many obstacles to the assumption of such roles.

Continuing Education and the Economics of Nursing Care

While much is being written and discussed about nurses' expanding their roles and spheres of influence, the bottom line of economics is the real measure against which they must pit their energy and strength. In British Columbia, after winning a considerable increase in wages ("A Nursing Shortage, 1980"), \$19,488 for beginning R.N.'s, nurses were required to make the system work with virtually the same amount of cash. It became increasingly difficult to hire well-qualified nurses to work in various specialty areas. Hospitals hired many new graduates as "floats" who were required to move from area to area and even into critical care areas without proper orientation or supervision. Baer (1977) asks, "Isn't there still a role for the nurse who is concerned with the emotional and physical comfort of a single patient?"

Must she be competent to work anywhere in a hospital setting with multiple, complex instruments and medications?" The answer to these questions is probably yes and no. Yes, there is a place for such a nurse, but, no, she can't expect to have the hospital respect matching of nurse to patient. There are too many permutations and combinations to be considered—a nurse must be ready to move almost anywhere. The resignation of several top level nurses at the Vancouver General Hospital over inadequate and inappropriate staffing procedures fell in the midst of a long and bitter battle (about the quality of patient care) between hospital administration and the nurses at large (Bazowski comments on V.G.H. Scene", 1978). Nurses in Alberta went on strike for better working conditions. A nurse from Alberta talking to a reporter sobbed, "I just can't go on like this. I just can't go on." One nurse held up a sign reading, "We are tired of a constipated budget". ("A Nursing Shortage", 1978). Now the situation in British Columbia is even more critical. Over 2000 hospital workers have been laid off, most of them nurses. This move comes as a direct attempt by hospitals to contain costs to fit government budget cuts.

Ginzberg (1981) suggests that tough economic times in North America will

most certainly negatively affect nurses' ability to go to university, and to be active as nurse practitioners. The more highly educated a nurse is, the more money she/he must be paid. Those who can afford to go to university, therefore, may find their employment opportunities limited as cuts are made across the board in health care.

Physicians Pay, Too

Economics are also affecting the real take-home pay of physicians who see themselves falling back in their relative position to other workers. This perception by doctors has caused a serious rift between doctors in Canada and the government that administers the national health care system. Ginzberg (1981) predicts that doctors real income will diminish even further with a dramatic increase in physicians practising in the United States—from 175 per 100,000 to 240 per 100,000 within the next ten years. This threat to doctors' real earning power and the concomitant increase in physicians will render nurses' efforts to expand their activities more and more difficult.

Inservice Cutbacks

While certain levels of inservice education for nurses may be necessary to assure hospital accreditation, hospitals will be looking for programs or courses with highest pay-off in the workplace. Since it is good economics, if an orientation program is in place, to keep regular staff in one place

(to avoid extra orientation costs or loss of efficiency due to the necessary learning period), hospitals do not promote education that will encourage staff members to move up the ladder in the organization unless they can eliminate the usual costs associated with such moves.

While Donovan (1978) found that continuing education benefits and programs are a key part of most hospitals' benefit packages in the United States, these conditions do not prevail in Canada. Recently, while being interviewed for a position, as an inservice educator in a highly respected university hospital, I was told that I would be given 1 1/2 to 2 days a year to continue my own education, and that I would have to seek out and bear the total cost of that education myself. An R.N. survey (1978) showed that more hospitals in the United States were tightening their budgets in relation to continuing education than were expanding them. Of 321 nurses in the R.N. survey, 57% said that they were paid their full salary while they attended continuing education activities; 46% got full reimbursement of tuition fees.

In Canada, such positive situations are rare. Recently, a generally trained graduate was asked to "float" to the cardiac care unit. She replied that she was not qualified and would need to take a cardiac course before she could assume that responsibility. While the hospital did not appear to agree with her assessment, she was given time off without pay to attend the course, since she refused to work in the cardiac care unit without further

education. The enterprise cost her her salary plus tuition and travelling expenses. The hospital benefited directly from this situation by employing her at once in the position. Baer (1977) attests to the fact that costs of continuing education are very high. His assessment is that for nurses and technologists who must pay these costs themselves, it is almost always prohibitive.

Marriner (1976) cites Argyris' idea that "the greater the disparity between the individual's and the organization's goals, the more likely the employee will feel dissatisfaction, tension, conflict, apathy or subversion." In the case of continuing education nurses receive double messages from their employers. They must be ready to move to any area of the hospital if necessary. Yet, few resources are provided to prepare them for such activities and to protect the patient from their ignorance. Burstahler in (1980) is quoted as saying that "nurses in B.C. cite one reason for their leaving nursing is being expected to carry out functions they haven't been taught to do. The mechanisms for learning these skills are not available (in B.C.)."

Germaine (1980) supports the idea that "nurses remain under constant pressure to do the ethical thing--to do what is good for the patient, while realizing that what is good for the patient may not be in the best economic interest of the agencies." For hospitals, cost-effectiveness comes first. The frustration nurses experience from such dilemmas' is increasing.

Continuing Education is Not Enough

While continuing education may be seen as part, even a large part, of the answer to increasing demands on the nurse to maintain and upgrade her skills, other factors impinge directly on her ability to provide quality care.

Del Bueno (1976, p. 51) "found that certain continuing education programs appeared to have no effect on behaviour of nurses on-the-job. Rather, she postulated, "reward and reinforcement systems probably are most important elements in affecting performance behaviour." She asks us to consider whether, in fact, nurses receive negative rewards for performance or positive rewards for non-performance. For example, she asks, does a nurse who takes extra time to meticulously carry out a catheterization receive chastisement because her paper work is not done? Does the nurse receive any feedback if her performance is done correctly, or only if it is done incorrectly? Is consistently correct performance possible within a system strained by lack of supplies, equipment and essential support services? One way in which this idea may be tested out is to examine the performance appraisal systems of hospitals.

Del Bueno (1979, p. 57) suggests that:

If employers believe that the reward system is just so much rhetoric i.e. that whether or not you do the job nothing will happen, then the best forms and the best training will be of no avail. Employees will test out the system to see if you really intend to "put your money where your mouth is." When unacceptable performance is tolerated at any level there is no credibility to a performance appraisal system.

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Even for the new graduate, entering nursing practice with energy and enthusiasm, more hindrances than incentives to quality care are seen to exist. House (1976) describes her experience as a new graduate in negative terms. Little salary differentiation for a university degree was given; little encouragement was given to innovative ideas; punishment was used more often than positive reinforcement; few incentives were provided for personal growth; there was little or no opportunity to voice dissatisfaction in an objective atmosphere or for input into policy; there was no advocate or ombudsman for the newly graduated nurse; lines of hierarchical power were hidden in the hospital structure, and they were difficult for the new graduate to discern.

House found that graduates were used in irrational way to "benefit the system." For example, new graduates, told that they were not experienced enough to do team leading during weekdays, were expected to fill-in in this position on other shifts and on weekends. Interest or ability of new graduates was a consideration secondary to the empty spots in the hospitals roster sheet. The new graduate feels "used".

House discusses Glasser theory of young peoples' shift from goal motivation to a role or identity motivation as a reason for the higher levels of frustration plaguing young nurses today. Glasser (cited in House, 1976) suggests that "people don't hate work. It's as natural as rest or play."

"But," he says, "they'll commit themselves only to the extent they can see ways of satisfying their ego and developmental needs."

Some nurses might assume that this move towards self-actualization is an evidence of selfishness or a shift in concern from the patient to the nurse. Fagin (1978, p. 51) describes some of these behaviours as the rights of a professional person. She lists these rights as:

1. The right to find dignity in self-expression and self-enhancement through the use of our special education and background.
2. The right to recognition for our contribution through the provision of an environment for its practice, and proper, professional, economic rewards.
3. The right to a work environment that will minimize physical and emotional stress and health risks.
4. The right to control what is professional practice within the limits of the law.
5. The right to set standards for excellence in nursing.
6. The right to participate in policy making affecting nursing.
7. The right to political and social action on behalf of nursing and health care.

Fagin recognizes that the historical-cultural image for such careers as nursing, teaching or ministering does not include rights. Rather, heavy emphasis has traditionally been placed on responsibility and service.

Katz (1969) postulates that nurses' culturally defined role fills the gap in humanizing produced by the pure application of science and/or technology. This role may be seen to be antithetical to science. In fact, in the early part of this century, it was considered so. Baumgart (1979, p. 32) quotes from "an address to the 1908 graduating class of the Philadelphia School of Nursing in which an eminent physician urged nurses to accept their intellectual inferiority and warned: "If a little knowledge is a dangerous thing in most avenues of employment, in nursing it is more than dangerous, it is fatal.'" Another generational problem observed by Winstead-Fry suggests that nurses need to begin the anxious process of differentiating themselves from those aspects of their history that hold them back from independence and professional autonomy.

Present Results From Roots in the Past

Miller and Mothner (1978) developed an interesting assessment of the psychological consequences of sexual inequality as they apply to nursing. In their article, the authors describe the subtle and not so subtle means by which non-dominant groups express their feelings of frustration and anger towards the dominant group. This anger results directly from the dominant group's destructive interactions with them. Yet both parties are tied to each other and need each other. Breaking out of this self-defeating behaviour is conflict-producing since it is promoted by the dominant group and even by some members of the non-dominant group as normal

A few years ago, as a nursing instructor in a large, teaching hospital, I sent a couple of students to watch a young doctor insert a medication into the chest cavity of one of the students' patients. As was our custom, we had discussed the equipment in advance and the students had handled it. We had analysed together possible risks of this procedure to the patient. During the procedure, the doctor unwittingly failed to close off the valve on the equipment and allowed air to enter the chest cavity. The students, aware of the possible danger of this error to the patient, asked the doctor about the valve and its function in the procedure. He immediately recognized his mistake and hurriedly finished the procedure, leaving the students to clean up. Approaching me in the hall, he said, "I'm wondering how well nursing instructors are trained these days. Can you tell me the normal ranges for these lab tests?" The conflict between doctors and nurses at all levels lies just beneath the surface of the civility of day-to-day interactions. The civility of the nurse-physician relationship has been called the Doctor-Nurse Game (Stein, 1967, p. 699). In this game the nurse is:

to be bold, have initiative and be responsible for making significant recommendations, while at the same time she must appear passive. This must be done in such a manner so as to make her recommendations appear to be initiated by the physician.

Rules in this game are few but cardinal. The nurse and doctor must both play according to the rules. Open disagreement must be avoided at all costs. The experienced nurse must subtly give her advice, the doctor must just as

subtly incorporate this advice directly into his treatment orders. If either fails to play the role by these rules, he/she will have to face the psychological consequences of various forms of punishment.

The beginnings of this game are found in the training of medical students. These students are led to believe (and later foster this belief in others) that they cannot make mistakes. Nursing students, on the other hand, are told that they must not make mistakes. Both sets of players in this game suffer from fears of personal inadequacy. Stein ends his discussion of the doctor nurse game with the observation that the game is a transactional neurosis whose "inhibitory effect on open dialogue is stifling and anti-intellectual." Richards (1978) refers to Stein's article and supplements his original thesis with numerous, recent examples of the ways in which the doctor-nurse game is played both successfully and unsuccessfully.

While the nurse may vicariously gain satisfaction from the results of her advice put into operation by a physician for the benefit of a patient, she does not gain the direct recognition Fagin claims is her right. She especially does not receive this recognition from doctors. A survey carried out by RN Magazine (1979) revealed that 3 out of 4 doctors regard nurses as their assistants and nothing more. A majority of the 536 MD's surveyed throughout the United States said that RN's could be replaced by licenced practical nurses, nurses' aids or physicians' assistants. Many

doctors, furthermore, do not appreciate the move of nurses to higher education. One representative statement of a physician was, "The new crop of nurses is over-educated but under-trained. They may be academically superior to older nurses but their training in nursing procedures is extremely poor." Others commented that, "Nurses are over-educating themselves, not to care for patients, but to police doctors without having the medical responsibility." (Lee, 1979, p. 24) More than 78% of the MD's surveyed believed that nurses already have enough say in patient care; almost 10% felt that they had too much power already.

While the doctor-nurse conflict may be viewed in terms of a power struggle in relation to patient care, it may also be viewed in another way--in relation to structure of work. Sheard (1980) describes differences between the orientation of physicians and nurses to their work in the areas of structuring of work, sense of time, sense of resources, unit analysis, work assignment, type of rewards and sense of mastery. This article, in its discussion of differences between the two groups, clearly shows how basic conflict easily arises between them. In their analyses of the nurses' role in the RN survey (1979), physicians, probably measuring nurses' orientation to work against their own, judged nurses to be doing too much paper work; to be overloaded with patients and staffing problems; to be involved in administrative chores that could be better done by non-nursing personnel; to be delegating too much nursing care to licenced practical nurses, aids and

others; to be fearful of accepting direct responsibility for patients; to be bored with hospital routine; to be moving too much towards specialization and away from general patient care; to be frustrated with doing unrewarding repetitive and unpleasant tasks required for bedside care. "LPN's (the doctors said), are frequently more interested, less angry, and more cooperative) in handling routine care." The doctors considered themselves qualified in all of this to pass judgements on the role of the nurse.

Sheard's article admonishes nurses to seek to develop the holistic model in terms of their work orientation. By doing this, we can move away from the functional model which has dominated our horizons for so long.

McLeod (1974) outlines the basic differences between the medical model and the health care model (which most closely resembles the holistic care model). Sheard says that physicians follow the holistic model in their work orientation. While his analysis of the nurses' and physicians' orientation may indeed, show some striking differences, I believe that his designation of the physicians approach as holistic to be an inaccurate use of the term. Rather doctors operate on the medical model and they perpetuate the use of that model to promote the exclusivity of their power to diagnose, prescribe and treat patients within it.

• Damned If You Do, Damned If You Don't

So—here stands the nurse. On the one hand she is being encouraged to be up-to-date and an active participant in the planning of health care; on the other hand she is being shown that her initiative and intelligence will only be rewarded as she plays games with it. On the one hand her job is viewed as easily done by any reasonable person; on the other hand she is encouraged to seek a nursing degree because her job is very complex and her role within it needs expansion. On the one hand she is told to treat the whole person; on the other hand she is forced to follow the medical model approach to health and illness. On the one hand, she is promised a bright future if she becomes a degreed person; on the other hand she finds no particular difference between her own work and the work of others without a degree. Others with degrees she sees moving further and further away from direct patient care. The nurse remains in a constant double bind situation. Is it any wonder she is confused, frustrated, angry and tired?

Burnout Realized

"You are suffering from burnout if you have lost heart, if your dedication is at a low ebb or if your professional pride is slipping."
(Ryan 1981, p. 16) "Burnout is resignation to a lack of power—the perception that no matter what you do or no matter how hard you try, you cannot make a difference in the situation." (Storlie 1979, p.1217) If

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burnout is the result of a consistently poor situation in nursing, what is considered a consistently good situation? Storlie suggests that the following points would describe the most fulfilling job. In such an ideal situation the nurse would: (Storlie, 1979, p. 1218)

1. have a strong voice in making and approving policies that affect her.
2. enjoy the consistent, strong support of nursing service.
3. be paid well and in keeping with other professions.
4. have a choice of shifts.
5. be provided with a variety of educational opportunities.
6. be guaranteed a minimum of being floated to other units.
7. be treated with respect by all physicians.
8. have available the technology to give high level care.
9. be working in a unit with ample staffing every shift.
10. have a mechanism through which she could report medical incompetence and other problems with physicians.

If Storlie has, indeed, described what most nurses would consider ideal, it is no wonder that nurses practicing in the real nursing situation are unhappy.

In fact, many are so unhappy that they are leaving nursing, giving their reasons as need for more control over their personal and working lives, dissatisfaction with working conditions, and salary - as an issue of lesser

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importance. Some nurses seem to be meeting these negative conditions by opting out of the security and benefits of hospital employment for the control and flexibility of self-employment.

In a 1979 survey by the Registered Nurses' Association of British Columbia, 1,880 non-practising members revealed that hours of work and working conditions were the major reasons for nurses' leaving active practice. Watson (1979) reports a study of reasons for nurses leaving a large, teaching hospital. The top three reasons given were:

1. lack of formal education opportunities
2. lack of administrative support
3. lack of opportunity for advancement

In analysing these responses to the survey, Watson remarks on the Catch 22 situation where nurses must give up comfortable day positions to gain formal education so that they won't lose comfortable day positions for not having enough education. Nurses who stayed in employment at this hospital gave their reasons as:

1. administrative support
2. salary
3. opportunity for advancement

The American Nurses' Association's commission chairman (1981) cited misuse of R.N.'s as a major cause of the nurse shortage. Luther Christman, (1981) a member of that commission, estimates that "three to four times the current professional nurse manpower could be recovered if nurses were used properly." A recently completed survey (1981) showed Oregon's nurses leaving practice firstly because of lack of administrative support, secondly because of insufficient salary and thirdly, because of lack of flexible hours and day care facilities. The Oregon study confirms an earlier study done in Texas which yielded the chief conclusion "that nurses who leave nursing and choose to remain outside the workplace, do so mainly because of the working conditions tolerated, or promoted, by administration."

Preliminary analysis of 22,000 subject's responses to a survey carried out by the New Jersey State Board of Nursing, shows responses "stressing both salary and working conditions, with a significant number citing dissatisfaction with their 'treatment as professionals'." Aiken, Blendon and Rogers (1981), show interesting correlations between nurses' rate of employment and their place on the salary scale in relation to other female workers. The higher the nurses' salaries they found, the higher the number of nurses practising in hospitals. The major implication drawn from this study was that a rise in nurses' salaries would encourage nurses to return to the workforce both on a full-time and a part-time basis and would encourage more, intelligent women to become nurses.

Moore (1981) reported a survey of Alberta nurses in which 40% of nurses were dissatisfied with working conditions while 38% were dissatisfied with salary and fringe benefits. The Registered Nurses' Association of Ontario in a survey of the nursing shortage in that province, showed "that shortages are not so much the actual lack of nurses, as a lack of nurses willing to work under the present set of circumstances. Administrators need to improve the work environment through more sensitive employment relations practices." The report also recommends that employers should consider flexible working hours, more innovative use of part-time workers and the institution of programs to help reduce stress and burnout.

A 1977 survey of almost 17,000 nurses carried out by Nursing 77, revealed that the most important factor cited by nurses to look for in a job is the opportunity for professional growth. The survey revealed choice of scheduling, supportive nursing administrators, and adequate staffing as being next in importance. Of those nurses who chose opportunity for professional growth, 86% considered continuing education activities to be appropriate. Seybølt, Pavett and Walker (1978) found that there were considerable differences between nurses who left employment at their hospital and nurses who stayed. Nurses who left were motivated most strongly by frustration of their needs for growth and development on the job. "They felt no point in working hard since it would not lead them to the outcomes they valued,

outcomes mostly concerned with growth-need satisfaction. Satisfaction data collected from nurses who remained in employment listed pay, promotions, and the chance to make full use of one's ability as reasons for their decision to stay at the hospital.

Nurses were asked in the R.N. survey to identify what they found most difficult about nursing. In order of importance these choices were:

1. unmotivated, inefficient staff
2. not enough time for patients
3. indifferent management and
4. keeping up to date technically.

Lack of appreciation, poor communication and conflicts with doctors and management also were seen to contribute to job dissatisfaction.

In an interesting attempt to gain some understanding of why so many intensive care nurses were quitting, a doctor in Newark, New Jersey decided to work as a nurse for a week ("Nurses Speak Out," 1982). At the end of that week, Dr. Cuyjets stated that he thought nurses worked even harder than doctors and under some very trying circumstances. He acknowledged surprise at the extent and range of nurses high level skills. After his week 'as a nurse' the doctor had a greater respect for nurses' stamina as well as their intelligence and could better understand their reasons for leaving the highly stressful Intensive Care Units.

Supernurse and Stress

While many nurses have been brought up, educated and fostered in the climate that expects them to be all things to all people, reality constantly intervenes by presenting immeasurable refutations of this expectation .

Yet nurses themselves, patients, and others with whom nurses work, have not accepted the reality of the situation. While operation in this dream world of expectations, may not significantly harm others, it is certainly unhealthy for nurses themselves.

A study in Tennessee by the National Institute for Occupational Safety and Health found nursing occupations ranking twenty-sixth (out of one hundred and thirty occupations studied) in admissions to mental health centres for stress-related reasons, (Ivancevich and Matteson, 1980). A Stress Diagnostic Survey was administered to 82 nurses in a large city in the southwestern United States. On this survey, nurses rated human resource development, politics, working conditions, rewards, and communication as the most important organizational stressors. In relation to the job itself, they chose responsibility for people, time pressures, role conflict, relationships with other nurses, and relationships with superiors as most important. This study also explored possible differences between nurses with Type A behaviour (i.e. competitive, aggressive with a sense of urgency) and Type B. (i.e. relaxed, less ambitious, less time-oriented) behaviour in relation to their ratings of stress-producing situations. The researchers found distinct

differences between what Type A nurses interpret as stressors and what Type B nurses interpret as stressors.

Tierney and Strom (1980) discuss nurses as being in the Type A2 category of personality i.e. conscientious people who have increasing numbers of high level tasks to accomplish within a very limited time frame. The examples cited by these authors are all well known to practising nurses. They include such situations as nurses' attendance at inservice classes and hospital committee meetings on duty time while other, busy and harried nurses must care for their patients. When the nurses return they often feel guilty and think they ~~must~~ work harder to make up for their absence. A Registered Nurses' Association of British Columbia's survey found that nurses considered giving high quality patient care much more of a source of stress than of satisfaction.

As has been documented throughout this discussion, hospitals are high-stress employers. Calhoun (1980) suggests that other industries have taken more of a leadership role in establishing programs in stress management than hospitals have. Many of the symptoms of stress (eg. restlessness, withdrawal, sullenness, defensive behaviour, anger, complaining, excessive drinking, hostility, reduced personal involvement, blaming others, denial, irritability and diminished initiative) complicate the problem by inviting negative reactions from others, thus further increasing the nurse's stress level. Scully (1980), reminds us that stress causes individuals to prepare for either fight or flight. While that mobilized energy, if maintained but

not put to direct use, can cause the mind and body to become completely exhausted, if mobilized for direct action can allow nurses to bring about personal and/or professional changes.

Nurses have many concerns about their work environment and the stress under which they are forced to work if they remain in hospital settings. Yet there are diversities among the nurses' responses and there are some differences between persons who stay employed in certain situations and those who do not.

Incentives and Hindrances - A Framework

Herzberg, (1966, p. 71-91) in his motivation-hygiene theory of work, postulates that differences among workers in terms of orientation to work are found to run on two separate continua. These continua are measures of satisfiers (achievement, recognition for achievement, work itself, responsibility, advancement, and possibility of growth), and dissatisfiers (supervision, company policy and administration, working conditions, interpersonal relations and salary). Herzberg states that satisfiers serve to motivate individuals; for this reason he calls satisfiers motivation factors. Dissatisfiers, on the other hand, serve only as maintenance measures, which, if present, at a sufficient level, serve to keep individuals from becoming unduly unhappy. For this reason he calls dissatisfiers hygiene factors.

Hygiene factors, according to Herzberg, have a limited life at any given level and must constantly be increased or upgarded in order to maintain their power to keep individuals from becoming unhappy. (This particular aspect of the theory is supported by nurses' comment that salary and fringe benefits were not satisfactory shortly after they had received a 37 1/2% increase over two years). The implications of Herzberg's theory is that in order to promote motivation one must attend to those factors which individuals who are growth-oriented choose as motivators. A second implication is that hygiene factors, even if present in ever-increasing quantity and quality, will not motivate individuals in terms of professional goals, nor will such hygiene factors make nurses happy. From this theory, it becomes plain that absence or presence of certain factors in the work environment are not sufficient explanations for all differences in nurses' performance on the job. As acceptance of this theory might promote higher regard for motivational factors to the exclusion of regard for hygiene factors, a cautionary note must be inserted.

Ullrich (1978) cautions wholehearted acceptance of Herzberg's theory for explanation of nursing turnover. In a study he conducted, it was found that 44.4% of the factors nurses mentioned in connection with turnover were motivation factors. He concluded that the discrete continuum aspect of each of the categories might be inadequate and that there might be a mixture of factors in both broad categories.

Herzberg's satisfiers include some of the tenets of professionalism discussed earlier, especially in relation to recognition, responsibility and possibility of growth. Such inner-directed activities reflect autonomy. His dissatisfiers are more suggestive of outer-directed influences reflecting dependency. The inner needs and aspirations of nurses might well be measured within such a framework of inner-directedness vs. outer-directedness or autonomy vs. dependency or professionalism vs. subordination. Recognition of the possibility of some mixture of influential factors would have to be included in such an analysis.

AFTER BURNOUT - WHAT?

While many nurses may be questioning the very core of their existence; while others may be so emptied of idealism and energy that they feel they have nothing left to give, there is a rainbow of promise faintly seen by some. Like the eight people long ago who saw the first rainbow, promising that the flood was over forever, a few 'seers' today are assured that this, too, shall pass.

Some of those nurses who have experienced the helplessness of the role of victim for so long, have decided to become rescuers instead. They have decided to rescue themselves. They are defying the pessimism that dominates their profession. They are reminding themselves and other nurses that, in fact, they have the power (Vachon, 1980). The power rests in their vast repertoire of experience, in their collective intelligence, in their stamina, in their genuine concern for the health of their patients.

These nurses recognize that they can make choices, by drift or design. They have decided to be designers. They also recognize that there is a thing called defensive avoidance. People who practice defensive avoidance: (King, 1979, p. 6).

1. misjudge relevance of warnings.
2. invent new arguments to support chosen policy.
3. fail to explore ominous implications of ambiguous events.
4. forget information that would enable a challenging event to be interpreted correctly.
5. misperceive signs at the outset of actual danger

The 'seers' have decided not to allow themselves to be caught in the collective mentality of defensive avoidance. They are recognizing the relevance of warnings in relation to the pressures on nursing (Stuart, 1979). They are attempting to invent new policies rather than support new arguments for old policies detrimental to nursing practice (Harrison, 1980). They are researching questions about their profession. They are attempting to integrate relevant information to develop strategies (Carson, Ames, 1980). They are setting out to encourage others to acquaint themselves with danger signs of battle fatigue (Neal, Cooper, 1980), and to do something therapeutic about them (Kovecses, 1980). Continuing education is one mechanism by which nurses can be encouraged and brought up-to-date with the positive climate that is just beginning to show itself.

CONCLUSION

In summary, this literature review and discussion included examination of continuing education in terms of its relationship to obsolescence, the rise of consumerism and changes in the profile of the typical hospital patient. In this chapter, participation in continuing education has been examined and the issue of voluntary vs mandatory continuing education has been explored. The demands, of the on-going process of nurses' professionalization has been discussed to place continuing nursing education in the context of the nurse's changing role. In conclusion, the concept of burnout was examined as it relates to nurses' struggle to find personal and professional satisfaction within a highly stressful nursing care environment.

Since continuing nursing education remains a voluntary activity in Canada, the question always must be asked, "Are nurses taking advantage of that freedom to participate?" Of special concern are those nurses working in the most highly technical units of hospitals. It might be expected that these nurses would be more active in continuing education. General nurses might be expected to have more difficulty **in obtaining** continuing education programs suitable to their work. Another question rising directly from the analysis of current literature is, "What kinds of incentives, hindrances and conditions affect nurses' participation in continuing

education in Canada? Do such incentives, hindrances and conditions relate in some way to aspects of the professionalization process? Are nurses generally concerned with intrinsic or extrinsic types of payoffs for their work? Do such payoffs that nurses identify as important fall into categories related to Herzberg's motivation-hygiene theory of work? What sort of 'perks' could be added to increase nurses' participation in continuing education? Or, are nurses suffering from burnout causing them to withdraw from their responsibility to remain current? All of these questions pose a challenge to researchers and other concerned nurses.

This study focuses on five questions arising from the preceding discussion. These questions are:

1. Are there discernible relationships between selected demographic characteristics of nurses and the total number of hours they spend in continuing education activities?
2. Are there particular incentives, hindrances or conditions that nurses consistently identify as important in either encouraging or discouraging their own continuing education?
3. Are those items identified as incentives and positive conditions to continuing education seen as hindrances and negative conditions if absent?

4. Are there discernible relationships between selected demographic data and items identified by nurses as important incentives and positive conditions or important hindrances and negative conditions?

5. Do incentives and positive conditions or hindrances and negative conditions fall into clusters similar to Herzberg's factor categorization in his motivation-hygiene theory of work?

CHAPTER III
METHODOLOGY

Participants for this study were nurses selected from two, medium-sized and one, large hospital in two Western Provinces. The sample of nurses was defined as the total numbers of registered nurses employed in those three hospitals, on all shifts over a three-week period during July and August of 1980. Since I was limited by time, only those individuals working during the three-week period, and whose working hours would allow the completion of two survey instruments administered several days apart, were potential respondents.

All nurses who actually participated in the survey were volunteers. They had been provided information in advance of the survey by head nurses and supervisors and then were personally contacted at the time the survey instrument was distributed. When individual contact was not possible, a verbal message was usually left with the head nurse and ward clerk; and the first section of the questionnaire, with a personal, written message from the researcher attached, was left for the absent person.

Four hundred and twenty two-part questionnaires were distributed at separate times in this manner over a three-week period. I personally collected the questionnaires whenever possible. Staff members in the respective Nursing Directors' offices also collected completed questionnaires.

Almost all nurses approached agreed to participate in the study. A few nurses declined, most saying either that they did not have time to do the survey or that they felt the exercise would accomplish nothing. Of the four hundred and twenty questionnaires distributed, two hundred and twenty-seven were returned completed, in matched sets, and these were used for the study. One hundred and thirty-nine additional nurses either returned only one questionnaire or failed to code their questionnaires.

Description of Hospitals

Hospital A was a medium-sized, non-teaching community hospital located in a suburb of a large Western Canadian city. Hospital B was a medium-sized, non-teaching, community hospital located in a suburb of another large Western Canadian city. Hospital C was a large, teaching, hospital complex in the same city as Hospital B. Hospital C included a children's hospital, a rehabilitation centre, a psychiatric centre and the full complement of other specialty areas.

The Survey Instrument

The survey questionnaire was made up of items generated from discussions with practising nurses, personal observation and experience, and the literature review. Initially, an informal survey was conducted among a group of nurses attending a policy meeting in a suburban hospital. These nurses were asked to list barriers to continuing education. The individual lists were then compiled and a definite trend of responses was noted. Additional items describing hindrances to pursuing continuing education were added from personal experience and the literature review.

An opposite expression of these hindrances was then developed to represent the positive of these negative statements. The hindrance statement, "insufficient salary increase," for instance, was rephrased as "significant salary increase". In this way, two separate, matched questionnaires were developed.

Items on each questionnaire, were divided into two subscales, the first subscale representing either a set of incentives or a set of hindrances (items 1-16). The second subscale of items on each questionnaire represented either eleven positive or eleven negative conditions related to continuing education. Availability of appropriate courses, for example, was listed as a positive condition and its opposite, lack of appropriate courses, constituted a negative condition.

Items on the questionnaire were rated on a 6-point Likert scale ranging from 0-5, with zero representing no importance and five representing very great importance. Items 16 and 27 on each questionnaire were called "other" and nurses were asked to suggest any significant issue or condition which they felt had been omitted in the preceding list. In addition, participants were requested to rank from all items on each questionnaire the first, second and third most important items.

The first questionnaire, hereafter referred to as the positive questionnaire, also collected demographic data about nurses. These

variables included: age, sex, year of graduation, type of generic nursing program, number of children in direct care, highest educational level attained, type of employment, position, and unit where employed.

The second questionnaire, hereafter referred to as the negative questionnaire, also asked participants to rate eight different modes of learning as to their practical value. Then nurses were asked to list their learning activities for the past year and the number of hours they had engaged in each. Finally, nurses were asked an attitudinal question about the importance of continuing education in the maintenance of nursing competence.

The questionnaire was tested by administering it to eight college nursing teachers. After minor revisions, it was printed for distribution to the research participants. Copies of the survey questionnaire are reproduced in Appendix A.

After administration, the questionnaire was statistically tested for internal consistency using Pearson correlation coefficients. Inter-item correlation of the matched sets of items (i.e. item one on the positive) was found to be reliable at least at $p \leq .01$ level for every matched item.

The only exceptions were items 16 and 27, the items asking nurses to list other factors not already on the questionnaire, which were deleted due to insufficient sample size, and item 19 which was deleted due to an imbalance

in sample size between those subjects having children in direct care (71 of those surveyed) and those having no children in direct care (143 of those surveyed).

Instructions to Participants

Participants were asked to identify their questionnaires by means of a code that insured confidentiality. The code was a number and letter combination made up of the last four digits of the nurse's telephone number and the last three letters of the nurse's mother's maiden name. A sample code number was illustrated in the written instructions.

The next step in instructing participants was to define continuing education. The text of that definition, as given on the questionnaire was as follows:

In this questionnaire CONTINUING EDUCATION means any structured learning activity engaged in after basic nursing education and directly related to nursing care. The definition does not include basic orientation activities provided by hospitals, for new employees. It does not include total programs such as a degree program offered at universities. It does include workshops, short courses, and longer courses designed to augment or update nursing information. It does include health-related courses offered in the community, such as nutrition or psychology courses.

Next, participants were asked to rate the first 15 items that might be considered possible benefits (eg. increase in salary) of continuing education.

The text of that instruction follows:

Section I Listed below are some possible benefits of continuing education. Indicate the relative importance (on a scale of 0-5) of each in motivating you to participate

in continuing education. Circle the one number that most clearly describes your belief. Please be sure to respond to each item.

Item 16 was stated as:

16. Other (please specify) 0 1 2 3 4 5

Section II consisted of ten items which were possible positive conditions related to participation in continuing education. The text of that instruction follows:

Section II Listed below are some conditions that may determine whether you can participate in continuing education activities. Indicate the relative importance on a scale of 0-5, of each by circling the number that most clearly describes your belief.

Item 27 was stated as:

27. Other (please specify) 0 1 2 3 4 5

Following this, participants were asked to rank the three most important items among all preceding items by assigning a 1, 2 and 3 respectively.

The text of that instruction follows:

Please review the preceding 27 items in Sections I and II to identify the three most important factors that bear on your participation in continuing education. Then, in the right hand margin, place a 1 opposite the item that is most important, a 2 opposite the item that is the second most important, and a 3 opposite the item which is the third most important.

After this, participants were asked to indicate their age and sex, the number of children they had in direct care and ages of these children, year of graduation from basic nursing program and type of generic program, highest educational level attained, type of employment (i.e. full-time or part-time), job description (i.e. staff nurse or specified other) and unit where employed.

The negative questionnaire began with the same instructions about coding the questionnaire and the same definition of continuing education.

Then the nurses were given the following instructions:

Section III: Listed below are some possible hinderances to continuing education. Indicate the relative importance (on a scale of 0 to 5) of each in influencing you against participation in continuing education. Circle the one number that most clearly describes your belief. Please be sure to respond to each item.

These instructions served for all 27 items on the second questionnaire (excluding items 16 and 27 which were phrased identically to those items on the first questionnaire).

Again, participants were asked to rank the three most important items. Instructions were the same as for the similar exercise on the first questionnaire.

This exercise was followed by a list of eight learning/teaching activities (eg. self study-reading of nursing journals) and participants were asked

Nurses were then chosen as possible participants from the work schedule sheet for the upcoming three weeks. Nurses who would be working over that period and would be able to answer the two questionnaires several days apart were chosen. These nurses were then approached individually by me and asked directly if they would participate. A letter explaining the nature of the study and requesting cooperation was also attached to each positive questionnaire. Examples of these letters may be seen in Appendix B.

CHAPTER IV

RESULTS

Demographics

Demographic data collected in the study (see Table I) helped to form the composite description of 227 nurses who completed the survey. These nurses ranged in age from 19-58 years. The mean age of the group was 30.3 years with fifty-three percent of the subjects being between 22-28 years of age. Nine of the participants were male; 216 were female. One hundred and forty-three individuals stated that they had no children in direct care. Twenty-three persons claimed one child; thirty-one persons claimed two children; eight participants claimed three children; seven individuals claimed four children; one person claimed six children; and one person claimed eight children in direct care. Year of graduation from basic nursing programs ranged from 1945-1980, the mean year being 1972 with 67% of those surveyed graduating between and including the years 1972-1980. Sixty-one of the subjects listed their generic nursing programs as two-year college; 68 as two-year hospital; 78 as three-year hospital and 17 as baccalaureate. One hundred and sixty-one subjects listed the RN Diploma as their highest academic standing; thirty-one listed post-basic nursing diplomas; nine indicated post-basic non-nursing courses/diplomas/degrees; seventeen listed the nursing baccalaureate as their highest academic standing. Twenty-three of the nurses surveyed worked part-time. One hundred and ninety-nine worked full-time. In the year of the survey (1980), 53% of the nurses surveyed had worked twelve months in their present

setting. Two hundred and ten of the participants classified themselves as staff nurses; seven indicated their position as administrative in relation to patient care; five classified themselves as administrators in relation to staff supervision. Table II shows the distribution of participants according to stated unit of employment.

TABLE I

Summary Data - Research Subject Profile

Demographic Data	<u>M</u>	S.D.	25% ile - 75% ile
Age (n=215)	30.34	8.50	24-35
Number of children in direct care (n=71)	0.76	1.23	0
Year of Graduation (n=224)	1971.46	8.29	1966-1977
Number of months worked in last year (n=222)	9.52	5.59	7-11

TABLE II

Unit Where Employed

Unit	Absolute Frequency	Adjusted Frequency Percent
Medical	31	13.9
Surgical	29	13.0
Medical/Surgical	24	10.8
Obstetrical	22	9.9
Paediatric	20	9.0
Psychiatric	24	10.8
Geriatric	7	3.1
Critical care (ICU, CCU, PARR, ER)	49	22.0
Rehabilitation	10	4.5
Dialysis	8	3.6
Neurology	2	0.9
Burns	1	0.4
EENT, Orthopaedics, isolation	8	3.6

NOTE: Several nurses checked both general (i.e. medical, surgical, medical/surgical, geriatric), and specialty categories for unit where employed. In this table the frequency count of 91 for these four categories counts all. When the categories were collapsed, double checked units were always assigned to the higher category of specialty. Hence, some of the general category nurses were absorbed in the specialty categories.

QUESTION 1

Is there a significant correlation between selected demographic variables describing nurses and the total number of hours they spend in continuing education? The answer to this question is generally, no. (See Table I)

Of 147 nurses responding to the question of total number of hours they spent in continuing education in the previous twelve months, 39 or 26% of them stated that they had engaged in no continuing education during that period. Seventy-eight nurses or 34% of the total sample of 225 did not respond to this item. Such figures indicate that as many as 51% of those surveyed did not participate in any continuing education activities in the preceding year. This figure calls into question the present efficacy of voluntary continuing education. Are nurses not involved in continuing education because of apathy, or are there barriers that prevent willing nurses from engaging in continuing education activities? Do nurses view continuing education as an aid to nursing practise? In this study, 65.8% of respondents agreed very greatly with the statement that continuing education (as well as nursing practise) was necessary to maintain nursing competence. Twenty-three percent agreed greatly with this statement. The combined percentages of nurses who greatly agreed or very greatly agreed was 89%. This figure shows a wide discrepancy between attitude and action for at least thirty-five percent of these nurses.

Pearson correlations between total numbers of hours of continuing education—and age, number of children in direct care, year of graduation, type of generic nursing program, and type of employment yielded correlations ranging from -0.05 to -0.11, none of which reached a level of statistical significance of $p \leq .05$. The only statistically significant correlation found was between the total number of hours of continuing education and unit where employed. To compute this correlation a code was created to represent the unit where nurses were employed that assigned low numbers to lesser degrees of specialization (i.e., general category = 1, critical care = 4). Nurses with jobs in more specialized units tended to have taken more hours of continuing education. This finding may be partially explained by referring to basic nursing education. As areas become more specialized, the ability of nursing schools to provide their students with a working knowledge of each area diminishes. When new graduates enter the workplace, therefore, it is necessary to provide on-going education in order to acquaint them with the knowledge and skills attached to that specialty. Often specialty areas have unique kinds of equipment which vary from specialty to specialty and hospital to hospital. While specialists may not be able to carry out their tasks without additional training, generalists may find their need for continuing education ignored just because they can carry out their basic nursing activities much more expertly from the onset of their employment. Table 1 presents correlations for all the selected demographic variables and total number of hours of continuing education. Table 2 presents a breakdown of total number of hours of continuing education by unit where employed.

TABLE 1

Total Number of Hours of Continuing Education
and Demographic Variables

Demographic Variables	r	n	p
Age	-0.08	138	0.18
Number of children in direct care	-0.11	141	0.09
Year of graduation	0.09	144	0.13
Generic nursing program	-0.05	144	0.29
Type of employment	0.11	145	0.10
Unit where employed	0.15	147	0.03

NOTE: Sample size varies due to omitted responses.

TABLE 2

Number of Hours of Continuing Education
and Unit Where Employed

Total Hours	General		Special		Special Procedures		Critical Care		Total	
	f	%	f	%	f	%	f	%	f	%
0	11	25.6	16	24.4	6	20.7	6	12.2	39	
1	1	2.3	2	3.0	3	10.3	2	4.1	3	
2	1	2.3	1	1.5	1	3.4	1	2.0	7	
3	1	2.3	1	1.5	1	3.4	1	2.0	2	
4	1	2.3	1	1.5	1	3.4	1	2.0	3	
5	1	2.3	1	1.5	1	3.4	1	2.0	2	
6	1	2.3	1	1.5	1	3.4	1	2.0	3	
8	2	4.7	1	1.5	2	6.9	1	2.0	6	
9	1	2.3	2	3.0	1	3.4	1	2.0	2	
10	1	2.3	1	1.5	1	3.4	1	2.0	2	
12	1	2.3	1	1.5	1	3.4	1	2.0	3	
14	2	4.7	1	1.5	2	6.9	2	4.1	4	
15	1	2.3	1	1.5	1	3.4	1	2.0	4	
16	4	9.3	3	4.5	1	3.4	1	2.0	9	
18	1	2.3	1	1.5	1	3.4	1	2.0	2	

TABLE 2 (continued)

Total Hours	General		Special		Special Procedures		Critical Care		Total	
	f	%	f	%	f	%	f	%	f	%
19			1	1.5	1	3.4			2	
20	2	4.7	1	1.5					3	
21	1	2.3							1	
22							1	2.0	1	
23	1	2.3							1	
24	1	2.3							1	
25	1	2.3	1	1.5					2	
28	1	2.3	1	1.5					2	
30			1	1.5					1	
32			1	1.5	1	3.4			2	
34			1	1.5					1	
36	1	2.3					1	2.0	2	
38							1	2.0	1	
39							1	2.0	1	
40	1	2.3	2	3.0					3	
46	1	2.3							1	
50							1	2.0	1	
59							1	2.0	1	

TABLE 2 (continued)

Total Hours	General		Special		Special Procedures		Critical Care		Total	
	f	%	f	%	f	%	f	%	f	%
60	1	2.3	1	1.5					2	
64			1	1.5					1	
66	1	2.3							1	
72			2	3.0					2	
74			2	3.0	1	3.4	1	2.0	4	
88	1	2.3							1	
96			1	1.5					1	
107			1	1.5					1	
114	1	2.3							1	
118			1	1.5					1	
124							1	2.0	1	
144			1	1.5					1	
147	1	2.3							1	
160							1	2.0	1	
163							1	2.0	1	
179					1	3.4			1	
208			1	1.5					1	

TABLE 2 (continued)

Total Hours	General		Special		Special Procedures		Critical Care		Total	
	f	%	f	%	f	%	f	%	f	%
420					1	2.0	1	2.0	1	2.0
714			1	3.4					1	3.4
840					1	2.0			1	2.0
1000					2	4.1			2	4.1
omitted	36	45.6	17	25.8	7	24.1	18	36.7	78	49.5

NOTE: general = 78; special = 66; special procedures = 29; critical care = 49. Empty cells indicate that no person in that unit participated in continuing education activities for that particular number of hours.

While Curran (1977) and Clark (1975) found that full-time workers participated more than part-time workers in continuing education, this finding was not borne out in this study. Although marital status was not addressed, number of children in direct care was used to reflect degree of family responsibility. Unlike Clarke's findings that pre-school children influenced participation in continuing educations, findings in this study showed no appreciable difference between those nurses with or without children and total number of hours of continuing education. Since only twelve nurses identified themselves as being in administration, no attempt was made to compare their participation with that of staff nurses.

Bush (1978) reported more participation in continuing education by older nurses, but age proved not to be a statistically significant variable in this study. Bell and Rix (1979) reported greater participation in other-directed continuing education activities by diploma graduates than by degree graduates. This finding was not supported by Clark (1975) who found that those with "university educational experience" were greater overall participants in continuing education than those without the university experience. This study found no statistically significant correlation between type of generic program and participation in continuing education.

These negative results are of special interest to those involved in nursing education. It might be expected that more recent emphasis on life-long learning would have begun to show itself in the behaviour of younger graduates.

This does not appear to be the case. The question must then be asked, "Why not?" If indeed, diploma graduates have not been appropriately inculcated with the values of continuing education, it might be assumed that the "professionally educated nurse" would show greater participation. Again the answer is negative. While, the sample of degree nurses was very small(17), those nurses involved in educating the degree nurse might well examine possible differences in levels of participation in continuing education by their graduates as contrasted with graduates from other types of generic programs. Other questions must be asked in terms of the hospital's willingness to actively participate in the education of its staff by providing the necessary arrangements and/or learning experiences.

These findings suggest a need for additional research especially related to general duty nurses' specific requirements for continuing education. An investigation into ways and means of fostering participation in continuing education through basic nursing socialization might also enhance understanding of present poor levels of participation.

QUESTION 2

Are there particular incentives, hindrances or conditions which nurses consistently identify as important in either encouraging or discouraging their continuing education?

First, in order to answer this question, one standard error of the mean was taken from item means to compensate for variability of the means over repeated sampling. These adjusted means of items thus were statistically equal to or greater than 3.5 on the scale even taking sampling variations into account, and were considered to be closer to the rating of great importance than the rating of moderate importance. Thus, they were identified as significant in that they were rated by nurses as of more than moderate importance on the Likert scale.

After subtraction of one standard error of the mean from the mean of each item on the incentives, positive conditions, hindrances and negative conditions subscales, Item 4 (more specialty area nursing), Item 8 (increased awareness) and Item 9 (more skill in patient care) were shown to be significant on the incentives subscale; Item 19 (child care facilities), Item 21 (flexible course times) and Item 24 (replacement when off) were shown to be significant on the positive conditions subscale; Item 21 (lack of flexible course times) was shown to be significant on the negative conditions subscale. Items 16 and 27 were excluded from this analysis since they were open-ended items which

yielded small numbers of varied responses. Table 3 displays these statistics.

Choice of Item 4 (more specialty nursing) supports the notion that nurses perceive specialty areas to be more desirable workplaces than general areas.

A number of reasons for this perception can be proposed. First, there must be more collegiality within the health care team in specialty areas in order to provide mechanisms for on-going, crisis intervention. This correlation between specialty areas and collegial decision-making is supported by the correlation of 0.35 between increased opportunity to nurse in a specialty area (Item 4) and greater opportunity to be involved in collegial decision-making (Item 13). Second, there is usually more direct input by staff nurses into policies and procedures in specialty areas. Increased opportunity to nurse in a specialty area (Item 4) and increased opportunity to effect change (Item 11), therefore, might be expected to show a high degree of correlation. In fact, they do not ($r = 0.22$). Third, transfers to specialty areas are seen as moves demonstrating upward mobility without moving into administration. This notion is supported with a correlation of 0.40 between increased opportunity to nurse in a specialty area (Item 4) and opportunity for promotion without movement into administration (Item 5).

Increased awareness of important health care information (Item 8) and increased skill in patient care (Item 9) were chosen as strong incentives to continuing education. This parallels the findings of Matthews and Schumacher

TABLE 3

Descriptive Statistics for Incentives, Hindrances and Conditions

Item	M	S.E.	S.D.	r	t value	p	Proportion in Extreme Ranges		Rank of Mean
							High Import-	Low Import-	
1. Increase in salary	2.62 ¹	0.09	1.40	0.32	-.12	.90	26.5	21.7	35
No increase in salary	2.63	0.10	1.43				26.4	24.3	34
2. Flexibility of hours	3.12	0.10	1.53	0.31	2.51	.01	48.9	19.6	18
No flexibility of hours	2.83	0.09	1.30				32.2	27.0	27
3. More confident unit change	3.50	0.09	1.33	0.22	7.93	.00	56.8	8.3	12
No confident unit change	2.55	0.10	1.54				30.5	27.0	37
4. More specialty area nursing	3.70 ^{*2}	0.08	1.88	0.16	7.85	.00	63.7	5.3	7
No more specialty area nursing	2.76	0.10	1.54				37.8	24.4	30
5. Promotion outside administration	2.96	0.09	1.35	0.34	4.46	.00	39.2	16.7	25
No promotion outside administration	2.47	0.10	1.54				29.6	29.7	39
6. Promotion to administration	1.59	0.10	1.49	0.36	0.79	.43	11.0	57.0	47
No promotion to administration	1.67	0.09	1.35				9.0	50.9	46

TABLE 3 (continued)

Item	M	S.E.	S.D.	r	t value	p	Proportion in Extreme Ranges		
							High Import-ance	Low Import-ance	Rank of Mean
7. Release from work No release from work	1.93 3.00	0.10	1.50 1.53	0.25	8.77	.00	14.5 43.8	42.3 18.6	45 23
8. Increased awareness No increased awareness	3.89* 2.67	0.07 0.10	0.97 1.59	0.22	10.97	.00	67.8 34.8	8.0 26.8	3 32
9. More skill in patient care No more skill in patient care	4.20* 2.78	0.06 0.11	0.88 1.66	0.26	12.76	.00	82.3 42.7	4.4 26.7	1 29
10. Encouragement from peers No encouragement from peers	3.00 2.40	0.09 0.11	1.27 1.38	0.32	5.74	.00	36.4 20.0	14.7 29.3	24 40
11. Change in ward policies. No change in ward policies	3.07 2.66	0.08 0.09	1.22 1.40	0.36	3.96	.00	41.0 31.4	9.6 23.4	21 33
12. Formal sharing of new knowledge No formal sharing of new knowledge	3.15 2.26	0.08 0.09	1.17 1.38	0.38	9.35	.00	41.9 19.8	9.7 32.1	17 44
13. More collegial decisions No more collegial decisions	3.09 2.39	0.08 0.09	1.24 1.37	0.39	7.21	.00	37.5 23.9	10.5 29.7	19 41

TABLE 3(continued)

Item	M	S.E.	S.D.	r	t value	p	Proportion in Extreme Ranges		Rank of Mean
							High Import-ance	Low Import-ance	
14. Approval of family and friends No approval of family and friends	2.47	0.10	1.42	0.32	8.37	.00	24.2	26.4	38
	1.55	0.10	1.47				11.6	55.8	48
15. Academic credit No academic credit	3.06 2.59	0.09	1.40 1.59	0.33	3.94	.00	43.2 31.3	13.2 28.6	22 36
17. Variety of good courses No variety of good courses	3.87* 3.52	0.07 0.11	1.04 1.30	0.39	4.15	.00	67.6	2.6	4
							58.2	8.5	11
18. Bursaries and scholarships No bursaries and scholarships	3.75 2.79	0.10	1.47 1.48	0.53	-0.56	.58	32.9	23.1	31
							36.3	23.9	28
19. Child care facilities No child care facilities	1.34 1.26	0.12 0.09	1.85 1.76	0.74	0.61	.54	19.1 16.6	67.2 68.2	49 50
20. Courses close by Courses not close by	3.55* 3.08	0.09	1.30 1.49	0.46	4.95	.00	55.7 43.6	7.5 16.7	10 20
21. Flexible course times No flexible course times	3.95* 3.82	0.09 0.10	1.28 1.27	0.48	1.64	.01	72.1 69.2	7.1 7.5	2 5

TABLE 3 (continued)

Item	M	S.E.	S.D.	r	t value	p	Proportion in Extreme Ranges			Rank of Mean
							High	Low	Intgrt-Intgrt-	
22. Time off without pay	2.31	0.11	1.58	0.21	-4.24	.00	23.5	33.3	43	
No time off without pay	2.87	0.12	1.55				39.2	20.5	26	
23. Time off with pay	3.38	0.10	1.53	0.46	-1.77	.08	54.2	14.6	9	
No time off with pay	2.57	0.10	1.44				59.1	11.9	14	
24. Replacement when off	3.75*	0.09	1.35	0.45	3.50	.00	69.1	10.1	6	
No replacement when off	3.43	0.08	1.39				54.6	11.5	13	
25. Maintenance of benefits	3.59	0.10	1.45	0.48	3.29	.00	63.8	11.4	8	
No maintenance of benefits	3.26	0.10	1.53				51.1	16.7	16	
26. Encouragement from supervisors	3.31	0.09	1.32	0.37	9.25	.00	51.7	16.7	16	
No encouragement from supervisors	3.35	0.10	1.48				25.0	33.5	15	

1 Numbers range from 223 to 227 due omitted responses on some items.

2 An * signals that the mean exceeds 3.50 after adjustment by subtracting one standard error.

(1979), Howard (1971) and Connor (1979), and calls into question the notion that most people attend continuing education activities for reasons other than learning. Clark (1975) found the learning orientation strongest for nurses among several orientations to continuing education.

Positive conditions which were identified as important to continuing education were appropriate child care facilities, flexible course times and adequate replacement when off. The importance of flexible course times also was supported by findings of Matthews and Schumacher (1979). Item 21 on the negative questionnaire (i.e. lack of flexibility of course times) also was rated of great importance as a hindrance to continuing education.

Second, the rank order of the means of responses to all items (excluding Items 16 and 27) also is listed in Table 3. Item 9 (increased skill in patient care) is first; Item 21 (flexible course times) is second; Item 8 (increased awareness) is third; Item 17 (variety of good courses) is fourth. All of these items are from the incentives and positive conditions subscales. Item 21 (lack of flexible course times) is fifth and is from the negative conditions subscale. Item 17 (a variety of courses available which provide, current, essential knowledge and skills) is the one item not already discussed. It is ranked as important in this study as a similar item (i.e. relatedness of topic to job) was in Matthews and Schumacher's study (1979).

Third, Table 3 displays the percentage of responses to each item (excluding Items 16 and 27) which fell in the two highest ratings (i.e. great or very great importance) and which fell in the lowest two ratings (i.e. no or little importance). To examine those items that more than one-half the sample rated as clearly in the extremes, 95% confidence bands were applied to the percentages in Table 3. These showed that a sample proportion of approximately 60% would strongly imply either clearly high or clearly low ratings. The application of this criterion revealed that Items 4 (more specialty area nursing), Item 8 (increased awareness), Item 9 (increased skill in patient care), Item 17 (variety of good courses), Item 21 (flexible course times) on the incentives and positive conditions subscales were rated as highly important. Items 21 (no flexible course times), Item 24 (no adequate replacement when off) and Item 25 (loss of benefits/seniority) on the negative conditions subscale also were rated highly important by this criterion. Importance placed on Items 24 and 25 corroborates comments in the literature about the perceived importance of these problems. Only Item 19 (child care facilities) ranked over 68% of responses rating the item of no or little importance. Of these respondents 114 had no children and 29 had children. The 29 respondents with children ranked lack of child care facilities as of great or very great importance as a hindrance to continuing education.

Fourth, inspection of the ranking first, second and third nurses assigned to the three items on the positive and on the negative questionnaire they considered most important revealed Items 9 (increased skill in patient care), 17 (variety of good courses) and 21 (flexible course times), on the positive questionnaire, were judged first, second and third most important respectively. Items 21 (lack of flexible course times), 17 (lack of variety of good courses), and 23 (lack of time off with pay) were ranked as first, second and third most important, respectively, on the negative questionnaire. Table 3 displays these statistics. All items and the frequency with which they were chosen as either first, second or third most important are displayed in Table 4.

The only new item which emerged as very important to nurses' continuing education was Item 23 on the negative questionnaire (difficulty obtaining time off with pay). The reality of this situation in Canada and the concern it generates were documented in the literature review.

To summarize, nurses may be encouraged to participate in continuing education if such participation will result in greater awareness, greater skill and greater opportunity to nurses in a specialty area. A variety of appropriate courses must be available and course times must be flexible. Adequate personnel to replace nurses during the time off they require to participate in continuing education is also very important. Not being given time off with pay is considered an important hindrance to continuing education.

Nurses uniformly expressed interest in courses which would help them carry out bedside nursing activities. Research could well address the question of attitudes towards continuing education and actual participation if the criterion of skill-enhancing courses is met. A national survey of the number and quality of courses available to nurses and an investigation of the flexibility of course times would greatly aid in the discussion of the issue of voluntary vs. mandatory continuing education. The practical question of the cost of continuing education in relation to time off, with or without pay, and reimbursement must be weighed against the quality of care which can be provided without it. Similarly, the question of adequate replacement for nurses who take time off must be researched. Are there enough qualified nurses in the replacement pool to allow nurses time off? All of these questions bear directly on the practical application of incentives and hindrances to continuing education.

TABLE 4

Frequency of Rankings of First,
Second and Third Most Important For Each Item

Item	Most Important		Second Most Important		Third Most Important		Not Chosen	
	f	%	f	%	f	%	f	%
1. Increase in salary No increase in salary	9	85	9	85	9	85	159	85
	8	87	9	87	8	87	161	87
2. Flexibility of hours No flexibility of hours	5	82	10	82	7	82	164	82
	10	87	7	87	7	87	162	87
3. More confident unit change No more confident unit change	5	84	10	84	14	84	157	84
	6	91	4	91	6	91	170	91
4. More specialty area nursing No more specialty area nursing	17	79	11	79	11	79	147	79
	8	87	5	87	11	87	162	87
5. Promotion outside administration No promotion outside administration	5	95	1	95	3	95	177	95
	1	94	6	94	5	94	175	94

TABLE 4 (continued)

Item	Most Important		Second Most Important		Third Most Important		Not Chosen	
	f	%	f	%	f	%	f	%
6. Promotion to administration No promotion to administration	1		2		3		180	97
7. Release from work No release from work	1		2		2		181	97
8. Increased awareness No increased awareness	11		15		9		178	96
9. More skill in patient care No more skill in patient care	3		3		7		173	93
10. Encouragement from peers No encouragement from peers	7		11		5		151	81
11. Change in ward policies No change in ward policies	47		27		12		161	87
12. Formal sharing of new knowledge No formal sharing of new knowledge	20		14		6		100	54
	0		0		2		146	78
	0		2		1		184	99
	0		2		3		183	98
	0		5		3		181	97
	0		1		3		178	96
	0		5		4		177	95
	0		1		2		183	98

TABLE 4(continued)

Item	Most Important		Second Most Important		Third Most Important		Not Chosen	
	f	%	f	%	f	%	f	%
13. More collegial decisions	1		6		6		173	93
No more collegial decisions	1		0		3		182	98
14. Approval of family and friends	1		1		2		182	98
No approval of family and friends	3		0		1		182	98
15. Academic credit	7		1		8		170	91
No academic credit	9		2		8		167	90
17. Variety of good courses	25		18		27		126	68
No variety of good courses	31		17		14		93	50
18. Bursaries and scholarships	6		3		3		174	94
No bursaries and scholarships	9		7		5		165	89
19. Child care facilities	5		4		2		175	94
No child care facilities	8		7		1		170	91
20. Courses close by	4		11		19		152	82
No courses close by	7		14		13		131	70
21. Flexible course times	20		22		13		131	70
No flexible course times	26		29		23		108	58

TABLE 4 (continued)

Item	Most Important		Second Most Important		Third Most Important		Not Chosen	
	f	%	f	%	f	%	f	%
22. Time off without pay	1		2		1		182	98
No time off without pay	1		10		5		170	91
23. Time off with pay	9		13		6		158	85
No time off with pay	16		11		17		142	76
24. Replacement when off	5		5		6		170	91
No replacement when off	5		17		19		145	78
25. Maintenance of benefits	1		7		10		168	90
No maintenance of benefits	1		0		2		183	98
26. Encouragement from supervisors	0		3		4		179	96
No encouragement from supervisors	1		0		1		184	99

NOTE: N= 186; 41 nurses did not rank any items.

QUESTION 3

Are those items identified as incentives and positive conditions to continuing education seen as hindrances and negative conditions if presented in their alternate form?

Pearson correlations between matched pairs of items (excluding items 16 and 27) are listed in Table 3. Two-tailed t-tests showed that all correlations were statistically significant at $p \leq 0.02$. This can be interpreted to mean that for each pair of matched items, ratings can be predicted from one form of an item to the other with some statistical reliability greater than zero. However, the magnitude of the correlations generally is small (approximately .30), indicating that the practical accuracy of such predictions would not be great. Items were judged to be of interest if, after subtraction of one standard error of the mean, differences between the means of matched pairs of an incentive or positive condition and its corresponding hindrance or negative condition were at least 1.00 on the Likert scale after rounding off to the second decimal place. Of the twenty-five items (i.e. 1-15, 17-26) analysed, five were found to meet the criterion. These five items and the differences in their adjusted means are listed in Table 5.

Increased opportunity to move confidently from area to area showed a difference of 0.95 in the matched responses with the positive statement

rated as a great incentive while its negative counterpart, no greater ability to move confidently from area to area, was rated only as a moderately important hindrance. This trend was also true for increased awareness of important health care information vs. no increased awareness of important health care information, increased skill in patient care vs. no increased skill in patient care, and encouragement from supervisory staff vs. no encouragement from supervisory staff.

Increased opportunity to move confidently from area to area within the hospital (Item 3), increased awareness of important health care information (Item 8), and increased skill in patient care (Item 9) are related in that they refer directly to increased skill in nursing knowledge and practice. The fact that an absence of the opportunity to gain more knowledge and skill is not seen as a strong deterrent to participation suggests the nurses might consider participation for other reasons.

Other discrepancies between ratings of incentives and hindrances may reflect a reluctance of subjects to express concerns in negative terms. This effect could have been enhanced by the lack of perfect parallelism between some items in which the negative statement may be seen to be stated more strongly—especially in relation to the use of the word significantly only in the negative items. Item 9 demonstrates this lack of parallelism; the positive statement reads, increased skill in carrying out patient care; the negative reads, no significant increase in ability to carry out patient

TABLE 5

DIFFERENCES IN MEANS OF MATCHED ITEMS

Item	Difference in Means	Larger Mean
3. More confident unit change No more confident unit change	0.95	3.50
7. Release from work No release from work	-1.08	3.00
8. Increased awareness No increased awareness	1.22	3.89
9. More skill in patient care No more skill in patient care	1.42	4.21
26. Encouragement from supervisors No encouragement from supervisors	0.98	3.32

NOTE: Only those differences ≥ 1.00 (after rounding off to the second decimal place) are shown.

care. Nurses may have been reluctant to state their points of view as strongly as was suggested by the words used.

Item 26, encouragement from supervisory staff (incentive) and lack of encouragement from supervisory staff (hindrance), were shown to differ by 0.98, the larger mean of the incentive being 3.32. Encouragement from supervisors may be construed to include facility of other arrangements such as time off— which may account for the greater emphasis on this item as an incentive.

Since incentive items have an implied direction of movement, they may be seen as changes from the status quo. The hindrance items, on the other hand, are phrased to reflect static qualities. The items for the questionnaire were generated from hindrances which practising nurses and the literature suggest are the status quo. Nurses may thus be seen to attach more importance to change (incentives and positive conditions) than to the present situation (hindrances and negative conditions).

The one item which shows stronger force as a hindrance than as an incentive is no opportunity to significantly decrease workload while participating in continuing education. This may suggest that while nurses do not value release from a busy schedule as an encourager to participate in continuing education (they might use release time for something else, for instance), they do see no release from their regular work commitments as a

definite hindrance—perhaps even an insurmountable barrier to continuing education activities. This particular item may not have been matched carefully enough. The incentive item was, temporary release from a busy schedule of work. The hindrance item was, no opportunity to significantly decrease workload while participating in continuing education. This slight difference in phrasing may account for the difference in responses.

Items 1(salary increase/no salary increase), 6(promotion to administration/no promotion to administration), 18(bursaries and scholarships/no bursaries and scholarships) and 19(child care facilities/no child care facilities) serve equally as incentives and positive conditions or hindrances and negative conditions with less than 0.10 difference on a scale of 0-5, but none was rated with a mean of more than 3 (i.e., moderate importance) on the Likert scale.

The first, second and third most important items chosen as incentives and positive conditions or hindrances and negative conditions revealed a common choice of items 17 (variety/no variety of good courses) and 21 (flexible/lack of flexible course times) on each questionnaire. Item 9 (increased skill/no increased skill in patient care), ranked as the most important on the incentive and positive conditions questionnaire was not chosen by the majority of nurses on the hindrances and negative conditions questionnaire. Item 23 (no time off with pay) appeared as the other priority on the hindrance and negative conditions questionnaire.

Nineteen nurses gave self actualization and personal satisfaction as additional incentives for participation in continuing education. Other incentives mentioned by one or two nurses included academic stimulation, shared financing and time-off benefits, well-advertised and interesting courses, improved self-esteem, improved peer relationships, recognition for special skills, and improved efficiency.

In summary, nurses see incentives and positive conditions as more important in moving them towards participation in continuing education than hindrances and negative conditions in moving them away from continuing education. This suggests that the introduction of certain incentives would improve the level of participation in continuing education. Some hindrances may well be a function of the total organization of the health care system and may, therefore, not easily be changed. The idea that the introduction of certain incentives, identified as most important by nurses, could actually improve the level of participation in continuing education is a challenge for other researchers.

QUESTION 4

Are there discernible relationships between selected demographic variables and items identified by nurses as important incentives and positive conditions or as important hindrances and negative conditions to their continuing education?

For this question six variables from the demographic data were chosen to compare with mean responses to items 1 through 15 and 17 through 26 on each of the two questionnaires. The variables not chosen were sex, (since there were only 9 males in the survey), ages of children (since number of children or presence or absence of children seemed more appropriate when 143 respondents had no children), highest educational level attained, (since there was some confusion in answering this item which necessitated an arbitrary assignment of category for some respondents), number of months worked in present position (since this item, also, seemed to generate unexpected and confusing responses) and job description (since only 12 respondents described themselves as other than staff nurses). This left age, number of children in direct care, year of graduation, type of basic nursing program, type of employment and unit where employed as variables to be considered.

Age

Pearson correlations yielded weak negative correlations between responses to items 4 (more specialty area nursing), 5 (promotion outside administration), and 15 (academic credit), and age on the positive questionnaire. A weak positive correlation was found between item 25 (maintenance of benefits) and age on the positive questionnaire. On the negative questionnaire, a weak, negative correlation was found between item 14 (no approval of family and friends) and age, and a weak, positive correlation was found between items 19 (no child care facilities) and 23 (no time off with pay) and age. Table 6 displays these statistics. Only correlations greater than or equal to .11 are reported in this table. It was judged that reporting correlations of lesser magnitude, accounting for only one percent or less of shared variance, was not worthwhile.

The data showed that the younger the participant, the greater the importance he/she attached to increased opportunity to nurse in a specialty area and opportunity for promotion without movement into administration (See Table 6). This result supports the suggestion that while most new graduates have limited skill in specialty areas, those areas are regarded as desirable workplaces. In addition, the notion that new graduates would expect and desire to gain personal autonomy before gaining responsibility for and authority over other workers is supported. (Howard, 1971) The more recent emphasis on primary nursing as an evidence of professionalism may also account for the

relationship between age and response to item five. The younger the nurse, the more importance was placed on encouragement from family and friends. Lack of encouragement was seen as more of a hindrance than encouragement was an incentive. This finding supports the idea that younger nurses are less independent than older nurses in their pursuit of continuing education.

Similarly, younger nurses demonstrated greater enthusiasm for credit leading to a certificate or diploma than did older nurses. This may reflect recent moves by professional associations and governments to demand evidence of continuing education activities sometime in the future.

The older the nurse; the more importance he/she placed on "difficulty obtaining time off with pay" as a hindrance. This may indicate more financial commitments on the part of the older nurses or may reflect a more highly developed sense of the employer's responsibility in promoting continuing education for its employees. Older nurses attached more importance to accumulated seniority benefits if extended leave for continuing education were necessary.

TABLE 6

PEARSON CORRELATIONS BETWEEN RESPONSES TO ITEMS AND SELECTED

DEMOGRAPHIC VARIABLES

Item	Age	# of Children	Year of Graduation	Generic Program	Type of Employment	Unit Where Employed
1. Increase in salary No increase in salary						0.17
2. Flexibility of hours No flexibility of hours						
3. More confident unit change No more confident unit change				-0.12	0.15	
4. More specialty area nursing No more specialty area nursing	-0.12		0.21	-0.18	0.13	0.13
5. Promotion outside administration No promotion outside administration	-0.19		0.22	-0.13	0.23	
				-0.12		

TABLE 6(continued)

Item	Age	# of Children	Year of Graduation	Generic Program	Type of Employment	Unit Where Employed
6. Promotion to administration No promotion to administration						-0.14
7. Release from work No release from work					0.15 -0.16	-0.20 -0.17
8. Increased awareness No increased awareness						
9. More skill in patient care No more skill in patient care						0.13
10. Encouragement from peers No encouragement from peers						
11. Change in ward policies No change in ward policies		-0.20	0.11			0.14

TABLE 6 (continued)

Item	Age	# of Children	Year of Graduation	Generic Program	Type of Employment	Unit Where Employed
12. Formal sharing of new knowledge No formal sharing of new knowledge						
13. More collegial decisions No more collegial decisions						
14. Approval of family and friends No approval of family and friends	-0.12					
15. Academic credit No academic credit	-0.12	-0.11	0.20	-0.13	0.13	
17. Variety of good courses No variety of good courses						
18. Bursaries and scholarships No bursaries and scholarships					0.16	0.13

TABLE 6 (continued)

Item	Age	# of Children	Year of Graduation	Generic Program	Type of Employment	Unit Where Employed
19. Child care facilities No child care facilities	0.11	0.36	-0.13		-0.12	
20. Courses close by No courses close by		0.37	-0.17		-0.20	
21. Flexible course times No flexible course times		0.11				
22. Time off without pay No time off without pay		-0.14	0.13			-0.12
23. Time off with pay No time off with pay	0.12	-0.13			0.12	
24. Replacement when off No replacement when off					0.13	
					0.14	
					0.16	

TABLE 6 (continued)

Item	Age	# of Children	Year of Graduation	Generic Program	Type of Employment	Unit, Where Employed
25. Maintenance of benefits No maintenance of benefits	0.15		-0.15	0.11		
26. Encouragement from supervisors No encouragement from supervisors	-0.12	-0.12				
NOTE: Empty cells indicate correlations with $p \geq 0.05$.						

Number of Children in Direct Care

A weak, negative correlation was found on the positive questionnaire between items 11(change in ward policy), 21(flexible course times), 22(time off without pay), and 26(encouragement from supervisors) and number of children in direct care. A weak positive correlation was found between item 19(child care facilities) and number of children in direct care. On the negative questionnaire, a weak positive correlation was found between item 20(courses not close by) and number of children in direct care and a slightly stronger positive correlation (0.37) was found between item 19 (no child care facilities) and this variable. A weak negative correlation was found between item 15(no academic credit) and number of children in direct care.

The fewer the number of children in direct care, the greater was the importance attached to increased opportunity to effect change in ward policies and procedures. Since many hospitals carry out policy and procedural changes at meetings for staff nurses outside of working hours, this response may support the notion that additional responsibility at home generally precludes additional responsibility at work. (Holt, 1981) refers to nursing as largely a second-income, supplemental career. In support of her observation, this response may suggest the need to see oneself as influential in one's major area of work. The greater the number of children the more importance was placed on lack of supervisory support as a hindrance. This may suggest

TABLE 7

DIFFERENCES BETWEEN MEANS OF RESPONSES
OF THOSE WITH CHILDREN AND THOSE WITHOUT CHILDREN

	Item	t value	p
11	Change in ward policies	2.10	0.04
19	Child care facilities	-6.25	0.00*
22	Time off without pay	1.98	0.05
19	No child care facilities	-6.58	0.00*

NOTE: Only those items yielding $p \leq 0.05$ on the t-test are shown;
* separate variance estimate was used.

some nurses with children practice less independence in their secondary nursing career. It may also suggest that nurses with fewer children exercise more autonomy in their primary nursing career.

Subjects with fewer children were more interested in flexibility of course times. This supports Clark's (1975) findings that nurses with young children were less likely to participate in continuing education activities. While this study does not show a statistically significant correlation between actual number of hours engaged in continuing education and number of children in direct care, it does indicate that nurses with fewer children show more interest in at least one aspect of course arrangement. In addition, the fewer the number of children, the more importance was placed on time off without pay as an incentive. Again, this trend suggests a stronger interest in continuing education among nurses with fewer children. The finding corroborates findings of Berg (1973) that participants in continuing education show greater willingness to expend money on continuing education activities than do non-participants. Nurses with a greater number of children placed more emphasis on courses not offered within reasonable travelling distance as a hindrance. In addition, calculation of differences in responses between those nurses with children and those nurses without children found statistically significant differences for these two groups (See Table 7) only for change in ward policies (Item 11), child care facilities (Item 19), time off without pay (Item 22) and no child care facilities (Item 19). Change

in ward policies and time off without pay were found to be statistically significantly more important for nurses without children. These findings support the difference found in the Pearson correlation statistics. Child care facilities and lack of child care facilities were seen as statistically significantly more important as an incentive and a hindrance for nurses with children, a finding which has obvious implications.

To further examine the question of the effect of having to care for children on nurses' responses to all items, a t-test was applied to means of responses to all items by comparing nurses who have children in direct care to those without children in direct care. Since group sizes were so unequal, an F-max test was conducted to test the reasonableness of the assumption of homogeneity of variance that underlies proper interpretation of the t-test. In Table 7 an * symbol signifies that this test showed variances were heterogeneous ($p \leq 0.05$) and a separate variance estimate of the standard error of differences between means was used. Statistically significant differences at $p \leq 0.05$ were found for the means for items 11 (change in ward policy), 19 (child care facilities), and 22 (time off without pay) on the positive questionnaire and item 19 (no child care facilities) on the negative questionnaire. These statistics are presented in Table 7.

Year of Graduation

Responses to items 4 (more specialty area nursing), 5 (promotion outside administration), 15 (academic credit) and 21 (flexible course times) on the

positive questionnaire were found to be weakly correlated with year of graduation. A weak correlation was found between item 19 (child care facilities) and year of graduation. On the negative questionnaire, a weak, negative correlation again was found between responses to item 19 and year of graduation. Table 6 displays these statistics.

The more recent the year of graduation, the more importance was given to appropriate child care facilities. This finding can be seen to be a direct result of the correlation between year of graduation and age and age and number of children in direct care. Time off without pay, as with age, was positively correlated with year of graduation - probably for the same reasons.

As with age, the more recent the year of graduation the more importance was placed on nursing in a specialty area and promotion without movement into administration. Again, the more recent the year of graduation, the more importance the incentive of credit towards a certificate or diploma. These trends have been discussed under age. In addition, the more recent the year of graduation the more importance placed on flexibility of course times to accommodate shift workers. This response may indicate greater interest in continuing education among more recent graduates (as evidenced by more interest in course arrangements), or it may indicate less flexibility of shift work for younger graduates, requiring more flexibility of course times if continuing education is to take place.

TABLE 8

Generic Nursing Program and Statistically Significantly
Different Responses to Incentives, Hindrances and
Conditions Items

	Item	Bartlett- Box Test	Omnibus F-test	Means of reliably different groups	
4.	More specialty nursing	F = 5.37 p = 0.00	F = 3.79* p = 0.01*	Group 1 3.93	Group 3 3.35
	No more specialty nursing	F = 0.21 p = 0.89	F = 2.60 p = 0.05	Group 1 3.18	Group 2 2.50
19.	Child care facilities	F = 1.70 p = 0.17	F = 2.98 p = 0.03	Group 3 1.73	Group 2 0.80
	No child care facilities	F = 3.89 p = 0.01	F = 4.08* p = 0.01*	Group 3 1.72	Group 2 0.68

CODE: Group 1 - 2 year college
Group 2 - 2 year hospital
Group 3 - 3 year hospital
Group 4 - 4 year university

Generic Nursing Program

Weak, negative correlations were found on the positive questionnaire between responses to items 4, 5 and 15 and generic nursing program. Since the code for type of program was proportional to length of the program, (eg baccalaureate was coded as 4, while two-year college was coded as 1) this correlation reveals that the shorter the program, the more importance was attached to these items. A weak positive correlation was found between item 25 and generic program. On the negative questionnaire, a weak, negative correlation was found between items 3, 4 and 5, and generic program. Table 6 displays these statistics.

The shorter the generic nursing program, the greater the importance placed on nursing in a specialty area, promotion without movement into administration and credit towards a certificate or diploma (See Table 8). These responses suggest greater interest in highly technical nursing skills and greater interest in staying at the bedside among graduates of shorter programs. This finding supports the ideas put forward by (Bullough and Sparks, 1975) in relation of socialization of university educated nurses away from the bedside. Caution must be taken in interpreting this trend, however, since the university educated sample size was only seventeen nurses. There may be some evidence here of differences among newer and older programs (two-year vs. three-year programs) in relation to the amount of time spent in specialty area preparation. Graduates of three-year hospital programs generally have had much more student experience in specialty areas than graduates from two-year programs. Similarly, the trend of more recently

graduated nurses to value credit for continuing education is discussed under age. The longer the generic nursing program the greater was the importance placed on maintenance of accumulated seniority benefits. This finding also may be more closely related to age since the three-year program graduates must be older, on average, because three-year programs are products of the past, and are now being replaced by two-year programs.

In addition, one-way analysis of variance was carried out on responses to all items for the four groups represented by type of generic nursing program. Since group sizes were so unequal, a Bartlett-Box test for the assumption of homogeneity of variance that underlies proper interpretation of the variance of the analysis of variance was conducted. When the omnibus F-statistic from the analysis of variance was statistically significant, Neuman-Keuls post-hoc t-tests were conducted to isolate the particular groups that differed from one another. Whenever it is noted in Table 8, by the symbol * that the Bartlett-Box test showed variances to be heterogeneous ($p \leq 0.05$), caution should be used in interpreting the differences between means signaled by the analysis of variance and subsequent post-hoc comparisons.

Responses to items 4 (flexibility of hours) and 19 (child care facilities) on the positive questionnaire were found to be reliably different across these four groups ($p \leq 0.05$). Three-year hospital graduates rated item 4 (flexibility of hours) on the positive form reliably lower than did two-year college

graduates. Two-year hospital graduates rated item 4 on the negative form lower than three-year hospital graduates. Responses to items 4 and 19 on the negative questionnaire also were found to be statistically significantly different among the groups ($p \leq 0.05$) with two-year college graduates and two-year hospital graduates, item 4 and two-year hospital and three-year hospital, item 19 differing most dramatically. Table 8 summarizes these statistics.

Employment Status

Nurses employed part-time attached greater importance to child care facilities both as an incentive to continuing education, if present, and as a hindrance to continuing education, if absent. This supports the notion that part-time workers are more likely to have young children in direct care than full-time workers. Nurses employed full-time attached more importance to increased ability to move confidently from area to area within the hospital than did part-time workers. This may reflect the fact that most full-time nurses work almost exclusively in one unit, and would, therefore, lack experience and confidence to work in other areas. Part-time nurses, on the other hand, are much more likely to "float" to many areas within the hospital in a day's work. Full-time nurses also assigned more importance than did part-time workers to nursing in a specialty area and promotion without movement into administration. This may reflect the fact that specialty areas are much more likely to employ full-time workers due to the orientation required; there also seems to be a connection between nursing in a specialty area and

the concept of primary nursing rather than hierarchical nursing management systems.

In addition, full-time nurses saw release from a busy schedule as more of an incentive, if present, and as more of a hindrance, if absent. This finding supports the fact that part-time workers, by the nature of their choice of employment, have already modified their busy schedule. More full-time than part-time nurses placed importance on time off with pay and adequate personnel to replace during time off for continuing education. Since part-time nurses generally receive few benefits, it is possible that time off with pay was not considered by them as an incentive within the realm of possibility. Since part-time nurses are the personnel who replace others when off, they would probably not expect the hospital to bear the cost of replacing them so that they could engage in continuing education.

Units Where Employed

On the positive questionnaire, a weak, positive correlation was found between item 4 and unit where employed and a weak, negative correlation was found between items 6 and 7, and unit where employed. On the negative questionnaire, weak, positive correlations were found between items 1, 9, 11, and 18, and unit where employed. Weak, negative correlations were found between items 7 and 21 and unit where employed. These statistics are displayed in Table 6.

TABLE 9

MEANS OF RESPONSES FOR GENERALISTS AND VARIOUS SPECIALISTS

Item	General	Special	Special Procedures	Critical Care	F	P
1. Increase in salary	2.68	2.50	2.97	2.49	0.94	0.42
	1.30	1.50	1.32	1.46		
No increase in salary	2.32	2.58	3.21	2.82	3.25*	0.02
	1.27	1.68	1.77	1.33		
2. Flexibility of hours	3.10	3.17	3.00	3.12	0.08	0.97
	1.50	1.63	1.49	1.54		
No flexibility of hours	2.81	2.86	2.90	2.76	0.10	0.97
	1.16	1.49	1.40	1.27		
3. More confident unit change	3.73	3.38	3.24	3.39	1.48	0.22
	1.27	1.36	1.46	1.30		
No more confident unit change	2.59	2.32	2.82	2.65	0.88	0.45
	1.50	1.61	1.44	1.56		

TABLE 9 (continued)

Item	General	Special	Special		F	P																																																				
			Procedures	Critical Care																																																						
4. More specialty area nursing	3.56	3.68	3.48	4.04	2.02	0.11																																																				
	1.34	1.31	1.30	1.00			No more specialty area nursing	2.78	1.40	2.86	2.88	0.40	0.75	2.59	1.64	1.24	1.78	5. Promotion outside administration	2.99	2.89	2.90	3.00	0.11	0.95	1.33	1.47	1.23	1.32	No promotion outside administration	2.54	2.44	2.62	2.31	0.33	0.80	1.40	1.58	1.50	1.76	6. Promotion to administration	1.82	1.59	1.21	1.35	1.71	0.17	1.47	1.53	1.29	1.55	No promotion to administration	1.90	1.51	1.39	1.63	1.47	0.22	1.31
No more specialty area nursing	2.78	1.40	2.86	2.88	0.40	0.75																																																				
	2.59	1.64	1.24	1.78			5. Promotion outside administration	2.99	2.89	2.90	3.00	0.11	0.95	1.33	1.47	1.23	1.32	No promotion outside administration	2.54	2.44	2.62	2.31	0.33	0.80	1.40	1.58	1.50	1.76	6. Promotion to administration	1.82	1.59	1.21	1.35	1.71	0.17	1.47	1.53	1.29	1.55	No promotion to administration	1.90	1.51	1.39	1.63	1.47	0.22	1.31	1.40	1.23	1.38								
5. Promotion outside administration	2.99	2.89	2.90	3.00	0.11	0.95																																																				
	1.33	1.47	1.23	1.32			No promotion outside administration	2.54	2.44	2.62	2.31	0.33	0.80	1.40	1.58	1.50	1.76	6. Promotion to administration	1.82	1.59	1.21	1.35	1.71	0.17	1.47	1.53	1.29	1.55	No promotion to administration	1.90	1.51	1.39	1.63	1.47	0.22	1.31	1.40	1.23	1.38																			
No promotion outside administration	2.54	2.44	2.62	2.31	0.33	0.80																																																				
	1.40	1.58	1.50	1.76			6. Promotion to administration	1.82	1.59	1.21	1.35	1.71	0.17	1.47	1.53	1.29	1.55	No promotion to administration	1.90	1.51	1.39	1.63	1.47	0.22	1.31	1.40	1.23	1.38																														
6. Promotion to administration	1.82	1.59	1.21	1.35	1.71	0.17																																																				
	1.47	1.53	1.29	1.55			No promotion to administration	1.90	1.51	1.39	1.63	1.47	0.22	1.31	1.40	1.23	1.38																																									
No promotion to administration	1.90	1.51	1.39	1.63	1.47	0.22																																																				
	1.31	1.40	1.23	1.38																																																						

TABLE 9 (continued)

Item	General	Special	Special Procedures	Critical Care		F	P																																																														
				Special	Critical Care																																																																
7. Release from work	2.32	1.86	1.62	1.53	1.53	3.46	0.02																																																														
	1.47	1.53	1.40	1.46	1.46			No release from work	3.28	3.03	2.76	2.63	2.63	2.08	0.10	1.39	1.71	1.66	1.42	1.42	8. Increased awareness	4.04	3.76	3.72	3.88	3.88	1.29	0.28	0.85	1.02	1.19	0.95	0.95	No increased awareness	2.52	2.45	3.21	2.81	2.81	1.89	0.13	1.61	1.56	1.50	1.58	1.58	9. More skill in patient care	4.30	4.03	4.07	4.27	4.27	1.46	0.23	0.77	0.92	1.10	0.84	0.84	No more skill in patient care	2.61	2.48	3.38	3.02	3.02	2.60	0.05	1.59	1.68
No release from work	3.28	3.03	2.76	2.63	2.63	2.08	0.10																																																														
	1.39	1.71	1.66	1.42	1.42			8. Increased awareness	4.04	3.76	3.72	3.88	3.88	1.29	0.28	0.85	1.02	1.19	0.95	0.95	No increased awareness	2.52	2.45	3.21	2.81	2.81	1.89	0.13	1.61	1.56	1.50	1.58	1.58	9. More skill in patient care	4.30	4.03	4.07	4.27	4.27	1.46	0.23	0.77	0.92	1.10	0.84	0.84	No more skill in patient care	2.61	2.48	3.38	3.02	3.02	2.60	0.05	1.59	1.68	1.45	1.80	1.80										
8. Increased awareness	4.04	3.76	3.72	3.88	3.88	1.29	0.28																																																														
	0.85	1.02	1.19	0.95	0.95			No increased awareness	2.52	2.45	3.21	2.81	2.81	1.89	0.13	1.61	1.56	1.50	1.58	1.58	9. More skill in patient care	4.30	4.03	4.07	4.27	4.27	1.46	0.23	0.77	0.92	1.10	0.84	0.84	No more skill in patient care	2.61	2.48	3.38	3.02	3.02	2.60	0.05	1.59	1.68	1.45	1.80	1.80																							
No increased awareness	2.52	2.45	3.21	2.81	2.81	1.89	0.13																																																														
	1.61	1.56	1.50	1.58	1.58			9. More skill in patient care	4.30	4.03	4.07	4.27	4.27	1.46	0.23	0.77	0.92	1.10	0.84	0.84	No more skill in patient care	2.61	2.48	3.38	3.02	3.02	2.60	0.05	1.59	1.68	1.45	1.80	1.80																																				
9. More skill in patient care	4.30	4.03	4.07	4.27	4.27	1.46	0.23																																																														
	0.77	0.92	1.10	0.84	0.84			No more skill in patient care	2.61	2.48	3.38	3.02	3.02	2.60	0.05	1.59	1.68	1.45	1.80	1.80																																																	
No more skill in patient care	2.61	2.48	3.38	3.02	3.02	2.60	0.05																																																														
	1.59	1.68	1.45	1.80	1.80																																																																

TABLE 9 (continued)

Item	General	Special	Special		F	P																																																				
			Procedures	Critical Care																																																						
10. Encouragement from peers	3.20	2.78	2.66	3.15	2.24	0.08																																																				
	1.20	1.37	1.47	1.05			No encouragement from peers	2.56	2.09	2.55	2.44	1.54	0.20	1.29	1.50	1.30	1.41	11. Change in ward policies	3.23	2.95	2.83	3.02	1.02	0.39	1.00	1.42	1.17	1.30	No change in ward policies	2.43	2.59	2.76	2.94	1.43	0.23	1.33	1.48	1.33	1.39	12. Formal sharing of new knowledge	3.28	3.05	2.66	3.27	2.40	0.07	1.14	1.17	1.26	1.10	No formal sharing of new knowledge	2.35	2.06	2.17	2.31	0.56	0.64	1.33
No encouragement from peers	2.56	2.09	2.55	2.44	1.54	0.20																																																				
	1.29	1.50	1.30	1.41			11. Change in ward policies	3.23	2.95	2.83	3.02	1.02	0.39	1.00	1.42	1.17	1.30	No change in ward policies	2.43	2.59	2.76	2.94	1.43	0.23	1.33	1.48	1.33	1.39	12. Formal sharing of new knowledge	3.28	3.05	2.66	3.27	2.40	0.07	1.14	1.17	1.26	1.10	No formal sharing of new knowledge	2.35	2.06	2.17	2.31	0.56	0.64	1.33	1.38	1.28	1.49								
11. Change in ward policies	3.23	2.95	2.83	3.02	1.02	0.39																																																				
	1.00	1.42	1.17	1.30			No change in ward policies	2.43	2.59	2.76	2.94	1.43	0.23	1.33	1.48	1.33	1.39	12. Formal sharing of new knowledge	3.28	3.05	2.66	3.27	2.40	0.07	1.14	1.17	1.26	1.10	No formal sharing of new knowledge	2.35	2.06	2.17	2.31	0.56	0.64	1.33	1.38	1.28	1.49																			
No change in ward policies	2.43	2.59	2.76	2.94	1.43	0.23																																																				
	1.33	1.48	1.33	1.39			12. Formal sharing of new knowledge	3.28	3.05	2.66	3.27	2.40	0.07	1.14	1.17	1.26	1.10	No formal sharing of new knowledge	2.35	2.06	2.17	2.31	0.56	0.64	1.33	1.38	1.28	1.49																														
12. Formal sharing of new knowledge	3.28	3.05	2.66	3.27	2.40	0.07																																																				
	1.14	1.17	1.26	1.10			No formal sharing of new knowledge	2.35	2.06	2.17	2.31	0.56	0.64	1.33	1.38	1.28	1.49																																									
No formal sharing of new knowledge	2.35	2.06	2.17	2.31	0.56	0.64																																																				
	1.33	1.38	1.28	1.49																																																						

TABLE 9 (continued)

Item	General	Special	Special Procedures	Critical Care	F	P																																																																										
13. More collegial decisions	3.15	3.11	2.93	2.98	0.33	0.80																																																																										
	1.13	1.44	1.00	1.28			No more collegial decisions	2.35	2.33	2.41	2.38	0.03	0.99	1.26	1.54	1.38	1.33	14. Approval of family and friends	2.46	2.45	3.45	2.45	0.00	1.00	1.47	1.45	1.35	1.43	No approval of family and friends	1.37	1.70	1.48	1.70	0.80	0.49	1.35	1.53	1.35	1.67	15. Academic credit	3.18	2.89	2.90	3.14	0.67	0.57	1.37	1.47	1.40	1.41	No academic credit	2.78	2.48	2.21	2.73	1.16	0.33	1.61	1.59	1.59	1.58	17. Variety of good courses	3.92	3.88	3.62	3.92	0.65	0.58	1.00	1.13	1.18	0.91	No variety of good courses	3.61	3.65	3.18	3.42	1.08	0.36	1.26
No more collegial decisions	2.35	2.33	2.41	2.38	0.03	0.99																																																																										
	1.26	1.54	1.38	1.33			14. Approval of family and friends	2.46	2.45	3.45	2.45	0.00	1.00	1.47	1.45	1.35	1.43	No approval of family and friends	1.37	1.70	1.48	1.70	0.80	0.49	1.35	1.53	1.35	1.67	15. Academic credit	3.18	2.89	2.90	3.14	0.67	0.57	1.37	1.47	1.40	1.41	No academic credit	2.78	2.48	2.21	2.73	1.16	0.33	1.61	1.59	1.59	1.58	17. Variety of good courses	3.92	3.88	3.62	3.92	0.65	0.58	1.00	1.13	1.18	0.91	No variety of good courses	3.61	3.65	3.18	3.42	1.08	0.36	1.26	1.34	1.47	1.20								
14. Approval of family and friends	2.46	2.45	3.45	2.45	0.00	1.00																																																																										
	1.47	1.45	1.35	1.43			No approval of family and friends	1.37	1.70	1.48	1.70	0.80	0.49	1.35	1.53	1.35	1.67	15. Academic credit	3.18	2.89	2.90	3.14	0.67	0.57	1.37	1.47	1.40	1.41	No academic credit	2.78	2.48	2.21	2.73	1.16	0.33	1.61	1.59	1.59	1.58	17. Variety of good courses	3.92	3.88	3.62	3.92	0.65	0.58	1.00	1.13	1.18	0.91	No variety of good courses	3.61	3.65	3.18	3.42	1.08	0.36	1.26	1.34	1.47	1.20																			
No approval of family and friends	1.37	1.70	1.48	1.70	0.80	0.49																																																																										
	1.35	1.53	1.35	1.67			15. Academic credit	3.18	2.89	2.90	3.14	0.67	0.57	1.37	1.47	1.40	1.41	No academic credit	2.78	2.48	2.21	2.73	1.16	0.33	1.61	1.59	1.59	1.58	17. Variety of good courses	3.92	3.88	3.62	3.92	0.65	0.58	1.00	1.13	1.18	0.91	No variety of good courses	3.61	3.65	3.18	3.42	1.08	0.36	1.26	1.34	1.47	1.20																														
15. Academic credit	3.18	2.89	2.90	3.14	0.67	0.57																																																																										
	1.37	1.47	1.40	1.41			No academic credit	2.78	2.48	2.21	2.73	1.16	0.33	1.61	1.59	1.59	1.58	17. Variety of good courses	3.92	3.88	3.62	3.92	0.65	0.58	1.00	1.13	1.18	0.91	No variety of good courses	3.61	3.65	3.18	3.42	1.08	0.36	1.26	1.34	1.47	1.20																																									
No academic credit	2.78	2.48	2.21	2.73	1.16	0.33																																																																										
	1.61	1.59	1.59	1.58			17. Variety of good courses	3.92	3.88	3.62	3.92	0.65	0.58	1.00	1.13	1.18	0.91	No variety of good courses	3.61	3.65	3.18	3.42	1.08	0.36	1.26	1.34	1.47	1.20																																																				
17. Variety of good courses	3.92	3.88	3.62	3.92	0.65	0.58																																																																										
	1.00	1.13	1.18	0.91			No variety of good courses	3.61	3.65	3.18	3.42	1.08	0.36	1.26	1.34	1.47	1.20																																																															
No variety of good courses	3.61	3.65	3.18	3.42	1.08	0.36																																																																										
	1.26	1.34	1.47	1.20																																																																												

TABLE 9 (continued)

Item	General	Special	Special Procedures	Critical Care	F	P
18. Bursaries and scholarships	2.70	2.94	2.76	2.53	0.76	0.52
	1.28	1.65	1.48	1.45		
No bursaries and scholarships	2.51	2.92	2.48	3.13	2.41	0.07
	1.37	1.58	1.43	1.47		
19. Child care facilities	1.05	1.86	1.32	1.08	2.68*	0.05
	1.53	2.16	1.61	1.88		
No child care facilities	0.95	1.59	1.44	1.14	1.81	0.15
	1.44	1.98	1.69	1.84		
20. Courses close by	3.58	3.74	3.45	3.27	1.32	0.27
	1.23	1.18	1.43	1.50		
Courses not close by	3.23	3.14	2.79	2.88	0.94	0.42
	1.37	1.42	1.68	1.65		
21. Flexible course times	4.01	3.98	3.79	2.84	0.34	0.80
	1.13	1.40	1.35	1.33		
No flexible course times	3.91	3.95	3.62	3.55	1.34	0.26
	1.08	1.22	1.37	1.54		

TABLE 9 (continued)

Item	General	Special	Special Procedures	Critical Care		F	P																																																														
				Special	Critical Care																																																																
22. Time off without pay	2.58	1.89	2.48	2.31		2.39	0.07																																																														
	1.58	1.69	1.60	1.39				No time off without pay	2.94	2.74	3.07	2.67		0.59	0.62	1.51	1.69	1.51	1.42		23. Time off with pay	3.15	3.55	3.79	3.24		1.65	0.18	1.54	1.66	1.29	1.48		No time off with pay	3.44	3.73	3.52	3.49		0.51	0.68	1.51	1.42	1.55	1.31		24. Replacement when off	3.68	3.83	3.83	3.65		0.26	0.85	1.40	1.44	1.26	1.23		No replacement when off	3.56	3.30	3.69	2.27		0.98	0.40	1.40	1.56
No time off without pay	2.94	2.74	3.07	2.67		0.59	0.62																																																														
	1.51	1.69	1.51	1.42				23. Time off with pay	3.15	3.55	3.79	3.24		1.65	0.18	1.54	1.66	1.29	1.48		No time off with pay	3.44	3.73	3.52	3.49		0.51	0.68	1.51	1.42	1.55	1.31		24. Replacement when off	3.68	3.83	3.83	3.65		0.26	0.85	1.40	1.44	1.26	1.23		No replacement when off	3.56	3.30	3.69	2.27		0.98	0.40	1.40	1.56	1.11	1.24											
23. Time off with pay	3.15	3.55	3.79	3.24		1.65	0.18																																																														
	1.54	1.66	1.29	1.48				No time off with pay	3.44	3.73	3.52	3.49		0.51	0.68	1.51	1.42	1.55	1.31		24. Replacement when off	3.68	3.83	3.83	3.65		0.26	0.85	1.40	1.44	1.26	1.23		No replacement when off	3.56	3.30	3.69	2.27		0.98	0.40	1.40	1.56	1.11	1.24																								
No time off with pay	3.44	3.73	3.52	3.49		0.51	0.68																																																														
	1.51	1.42	1.55	1.31				24. Replacement when off	3.68	3.83	3.83	3.65		0.26	0.85	1.40	1.44	1.26	1.23		No replacement when off	3.56	3.30	3.69	2.27		0.98	0.40	1.40	1.56	1.11	1.24																																					
24. Replacement when off	3.68	3.83	3.83	3.65		0.26	0.85																																																														
	1.40	1.44	1.26	1.23				No replacement when off	3.56	3.30	3.69	2.27		0.98	0.40	1.40	1.56	1.11	1.24																																																		
No replacement when off	3.56	3.30	3.69	2.27		0.98	0.40																																																														
	1.40	1.56	1.11	1.24																																																																	

TABLE 9 (continued)

Item	General	Special	Special Procedures	Critical Care	F	P
25. Maintenance of benefits	3.60	3.65	3.55	3.50	0.10	0.96
	1.34	1.56	1.30	1.61		
No maintenance of benefits	3.23	3.38	3.45	3.06	0.56	0.64
	1.38	1.68	1.45	1.64		
26. Encouragement from supervisors	3.78	3.38	3.07	3.22	0.49	0.69
	1.31	1.44	1.31	1.23		
No encouragement from supervisors	2.46	2.16	2.46	2.33	0.55	0.65
	1.35	1.51	1.60	1.59		

NOTE: * The test for homogeneity of variance revealed that variances were not homogeneous at $p \geq .05$.

Further to the question of possible differences among nurses employed in different areas of nursing, one-way analyses of variance generally revealed no statistically significant differences in means of responses among generalists and various categories of specialists. The only exceptions to this general finding were for item 7 on the positive questionnaire and item 9 on the negative questionnaire. Both of these exceptions were statistically significant at $p \leq 0.05$ (See Table 9). Caution should be taken in interpreting differences between these means since the test for homogeneity of variance revealed that variances were not homogeneous at $p \leq 0.05$.

The nurses were then divided into two groups with all of those who specified general medicine, general surgery or geriatrics as unit where employment being assigned to generalists, and all those who specified other areas being assigned to specialists. A t-test was applied to the means of responses for these two groups on each incentive, hindrance or condition item on the questionnaires. These are presented in Table 10. Responses to items 3 and 7 on the positive questionnaire and items 1, 6, 7 and 19 on the negative questionnaire were statistically significantly different ($p < 0.05$) with the generalists scoring higher means in items 3 and 7 on the positive questionnaire and in items 6 and 7 on the negative questionnaire. Specialists scored higher means on items 1 and 19 on the negative questionnaire.

To further describe these differences, an effect size was calculated

that compared the percentile ratings of specialists to generalists whose percentile was set at 50 for each item. (See Table 10) This yielded several statistics of interest defined as $\pm 20\%$. Using this criterion, responses to items 3, 7, 8, 10, 11, 19 and 22 were identified on the positive questionnaire and responses to items 1, 7, 18 and 19 were identified on the negative questionnaire.

The less the degree of specialization of the participants, the greater the importance placed upon increased opportunity to move into administration. (See Table 9) This finding may reflect the nurse's need to gain recognition and status within the confines of the less dramatic and less technically demanding general nursing areas. Similarly, the lower the degree of specialization the more importance placed on release from a busy schedule as an incentive to continuing education. This finding may reflect the general hospital practice of assigning fewer staff to general than to special areas, resulting in chronic staff shortages in some general areas. Conversely, the greater the degree of specialization, the more importance attached to lack of release from a busy schedule as a hindrance to continuing education. The finding may support the notion of time pressure for special procedures which, because of the serious nature of patients' conditions, cannot be delayed. Lack of release from such scheduled activities would, therefore, make addition of continuing education activities very difficult or impossible.

TABLE 10

COMPARISON OF GENERALISTS AND SPECIALISTS

Item	Generalists		Specialists		T value	T prob.	per-centile
	Mean	S.D.	Mean	S.D.			
1. Increase in salary No increase in salary	2.68	1.30	2.59	1.46	0.45	0.65*	44 ⁺
	2.32	1.27	2.78	1.49	-2.37	0.02	78 ⁺
2. Flexibility of hours No flexibility of hours	3.10	1.50	3.12	1.56	-0.08	0.94*	51
	2.81	1.16	2.83	1.39	-0.13	0.90	52
3. More confident unit change No confident unit change	3.73	1.27	3.35	1.35	2.05	0.04	26 ⁺
	2.59	1.50	2.53	1.57	0.29	0.77	47
4. More specialty area nursing No more specialty area nursing	3.56	1.14	3.76	1.22	-1.19	0.24	64
	2.78	1.40	2.74	1.61	0.20	0.84	48
5. Promotion outside administration No promotion outside administration	2.99	1.33	3.92	1.37	0.34	0.74	46
	2.54	1.40	2.43	1.62	0.50	0.62	44
6. Promotion to administration No promotion to administration	1.82	1.47	1.43	1.49	1.89	0.06	29
	1.90	1.36	1.53	1.36	1.96	0.05*	28

TABLE 10 (continued)

Item	General-ists		Special-ists		T value	T prob.	per-centile
	Mean	S.D.	Mean	S.D.			
7. Release from work No release from work	2.32	1.47	1.70	1.48	2.98	0.00*	17 ⁺
	3.28	1.39	2.84	1.61	2.05	0.04	25 ⁺
8. Increased awareness No increased awareness	4.04	0.85	3.79	1.03	1.81	0.07	27 ⁺
	2.52	1.51	2.73	1.57	-0.93	0.36	60
9. More skill in patient care No more skill in patient care	4.30	0.77	4.12	0.93	1.50	0.14	52
	2.61	1.69	2.85	1.70	-1.01	0.32	62
10. Encouragement from peers No encouragement from peers	3.20	1.20	2.88	1.30	1.18	0.07	29 ⁺
	2.56	1.29	2.30	1.43	1.31	0.19	34
11. Change in ward policies No change in ward policies	3.23	1.00	2.95	1.32	1.76	0.08	28 ⁺
	2.43	1.33	2.74	1.42	-1.60	0.11	68
12. Formal sharing of new knowledge No formal sharing of new knowledge	3.28	1.14	3.04	1.18	1.45	0.15	33
	2.35	1.33	2.17	1.40	0.94	0.35	39

TABLE 10 (continued)

Item	General-ists		Special-ists		T value	T prob.	per-centile
	Mean	S.D.	Mean	S.D.			
13. More collegial decisions No more collegial decisions	3.15	1.13	3.03	1.30	0.71	0.48	41
14. Approval of family and friends No approval from family and friends	2.35	1.26	2.36	1.43	-0.05	0.96	50
	2.46	1.47	2.45	1.41	0.02	0.98	50
	1.37	1.35	1.65	1.54	-1.39	0.17	34
15. Academic credit No academic credit	3.18	1.37	2.98	1.43	1.00	0.32	38
	2.78	1.61	2.51	1.59	1.19	0.24	36
17. Variety of good courses No variety of good courses	3.92	1.00	3.84	1.07	0.55	0.58	44
	3.61	1.28	3.48	1.33	0.70	0.48	42
18. Bursaries and scholarships No bursaries and scholarships	2.70	1.28	2.76	1.56	-0.30	0.76	54
	2.51	1.37	2.90	1.52	-1.92	0.06	72 ⁺
19. Child care facilities No child care facilities	1.05	1.53	1.49	1.98	-1.78	0.08*	73 ⁺
	0.95	1.44	1.42	1.88	-2.02	0.05	75 ⁺

TABLE 10 (continued)

Item	General-ists		Special-ists		T value	T. prob.	per-centile
	Mean	S.D.	Mean	S.D.			
20. Courses close by Courses not close by	3.58 3.23	1.23 1.37	3.52 2.98	1.35 1.55	0.30 1.19	0.76 0.24	46 36
21. Flexible course times No flexible course times	4.01 3.91	1.34 1.08	3.90 3.75	1.36 1.37	0.65 0.97	0.52 0.34	42 38
22. Time off without pay No time off without pay	2.58 2.94	1.58 1.51	2.15 2.78	1.59 1.57	1.90 0.70	0.06 0.48	29 ⁺ 41
23. Time off with pay No time off with pay	3.15 3.44	1.54 1.51	3.49 3.60	1.53 1.40	-1.57 -0.80	0.12 0.43	67 59
24. Replacement when off No replacement when off	3.68 3.56	1.40 1.40	3.77 3.37	1.33 1.37	-0.48 0.98	0.63 0.33	55 39
25. Maintenance of benefits No maintenance of benefits	3.60 3.23	1.34 1.38	3.58 3.28	1.52 1.62	0.12 -0.26	0.90 0.79	49 53
26. Encouragement from supervisors No encouragement from supervisors	3.37 2.46	1.31 1.35	3.26 2.28	1.34 1.55	0.58 0.86	0.57 0.39	44 40

NOTE: * Statistically significant difference at the $p \leq 0.05$ level
+ percentile of + 20 as compared with generalists.

n Group 1 = 78
n Group 2 = 144

The higher the degree of specialization, the greater the emphasis placed on increased opportunity to effect change in ward policies and procedures. This finding may be reflective of the degree of actual autonomy and the degree of expected autonomy among specialists. The higher the degree of specialization, the more emphasis placed on lack of bursaries and scholarships as a hindrance. The more highly specialized nurses also chose time off without pay as an incentive. It appears that more highly specialized nurses place more emphasis on financial aid from external sources than from the hospital, itself. The higher the degree of specialization the more emphasis was placed on lack of increased ability to carry out patient care as a hindrance. This supports the notion that specialists value their high level skills in patient care and would be discouraged from seeking continuing education if increased skill were not a result. To further test for possible differences between the broad categories of generalist and specialist, the t-test was applied (See Table 10). Statistically significant differences were found for confident movement from unit to unit, the generalists placing more importance on this item as an incentive than the specialists did. Generalists also saw release from a busy schedule as more important. These differences were discussed in relation to correlation statistics on the negative questionnaire. Lack of salary increase was seen as more of a hindrance by specialists. Lack of promotion, both to administration and within patient-care duties, was seen by generalists as more of a hindrance. These findings support the notion the specialists believe they should be paid extra for their knowledge and skills and that promotion

as outlined in this survey is not an important an item. Specialists see lack of child care facilities as statistically significantly more important. This finding strongly suggests that specialists have younger children or a greater number and younger children than generalists in this study.

To summarize, the notion of differentiation of perceived incentives and hindrances in relation to age, number of children in direct care, year of graduation, type of generic nursing program, type of employment, and unit where employed is supported. While these trends are not strong, they generate questions which could be more accurately answered by additional research. Making continuing education attractive must be a primary aim for those who promote the extension of its voluntary status. Linking continuing education with opportunities to specialize appears to show positive possibilities as a form of motivation. Still to be explored are ways in which nurses working in general areas can be encouraged to think of themselves as experts in those areas. One way to promote the development of such an attitude might be courses designed to build on one another with cumulative in-house credit attached and the development of a senior nurse category. The fact that graduates of longer programs appear more socialized towards administration raises the question who will assume responsibility for educating nurses to assume more advanced nursing skills in direct patient care. If, in fact, universities are not preparing such highly skilled nurses, and other programs are being shortened, alternatives must be explored. The seeming decrease in numbers of nurses without children calls for changes in program planning in continuing education for career-oriented women in nursing.

QUESTION 5

Do incentives and positive conditions or hindrances and negative conditions fall into clusters which may be compared to Herzberg's factor categorization in his motivation-hygiene theory of work?

Four separate principal components analysis with one in the diagonal of the interitem correlation matrix were performed to explore for factors represented in the incentives subscale and the hindrances subscale on each of the positive and negative questionnaires. Using the traditional eigen-value cutoff of 1.00, 4 factors were identified from the incentives subscale and from the hindrances subscale that together accounted for 60% and 66% of the common variance, respectively. Three factors were identified from the conditions subscale on each questionnaire. These accounted for 60% and 55% of the common variance, respectively. Each set of factors was rotated using the varimax criterion. Factor loadings are reported in Tables 11-14. Items having loadings greater than or equal to 0.50 were selected to form subscales representing the factors and are analysed, logically, in chapter 5, for their correspondence to Herzberg's factors.

One-way analysis of variance was then applied to determine whether the factors were differentially important depending on the unit where nurses were employed. Since group sizes were so unequal, a Bartlett-Box test for the assumption of homogeneity of variance that underlies proper interpretation of the analysis of variance was conducted. When the omnibus F-statistics from the analysis of variance was statistically significant, Neuman-Keuls post-hoc

TABLE II

Varimax Rotated Factor Matrix

Incentives Subscale

Item	Factor I	Factor II	Factor III	Factor IV
1. Increase in salary	0.11	0.84*	0.09	-0.01
2. Flexibility of hours	0.02	0.85*	0.20	0.07
3. More confident unit change	-0.07	0.15	0.69	0.18
4. More specialty area nursing	0.08	0.11	0.58	0.36
5. Promotion outside administration.	0.08	0.39	0.34	0.60*
6. Promotion to administration	0.22	0.06	-0.05	0.75*
7. Release from work	0.28	0.58*	-0.08	0.17
8. Increased awareness	0.45	-0.03	0.61*	-0.06
9. More skill in patient care	0.40	0.03	0.68*	-0.27
10. Encouragement from peers	0.74*	0.18	0.13	0.02
11. Change in ward policies	0.66*	0.24	0.24	0.21

TABLE II (continued)

Item	Factor I	Factor II	Factor III	Factor IV
12. Formal sharing of new knowledge	0.76*	-0.03	0.20	0.31
13. More collegial decisions	0.54*	0.08	0.33	0.50*
14. Approval of family and friends	0.65*	0.21	-0.08	0.10
15. Academic credit	0.27	0.48	0.08	0.34
Reliability	Alpha=0.81	Alpha=0.71	Alpha=0.62	Alpha=0.50

TABLE 12

Varimax Rotated Factor Matrix

Hindrances Subscale

Item	Factor I	Factor II	Factor III	Factor IV
1. No increase in salary	0.18	0.09	0.07	0.85 ⁺
2. No flexible hours	0.08	0.08	0.19	0.82 ⁺
3. No confident unit change	0.11	0.76 ⁺	0.32	0.16
4. No more specialty area nursing	0.13	0.75 ⁺	0.46	0.08
5. No promotion outside administration	0.11	0.26	0.72 ⁺	0.26
6. No promotion to administration	0.32	-0.05	0.72 ⁺	0.00
7. No release from work	0.18	0.16	0.41	0.36
8. No increased awareness	0.47	0.76 ⁺	-0.10	0.10
9. No more skill in patient care	0.38	0.81 ⁺	-0.15	0.05
10. No encouragement from peers	0.77 ⁺	0.18	0.18	0.10
11. No change in ward policies	0.81 ⁺	0.18	0.06	0.22

TABLE 12 (continued)

Item	Factor I	Factor II	Factor III	Factor IV
12. No formal sharing of new knowledge	0.75 ⁺	0.30	0.32	0.06
13. No more collegial decisions	0.68 ⁺	0.20	0.34	0.14
14. No approval from family and friends	0.41	0.28	0.16	0.10
15. No academic credit	0.39	0.02	0.47	0.35
Reliability	Alpha=0.87	Alpha=0.86	Alpha=0.61	Alpha=0.71

TABLE 13

Varimax Rotated Factor Matrix
Positive Conditions Subscale

Item	Factor I	Factor II	Factor III
17. Variety of good courses	0.76 ⁺	0.07	0.00
18. Bursaries and scholarships	0.34	0.25	0.56 ⁺
19. Child care facilities	-0.10	-0.11	0.83 ⁺
20. Courses close by	0.73 ⁺	-0.10	0.29
21. Flexible course time	0.82 ⁺	0.14	0.11
22. Time off without pay	-0.22	0.76 ⁺	-0.07
23. Time off with pay	0.37	0.31	0.52 ⁺
24. Replacement when off	0.59 ⁺	0.47	0.08
25. Maintenance of benefits	0.44	0.54 ⁺	0.35
26. Encouragement from supervisors	0.39	0.61 ⁺	0.17

*Reliability

Alpha=0.79

Alpha =0.49

Alpha=0.49

TABLE 14

Varimax Rotated Factor Matrix
Negative Conditions Subscale

Item	Factor I	Factor II	Factor III
17. No variety of good courses	0.08	0.80 ⁺	-0.08
18. No bursaries and seholarships	0.08	0.15	0.76 ⁺
19. No child care facilities	0.01	0.09	0.66 ⁺
20. Courses not close by	-0.01	0.78 ⁺	0.38
21. No flexible course times	0.34	0.64 ⁺	0.22
22. No time off without pay	0.76 ⁺	0.03	-0.12
23. No time off with pay.	0.56 ⁺	-0.01	0.51
24. No replacement when off	0.65 ⁺	0.29	0.10
25. No maintenance of benefits	0.54 ⁺	0.18	0.21
26. No encouragement from supervisors	0.63 ⁺	-0.01	0.20
Reliability	Alpha=0.67	Alpha=0.70	Alpha=0.38

t-tests were conducted to isolate the particular groups that differed statistically from one another. Caution should be used in interpreting the differences between means that are discussed here since the assumption of homogeneity of variance is not warranted for the results reported.

One-way analysis of variance yielded results of statistical significance ($p \leq 0.05$) for only the subscale factor named Financial Help. The Bartlett-Box test for homogeneity of variance renders the level of significance of the F-test suspect. The level of statistical significance for the F-statistic for No Financial Help was $p = 0.06$ and the Bartlett-Box F probability was 0.199.

These tests suggest differences between two-year college and two-year hospital graduates in relation to the importance they placed upon financial help for continuing education. No other statistically significant differences in responses to item clusters were found among nurses employed in different units.

Pearson correlations were computed between factors and age, number of children in direct care, year of graduation, generic nursing program, type of employment, unit where employed and total number of hours spent in continuing education. Table 15 displays these correlations. Only those with $p \leq 0.05$ are reported. On the positive questionnaire, weak negative correlations were found between the social influence factor and number of children in

direct care, between skill/patient care and generic nursing program, between promotion and age, between encouragement from the hospital and number of children in direct care, and between financial help and year of graduation. Weak positive correlations were found between the money/hours factor cluster and type of employment, between promotion and year of graduation, and promotion and type of employment, between financial help and age and financial help and children in direct care.

On the negative questionnaire weak negative correlations were found between lack of accessibility and unit where employed and lack of financial help and year of graduation. Weak positive correlations were found between lack of financial help and age, number of children in direct care and generic program.





TABLE 15

Correlation of Factor Clusters With

Demographic Variables

	Age	Number of Children In Direct Care	Year of Graduation	Generic Program	Type of Employment	Unit Where Employed
1. Social		-0.13				
2. Money/hours					0.11	
3. Skill/patient care				-0.15		
4. Promotion	-0.14		0.17		0.20	
5. Accessibility of continuing education						
6. Encouragement from hospital		-0.16				
7. Financial Help	0.14	0.12	-0.14			

TABLE 15 (continued)

	Age	Number of Children In Direct Care	Year of Graduation	Generic Program	Type of Employment	Unit Where Employed
1. No social influence						
2. No more skill in patient care						
3. No more promotion						
4. No more money/hours						
5. No encouragement from hospital						
6. No accessibility						-0.12
7. No financial help	0.13	0.20	-0.15	0.12		

NOTE: Empty cells indicate correlation with $p \geq 0.05$.

The items for this survey-questionnaire were generated from observation, personal experience, reports of practising nurses and literature about nurses' continuing education. This latter contributing factor did not overlap with literature describing Herzberg's model, and no special attempt was made to accommodate his theoretical categories in the questionnaire itself. An attempt was made, however, to analyse the items used in relation to Herzberg's delineation of satisfiers and dissatisfiers to see if any such categories arose. (Tables 11-14) In fact, certain factors did emerge from the set of items used in this study that fall into either the satisfiers or dissatisfiers category. As reviewed earlier, Herzberg's categories are as follows. Satisfiers (or motivators) Herzberg identifies as achievement, recognition, work itself, responsibility and advancement. Dissatisfiers (or hygiene factors) he identifies as company policy, administration, supervision, salary, interpersonal relations and working conditions.

Four factor clusters emerged from the first fifteen items on the positive questionnaire (Table 11). They were labelled social influence, money/hours, skill/patient care, and promotion. Included in the social/influence factor were encouragement from peers (item 10), increased chance to effect change (item 11), formal chance to share new knowledge (item 12), more collegial decision-making (item 13), and approval of family and friends (item 14). Included in the money/hours factor were increase in salary (item 1), more flexible hours (item 2), and release from busy schedule (item 7). Included in the skill/patient care factor were confidence in unit change

(item 3), more chance for specialty nursing (item 4), increased awareness of important health care information (item 8) and increased skill in patient care (item 9). Included in the promotion factor were chance for promotion without movement into administration (item 5) and chance for promotion to administration (item 6). The skill/patient care and the promotion factors contain items which may be subsumed under Herzberg's satisfiers, achievement and advancement. The social influence and money/hours factors contain items which more closely resemble Herzberg's dissatisfiers, regarding interpersonal relations, salary, and working conditions.

While factors for the first fifteen items on the negative questionnaire fell out in a different order, they paralleled the factors from the positive questionnaire. This is further evidence of correspondence between incentives and hindrances that was described under question 2. The four factors were given the same names as before. In order, the skill/patient care factor again emerged as most important and included the negative counterpart of all items in the first factor cluster except approval of family and friends. This indicates that lack of approval of family and friends is not as much a hindrance as approval is an incentive to continuing education. The second factor from the hindrance subscale was skill/patient care and included the negative counterparts of each item in that factor derived from the incentives subscale. The third factor from the hindrance subscale was promotion which included the two items in that factor derived from the incentives subscale.

The last factor on the hindrance subscale was money/hours and included all corresponding items on the factor from the incentives subscale except release from a busy schedule. As described earlier, discrepancies between this item on the incentives subscale and this item on the hindrance subscale may be due partly to lack of parallelism in wording of the matched items.

Factor analysis of items on the conditions subscales of the two questionnaires resulted in the emergence of additional factor clusters which may be compared to Herzberg's factors. The factors that emerged from the positive conditions subscale were accessibility/time off, encouragement from hospital, and financial help. Items included in the accessibility/timeoff factor were a variety of good courses available, courses offered within a reasonable distance, flexibility of course times and adequate personnel to replace during time off. Items included in the encouragement from hospital factor were time off without pay, maintenance of accumulated benefits, and encouragement from supervisory staff. Items included in the financial help factor were bursaries and scholarships, appropriate child care facilities, and time off, with pay.

The factors that emerged from the negative conditions subscale were similar to those derived from the positive conditions subscale but they differed in order and in inclusion or exclusion of several items. The factors from the negative conditions subscale was called encouragement from hospital and included difficulty obtaining time off with pay and lack of

adequate personnel to replace during time off as well as items 22(time off without pay), 25(maintenance of benefits), 26(encouragement from supervisors) which were under that factor heading from the positive conditions subscale.

The second factor emerging from the negative conditions subscale was the accessibility/time off factor which included the negative counterpart to all items under that factor as derived from the positive conditions subscale except adequate personnel to replace during time off which was subsumed under factor 1. Factor 3, financial help, included the negative counterpart of all items under that factor derived from the positive conditions subscale except time off with pay.

Positive and negative conditions appear to fall out in similar but not discrete factor categories. This differentiation from Herzberg's categories may provide some direction to investigation of reasons for participation or lack of participation in continuing education by nurses. Items as part of a factor cluster gain strength in either their positive or negative effect. All items which fall into factor clusters on the conditions' subscales may be subsumed under Herzberg's dissatisfiers; especially if provision of continuing education activities is considered part of the hospital's responsibility.

In this case, items such as availability of courses, courses within reasonable distances, child care facilities, flexible course times, time off with or without pay, and maintenance of benefits, may be considered to approximate Herzberg's company policy and working conditions factors. Encouragement from supervisory staff may be seen as similar to his supervision factor.

While factor clusters in this study approximate those which Herzberg identified, Herzberg's major categories of satisfiers vs. dissatisfiers may be questioned. Herzberg's major classification may be seen to coincide with the concepts of inner-directedness and outer-directedness, inner-directedness being exemplified by the satisfiers and outer-directedness being exemplified by the dissatisfiers. Similarly, satisfiers may be compared with independence factors while dissatisfiers may be compared with dependence factors. An extension of this idea might be the comparison of satisfiers with professional behaviours and dissatisfiers with subordinate behaviours. In the practice of nursing, these categories that Herzberg outlined as being discrete appear to overlap. The interdependence of members of the health care team renders the interpersonal relations factor (a dissatisfier) an integral part of achievement, responsibility and the work itself (satisfiers). Similarly, factors such as company policy and working conditions (dissatisfiers) very directly impinge upon the factor "work itself" (satisfier) by outlining the parameters within which patient care may be carried out. Administration, and supervision (dissatisfiers) also may be seen to overlap with recognition, responsibility and advancement (satisfiers) in nursing practice.

Herzberg postulated that dissatisfiers, being of a separate order from satisfiers, could never serve as motivators. In this study, conditions (variety of courses and flexibility of course times) that Herzberg would probably identify, as working conditions were ranked as important incentives to

continuing education for nurses. It might be argued that participants were biased in their selection of items by the researcher's suggestion that items could be incentives or motivators, when Herzberg suggests they could not be. This study, of course, was not measuring factors related to the nature of work as such but was attempting rather to identify factors promoting or inhibiting engagement in continuing education activities. Extension of Herzberg's theory to explain participation or lack of participation in continuing education may not be justified and discrepancies between his findings and those in this study may be an expression of the limits of adaptation of the theory rather than the limits of the theory itself.

An additional analysis was carried out to test for correlations between factor clusters and selected demographic variables (Table 15). On the positive questionnaire, a weak negative correlation was found between the social influence factor and number of children in direct care. This finding suggests that nurses with fewer children place more emphasis on the combination of being influenced and exerting influence in their work. Such an emphasis may suggest a higher degree of personal involvement in the work itself by nurses with fewer children. A weak negative correlation between skill/patient care and generic nursing program supports findings reported earlier. These findings in combination suggest that socialization to direct patient care decreases as length of nursing program increases. The weak negative correlation between importance of the promotion factor and age suggests a conflict between the two kinds of promotion—since findings reported earlier

demonstrated differences in choices of kind of promotion and age (i.e. promotion to administration and age and promotion to complexity of patient care and age).

The weak negative correlation between encouragement from hospital and number of children in direct care suggests that nurses with fewer children place more importance on time off without pay, maintenance of benefits and encouragement from supervisors. This last item was associated with nurses with more children in other analyses in this study. A possible explanation for this seeming discrepancy is the magnitude of factor loading of the items "time off without pay" and "maintenance of benefits" which suggest more of a primary career orientation to nursing. The magnitude of factor loading of these items may have attracted more responses from women without children. The weak negative correlation between the factor financial help and year of graduation suggests that the less recent the year of graduation the more emphasis placed on financial help. Possible reasons for this connection were discussed earlier.

A weak positive correlation was found between the money/hours factor, the promotion factor, and type of employment. Full-time employees placed more importance on salary, flexibility of hours and release from a busy schedule than did part-time employees. Again this finding suggests a greater expectation from nurses who regard nursing as their primary career. A weak positive correlation was also found between the promotion factor and year of

graduation. This finding suggests that the more recent the year of graduation the more emphasis is placed on promotion. As with the weak negative correlation between importance of the promotion and age, the finding suggests a conflict between the two kinds of promotion which may have skewed the results. The weak positive correlation between the financial help factor and age again suggests that older nurses place more emphasis on help from their employer in their continuing education. Since the financial help factor includes child care facilities, it is easy to see why there is a positive correlation between this factor and number of children in direct care.

On the negative questionnaire, a weak negative correlation was found between the accessibility/time off factor and unit where employed. This finding suggests the lower the degree of specialization the greater the combined importance of lack of variety of good courses, no courses within a reasonable distance, lack of flexibility of course times and no adequate personnel to replace during time off. Since in earlier discussion it was suggested that the hindrances and negative conditions represented the status quo, it might be suggested that generalists experience more barriers in these areas than specialists do. The weak negative correlation between lack of financial help and year of graduation suggests that the less recent the year of graduation the more of hindrance lack of financial help is seen to be. This finding supports the positive correlation between age and the financial help factor. Again number of children in direct care was found to be positively correlated with the financial help factor probably because it includes child care

facilities. The positive correlation between generic program and the financial help factor may, as discussed earlier, also relate to age, since the majority of three-year graduates in the study are older.

The fact the items fall out in clusters suggests that changes in policies, and benefits related to continuing education must be considered in their inter-relatedness to other environmental conditions. Change in one item may not bring about desired results if the combined effects of various items are not considered.

In summary, Herzberg's model provides a useful framework for the discussion of incentives and hindrances to continuing education for nurses. While there appears to be some overlap in his major categories of satisfiers and dissatisfiers in the analysis of nurses' roles, his factor clusters remained, for the most part, within their discrete categories when applied to this study. Other researchers could usefully explore the adaptation of Herzberg's theory to the professional role expectations of the nurse.

APPENDIX A
QUESTIONNAIRES

Directions for code:
 List last 4 digits of telephone # and last 3 letters of mother's maiden name.
 Ex. 525-1346 Spence
 Code: 1346-nce
 CCDF

CONTINUING EDUCATION QUESTIONNAIRE

PART A

In this questionnaire CONTINUING EDUCATION means any structured learning activity engaged in after basic nursing education and directly related to nursing care. The definition does not include basic orientation activities provided by hospitals for new employees. It does not include total programs such as degree programs offered at universities. It does include workshops, short courses, and longer courses designed to augment or update nursing information. It does include health related courses offered in the community, such as nutrition or psychology courses.

SECTION I: Listed below are some possible benefits of continuing education. Indicate the relative importance (on a scale of 0 to 5) of each in motivating you to participate in continuing education. Circle the one number that most clearly describes your belief. Please be sure to respond to each item.

	no	little	some	moderate	great	very great
1. Significant increase in salary	0	1	2	3	4	5
2. Greater flexibility in hours of work	0	1	2	3	4	5
3. Increased opportunity to move confidently from area to area within the hospital	0	1	2	3	4	5
4. Increased opportunity to nurse in a specialty area	0	1	2	3	4	5
5. Opportunity for promotion without movement into administration	0	1	2	3	4	5
6. Increased opportunity for promotion to administration	0	1	2	3	4	5
7. Temporary release from a busy schedule of work	0	1	2	3	4	5
8. Increased awareness of important health care information	0	1	2	3	4	5

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CONTINUING EDUCATION QUESTIONNAIRE

PART A SECTION I (continued) page 2

	no	little	some	moderate	great	very great
9. Increased skill in carrying out patient care	0	1	2	3	4	5
10. Encouragement from peers to put new learning into practice	0	1	2	3	4	5
11. Increased opportunity to effect change in ward policies and procedures	0	1	2	3	4	5
12. Formal opportunity to share new knowledge and skills with peers	0	1	2	3	4	5
13. Greater opportunity to be involved in collegial decision-making with other professionals on the health care team	0	1	2	3	4	5
14. Approval and encouragement from family and friends	0	1	2	3	4	5
15. Credit towards a certificate or diploma	0	1	2	3	4	5
16. Other (please specify)	0	1	2	3	4	5

Section II: Listed below are some conditions that may determine whether you can participate in continuing education activities. Indicate the relative importance on a scale of 0 to 5, of each by circling the number which most clearly describes your belief.

17. A variety of courses available which provide current, essential knowledge and skills	0	1	2	3	4	5
18. Bursaries and scholarships	0	1	2	3	4	5
19. Appropriate child-care facilities	0	1	2	3	4	5
20. Courses offered within reasonable traveling distance of home or hospital	0	1	2	3	4	5
21. Flexibility of course times to accommodate shift workers	0	1	2	3	4	5
22. Time off without pay	0	1	2	3	4	5
23. Time off with pay	0	1	2	3	4	5
24. Adequate personnel to replace during time off	0	1	2	3	4	5

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CONTINUING EDUCATION QUESTIONNAIRE

PART A SECTION II (continued) page 3

	no	little	some	moderate	great	very great
25. Maintenance of accumulated seniority benefits if extended leave is necessary	0	1	2	3	4	5
26. Encouragement from supervisory staff	0	1	2	3	4	5
27. Other (please specify)	0	1	2	3	4	5

Please review the preceding 27 items in Sections I and II to identify the three most important factors that bear on your participation in continuing education. Then, in the right hand margin, place a 1 opposite the item that is most important, a 2 opposite the item that is the second most important, and a 3 opposite the item which is the third most important.

PLEASE COMPLETE THE FOLLOWING DATA CATEGORIES:

1. Age ----
2. Sex male female
3. Number of children in direct care -----
4. Ages of these children pre-school
 6 - 12
 13 - 18
 over 18
(Please check all that apply)
5. Year of graduation from basic nursing program 19---
6. Type of basic nursing program 3-year hospital
 2-year college
 baccalaureate
 other (please specify)
7. Highest educational level attained -----
8. Type of employment full-time
 part-time
9. Number of months worked in present position in last year -----
10. Job description staff nurse
 other (please specify)
11. Unit where employed medical (general)
 surgical (general)
 medical/surgical
 obstetrical
 paediatric
 psychiatric
 geriatric
 other (please specify)

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Directions for code: Eg. 525-1345

List 1-st four digits 525

of telephone # and last Code: 1345-nce

3 letters of Mother's

CODE

maiden name: CONTINUING EDUCATION QUESTIONNAIRE

PART B

In this questionnaire CONTINUING EDUCATION means any structured learning activity engaged in after basic nursing education and directly related to nursing care. The definition does not include basic orientation activities provided by hospitals for new employees. It does not include total programs such as degree programs offered at universities. It does include workshops, short courses, and longer courses designed to augment or update nursing information. It does include health related courses offered in the community, such as nutrition or psychology courses.

SECTION III: Listed below are some possible hinderances to continuing education. Indicate the relative importance (on a scale of 0 to 5) of each in influencing you against participation in continuing education. Circle the one number that most clearly describes your belief. Please be sure to respond to each item.

	no	little	some	moderate	great	very great
1. Insufficient salary increase for continuing education (time spent/knowledge gained)	0	1	2	3	4	5
2. No greater flexibility of hours of work as a result	0	1	2	3	4	5
3. No greater ability to move confidently from area to area within the hospital	0	1	2	3	4	5
4. No greater opportunity to nurse in specialty areas after continuing education	0	1	2	3	4	5
5. No opportunity for promotion without movement into administration	0	1	2	3	4	5
6. No greater opportunity for promotion in administration after continuing education	0	1	2	3	4	5
7. No opportunity to significantly decrease workload while participating in continuing education	0	1	2	3	4	5

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CONTINUING EDUCATION QUESTIONNAIRE

PART B SECTION III (continued) page 2

	no	little	some	moderate	great	very great
8. No significant increase in awareness of pertinent health care information as a result	0	1	2	3	4	5
9. No significant increase in ability to carry out patient care	0	1	2	3	4	5
10. Little encouragement from peers to put new learning into practice	0	1	2	3	4	5
11. No greater opportunity to effect change in ward policies or procedures	0	1	2	3	4	5
12. No formal opportunity to share new knowledge and skills with peers	0	1	2	3	4	5
13. No greater opportunity to be involved in collegial decision making with other professionals on the health care team	0	1	2	3	4	5
14. Lack of approval and encouragement from family and friends	0	1	2	3	4	5
15. No credit towards a certificate or degree	0	1	2	3	4	5
16. Other (please specify)	0	1	2	3	4	5
17. A lack of available courses which provide current, essential knowledge and skills	0	1	2	3	4	5
18. Lack of readily available bursaries and scholarships	0	1	2	3	4	5
19. Lack of appropriate child-care facilities	0	1	2	3	4	5
20. Lack of available courses offered within reasonable travelling distance of home or work	0	1	2	3	4	5
21. Lack of flexibility of course times to accommodate shift workers	0	1	2	3	4	5
22. Difficulty obtaining time off without pay	0	1	2	3	4	5
23. Difficulty obtaining time off with pay	0	1	2	3	4	5
24. Lack of adequate personnel to replace during time off	0	1	2	3	4	5
24. Loss of accumulated seniority benefits if extended leave is necessary	0	1	2	3	4	5

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CONTINUING EDUCATION QUESTIONNAIRE

PART B SECTION III (continued) page 3

	no	little	some	moderate	great	very great
26. Lack of encouragement from supervisory staff	0	1	2	3	4	5
27. Other (please specify)	0	1	2	3	4	5

Please review the preceding 27 items in Section III to identify the three most important factors that bear on your participation in continuing education. Then, in the right hand margin, place a 1 opposite the item that is most important, a 2 opposite the item that is the second most important, and a 3 opposite the item which is the third most important.

Please indicate the relative value (in terms of personal preference) of the following teaching/learning strategies.

1. Self-study (eg. reading of nursing journals)	0	1	2	3	4	5
2. Learning packages (eg. study materials and questions regularly featured in the American Journal of Nursing)	0	1	2	3	4	5
3. Straight lecture with an expert (no planned discussion or demonstration)	0	1	2	3	4	5
4. Lecture-discussion with an expert	0	1	2	3	4	5
5. Lecture-demonstration with an expert	0	1	2	3	4	5
6. Lecture-discussion with demonstration (expert)	0	1	2	3	4	5
7. Learning on the job from experts	0	1	2	3	4	5
8. Learning on the job from co-workers	0	1	2	3	4	5

Please list any continuing education activities you have participated in within the last year. Indicate the approximate number of hours involved in each activity.

Please indicate (on a scale of 0 to 5) your agreement with the following statement

Continuing education, as well as nursing practice, is essential in maintaining nursing competence	0	1	2	3	4	5
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APPENDIX B
SAMPLE LETTER TO PARTICIPANTS

August 1930

Dear Fellow Nurses:

When I left the city a few years ago, I had no idea that I would be returning to "the General" to ask for help. But, after many years of venting frustrations with other nurses, I have decided to try to do something official about all that talk.

As partial fulfillment of a Master of Arts (Education) Degree requirements, I am conducting a study about the incentives and hinderances to continuing education in nursing. For this study I need your help. I am counting on your good will to answer a two-part questionnaire. Each part takes about ten minutes to complete. The first part is to be done this week and the second part in five or seven days from now.

Although I know some of you personally from having worked with you in various nursing capacities, there are many of you whom I do not know. So, I am asking you to answer this questionnaire for professional reasons. We need to know more about why some nurses cannot meet their expectations in relation to continuing education.

Please be assured that all information collected in this study will remain confidential. Individual nurses and results from individual institutions will not be identified. Results of this study will be made available to your hospital libraries upon completion of the work.

Knowing that without your cooperation I cannot do this study, I thank you in advance for your help.

Sincerely,

Shirley Patz, R.N.

APPENDIX C
CONTINUING EDUCATION ACTIVITIES
AS LISTED BY NURSES ON THE
QUESTIONNAIRE

APPENDIX C

Continuing Education Activities as Listed
by Nurses on the Questionnaire

Number of People
who listed
the activity

Activity

5	CPR
19	Resp. workshop
50	General Inservice
1	Grieving Seminar
2	Group Therapy/Group Process
1	Teaching/Diagnostic Sessions
1	Reality Orientation Workshop
10	Lecture/Discussion Medical Staff
4	Cardiology Lectures/Care of Cardiac
2	Liberal Arts Courses
11	ICU Course
5	Personal Growth/Experiential
1	Dream Seminar
19	Nursing Journals/Self Study
3	Learning from Co-Workers
1	Emergency Nursing/Conference
2	Primary Nursing
1	Cardiac Monitoring
5	EKG
2	ER Conference
6	Inservice - Co-workers
5	Stress Workshop
4	General Workshops
4	Critical Care
1	Nursing Conferences
1	MARN Inservice
1	Neurology Course
1	Neuro Conference
3	Hospital Management/Supervision/Nursing Administration
1	Sex and Aging
1	Nursing Standards
17	CPR Certification
41	Dying - Terminally Ill
2	POMR

<u>Number of People who listed the activity</u>	<u>Activity</u>
2	Neonatal Workshop
1	Diabetic Symposium
3	Foetal Monitoring
2	Neuro Interest Group
2	CAPD
2	TPN
2	University - Nursing/Medical/College
2	Counselling
1	Alcohol Workshop
1	Obstetrics Workshop
3	Nursing Process/Primary Nursing
1	Chemotherapy and Radiotherapy
1	Nursing Form Committee
1	Nursing Conference - Team Leading
2	Child Abuse Conference
1	Nutrition/Renal Conference
1	Organizational Behaviour
1	Communication Workshop
2	Defibrillation
1	Play Therapy
1	Holistic Medicine
1	Blood gasses
2	IV Therapy
2	Ethics
6	A & P Review
1	Working with Students
1	Strategies for Mental Health
1	OR Nursing, BCOFNG
1	Geriatrics
1	Acute Injury Seminar
1	Peritoneal Dialysis
1	Massage Therapy 1 & 2
1	Pediatric Critical Care

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