

What Motivates Registered Nurses to Participate in
Continuing Education Activities?

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Submitted in partial fulfillment
of the requirements for the degree of
Master of Education
Faculty of Education, Brock University
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October, 1993

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Abstract

The study was undertaken to identify what motivates registered nurses to participate in continuing education activities. The primary questions were whether basic nursing education, employment status, clinical area, and position, as well as readiness for self-directed learning influenced Canadian nurses' motivational orientations when deciding to participate in continuing education activities. Other individual differences (e.g., age) were also examined. The sample included 142 registered nurses employed at an urban community hospital. Three instruments were used for data collection: the Education Participation Scale, the Self-Directed Learning Readiness Scale, and a nursing survey consisting of demographic questions. Basic nursing education and employment status did not effect motivational orientation or self-directed learning readiness. Clinical area and level of position significantly influenced nurses' decisions to participate in continuing education activities. Motivational orientation had a significant relationship with self-directed learning readiness. Implications for practice as a result of this study involves program planning and delivery. The identification of the motivational orientations of participants may assist in the development and delivery of continuing education programs that are beneficial, relevant, and address the identified learning needs of participants. Implications for future research also exist in relation to studying different groups of nurses, for example, registered nursing assistants, and investigating related issues, for example, what are the deterrents to participation in continuing education?

Acknowledgments

Many thanks are extended to my advisor, Dr. Vera Woloshyn, who has spent a tremendous amount of time advising, reassuring, and supporting, and whose patience has never wavered.

I also wish to express my appreciation to my family, friends, and colleagues who were faithful in their support and encouragement.

Finally, to JV, who has always supported me without fail and who actually survived the completion of my thesis.

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CHAPTER ONE: THE PROBLEM

Background of the Problem

How does the process of learning evolve for adults in relation to learning limits, criteria, and principles of learning? Do particular characteristics of adult learners exist? How do theories of learning aid in our understanding of adult learning? According to Candy (1991), learning is "a qualitative shift in how a learner views or thinks about a person, situation, idea, experience, event, or other phenomena of interest" (p. 294). Smith (1982) describes the nature of learning as lifelong, personal, involving change, a function of human development, related to experience, and partially intuitive. However, limits to learning do exist with respect to the ability of the learners (Kidd, 1973). If these limits can be overcome, common characteristics of adult learners often exist including, orientation to learning based on roles and responsibilities, life experience, developmental changes and tasks, and anxiety regarding learning (Smith, 1982). The two characteristics of adult learning most frequently cited in the adult education literature are autonomy in terms of self-direction and the use of personal experiences as a learning resource (Brookfield, 1986).

A number of educators describe criteria necessary for learning. Miller (1964) cites six conditions for learning: is motivated to change behaviour, is aware of the inadequacy of current behaviour, has a clear idea of the required behaviour, has an opportunity to practice the required behaviour, obtains reinforcement of appropriate behaviour, and has access to appropriate learning resources. Learning may involve change in three components of behaviour: intellect, attitude, and skill (Kidd, 1973). The adult learner must also have the ability to accept the responsibility for functioning as an internal change agent and the ability to conceptualize their own learning process in terms of self-reflection and self-direction (Brundage & MacKeracher, 1980).

Houle (1961) began an investigation into the process of adult learning which was extended by Tough (1969). Adult learners proceed through several phases in the process

of participating in a learning project (Tough, 1969). The first phase is deciding to begin. This phase involves 26 possible steps including setting goals, assessing interests, and seeking information. The second phase is choosing the planner (self, object, individual, group). The final phase is engaging in the learning project. The process of learning also requires that new information, experiences, and ideas be accommodated within the learner's existing cognitive framework (Candy, 1991).

Numerous attempts have been made to cite generic principles of adult learning. Many variables make this difficult, for example, physiology, personality, culture, age, life experience, and roles and responsibilities (Brookfield, 1986). In spite of these difficulties, a number of educators discuss similar principles of adult learning in the literature. Goals for learning are set by the learners and the learners require feedback regarding progress toward achieving these goals. Adults learn continually and informally in relation to role changes and this learning is modified by both individuals' characteristics and the content and pace of instruction. Adult learning is facilitated when content and processes are relevant to the learners' needs, experiences, and problems. Adults learn best when there is a need to learn and a sense of responsibility for learning. A nonthreatening environment leads to conducive learning. Positive reinforcement and active participation also enhance learning (Brundage & MacKeracher, 1980; Darkenwald & Merriam, 1982; Gibb, 1960; Knox, 1977; Smith, 1982).

Adult learning theorists commonly stress the experiential and self-directedness aspects of adult learning. Knowles (1984) describes an andragogical model of adult learning. Andragogy is "the art and science of helping adults learn" (Knowles, 1970, p. 38). Mezirow (1991) defines andragogy as "an organized and sustained effort to assist adults to learn in a way that enhances their capability to function as self-directed learners" (p.199). The model is composed of six assumptions regarding adult learning: desire to increase knowledge, self-concept, experience, readiness to learn, orientation to learning, and motivation (Knowles, 1984). Adults need to know why they should

acquire particular information and skills prior to the learning experience. Positive self-concept involves a sense of responsibility for decision-making and capability for self-direction. The learners' personal experiences are valuable resources to aid in learning and shape self-identity. In general, adults are ready to learn the things they need to learn. Their orientation to learning is life-centered in that specific knowledge is considered worth learning if it assists in performing tasks or dealing with problems. The most relevant motivators are internal motivators (e.g., the desire for increased job satisfaction). Brookfield (1986) maintains that andragogy is a set of assumptions as opposed to an empirically based theory. He levels criticism towards two assumptions. Adults do not necessarily undertake learning which is only problem-centered, learning may be related to interest alone. As well, adults do not necessarily seek immediate application of learning but instead may learn to increase self-awareness.

Transformation theory explains how adult learning is structured and how the frames of references through which life experiences are interpreted are changed or transformed (Mezirow, 1991). Each individual has a frame of reference through which they construe meaning or interpret and explain what happens to them. In transformative learning, an old experience is reinterpreted because of the presence of a new set of experiences, therefore, new meaning and perspective are added to the old experience. This process guides future actions and allows learning to occur. The process is composed of ten steps: a disorienting dilemma, self-examination, assessment of assumptions, recognition that others have experienced similar dilemmas, exploration of options, planning a course of action, acquisition of required knowledge and skills, adopting new roles, building competence and self-confidence in the new roles, and integration of new perspectives. Perspective transformation may occur when basic premises previously taken for granted are found to be unjustified and may result in life changes.

The concept of continuing professional education as related to adult learners evolved in the late 1960s. The movement was partially intended to improve public image and to

combat criticism from within professional memberships. With time, the concept of continuing education broadened to include all professional learning efforts (Houle, 1980).

What is the purpose of continuing education? Houle (1967, cited in Young & Willie, 1984) describes four primary purposes including, (a) acquiring new knowledge, (b) establishing mastery of new conceptions, (c) continuing study of basic disciplines, and (d) growing as people as well as professionals. Schoen (1979) states that the purpose of continuing education for the nursing profession is to gain knowledge, learn new nursing roles and skills, and to promote self-development and professional growth. Presumably, this type of learning will enhance job performance. Therefore, the immediate objective of continuing education is change, and the long-term objective is higher quality nursing care (Kellmer-Langan, Hunter, & Nottingham, 1992).

Houle (1980) goes on to describe two important characteristics of continuing education. First, it must enhance the ability of practitioners to perform successfully. Second, continuing education should be truly continuing--it should not be sporadic, casual or opportunistic. Continuing education is a part of the entire learning process that continues throughout the life span. Lifelong education is essential because basic training cannot keep abreast of the continuous changes in technology.

The importance of continuing education has increased since its conception in the 1960s as societal and professional changes have occurred. These changes have dictated that continuing education be diverse, based on content-oriented goals, and designed to facilitate career changes (Houle, 1980). Darkenwald and Merriam (1982) discuss a number of influential societal changes. These include an increase in the number of adults and their educational attainment, the changing status of women in relation to the labour force, increased individual movement between jobs and occupations, a transformation of the labour force in terms of a decrease in unskilled and blue-collar labour and an increase in clerical, service and technical/professional labour, an increase in income and leisure

time, and an increase in technology and knowledge. Additionally, changes continue to occur in individuals' careers in terms of promotions, shifts in specialization, return to practice after periods of absence and temporary assignments (Houle, 1980).

Baumgart and Larsen (1988) outline specific changes in nursing practice. The level of patient acuity has increased along with advances in technology. An increase in knowledge has occurred in all disciplines that influence nursing practice. Therefore, nurses require more knowledge in the bio-psycho-social processes and patients' responses to illness in order to develop expert clinical judgment. As well, there is an expanding base of nursing research to guide nursing practice. Finally, there is an increasing complexity of ethical problems in health care.

The Registered Nurses' Association of Ontario (1980) states that nursing is a profession, and as professionals, nurses are responsible for providing quality patient care. The quality of nursing practice is dependent on the competence of nurses. Professional competence is maintained and enhanced by increasing knowledge and skills in relation to scientific advances, technology, and the changing role of the nurse. Continuing education is the primary means by which nurses increase knowledge and skills in order to practice competently. Warmuth (1987) had nurse-learners identify functions of continuing education. The nurses reported that continuing education was useful for handling changes in nursing practice, changes in nursing thinking or rationale, changes in nursing perspective, teaching others, and applying knowledge outside of the work setting.

Evidence exists that continuing education influences nursing practice. For example, Waddell (1991) determined that continuing education positively affects nursing practice based on a meta-analysis of published and unpublished studies. Also, a positive relationship may exist between participation and job satisfaction and retention (Kirsch, 1990).

In light of the fact that continuing education is essential to maintain competency as a practicing nurse, motivation for participation needs to be examined more closely. Three problems should be considered when considering motivation: participation, active learning, and application of knowledge and skills to clinical practice (O'Connor, 1982b). There are two properties of participation according to Douglass (1970). The first is that participation can be either a group or individual phenomenon, taking place within a group setting (e.g., group inservice or reading professional journals). The second property is that participation is usually a means to an end in that the learner seeks to achieve specific goals. Wlodkowski (1985) describes three important features of motivation: learning cannot occur without motivation, motivation mediates learning, and motivation is a consequence of learning.

According to Houle (1980), four aspects of service have an effect on the nature and extent of the professional's participation in continuing education. The first is the basic setting of professional practice and the emphasis on education and whether delivery is formal or informal. The second is change in career in terms of performance, function, or setting. The third aspect is quality of formal and informal work life (i.e., are the stimuli for learning an integral part of the profession)? Age may be a fourth aspect although there is little literature on the influence of age upon a professional's need for education.

In summary, changes in nursing practice and technology have increased the importance of continuing education. The provision of quality nursing care is dependent to some extent on maintaining relevant knowledge and skill through participation in continuing education.

Definition of Terms

Basic Nursing Education

Diploma or baccalaureate programs that prepare generalist nurses to write registration examinations in Ontario as a prerequisite for practice as registered nurses (Registered Nurses' Association of Ontario, 1980).

Certificate of Competence

Issued annually to all registrants who complete the application process. The certificate entitles a professional to be called a registered nurse or registered nursing assistant and is mandatory for practice in Ontario.

College of Nurses of Ontario

The regulatory body for the profession of nursing whose mission "is to protect the public through the regulation of nursing" (College of Nurses of Ontario, 1992, p. 1). This goal is achieved through registration procedures and requirements, establishment and interpretation of the Standards of Nursing Practice, and complaints and discipline processes (College of Nurses of Ontario, 1992).

Competence

When providing nursing care, nurses demonstrate a level of knowledge, skill, judgment, and concern that reflect the Standards of Nursing Practice (College of Nurses of Ontario, 1980).

Continuing Education

Baumgart & Larsen (1988) stated the following:

Continuing nursing education is any planned learning experience which is intended to build on first-level nursing preparation and practice experience. It may take place under the auspices of an educational institution or other educational provider, or be self-organized and directed. It may be credit or non-

credit. It is intended to contribute to the enhancement of nursing practice, education, administration, and/or research, and to the fulfillment of individual nurses' professional goals. (p. 366)

Diploma Program

A three-year program at a college of applied arts and technology leading to a diploma in nursing.

Degree Program

A four-year program at a university leading to a baccalaureate degree in nursing. Post-RN programs also exist which are of variable length and designed for nurses who already have diplomas.

Mandatory Continuing Education

The tendency of some states and provinces and professional associations to require the members of particular professions to fulfill specific educational obligations in order to retain or renew their licenses to practice (Cross, 1981).

Nurse

A registered nurse (RN) who has completed a required course of study and standard set of examinations and possesses a current certificate of competence in Ontario. This definition excludes the registered nursing assistant for the purposes of this study only.

Other-Directed Learning

Activities (e.g., identification of resources, implementation of learning strategies) which are carried out by other people for the learners (O'Kell, 1988).

Registered Nurses' Association of Ontario

The professional organization for registered nurses in Ontario. This voluntary organization promotes a positive and professional image of nursing through continuing education, development of position papers and government lobbying. It attempts to

protect the profession's interests and integrity by shaping and reflecting changes in the profession and health care system (Registered Nurses' Association of Ontario).

Self-Directed Learning

Self-directed learning is "a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes" (Knowles, 1975, p. 18).

Standards of Nursing Practice

The standards identify the minimum expectations for nursing care for registered nurses and registered nursing assistants and provide criteria for a basic level of safe practice across the province (College of Nurses of Ontario, 1990).

Study Rationale

There are several gaps in the nursing literature examining nurses' motivation to participate in continuing education activities. The first gap is that the majority of existing studies are American. There are only two Canadian studies in the motivational literature. The first (Clark & Dickinson, 1976) investigated hospital trained nurses which is no longer a setting for basic nursing preparation in the majority of provinces including Ontario, and thus, limits the generalizability of the results. The second study (Ateah, 1991) explored the perceptions of nursing students as opposed to practicing nurses.

It is difficult to generalize findings from American studies to Canadian nurses. The United States and Canada have dissimilar basic nursing education programs. Specifically, the United States has a three-tier system consisting of a two-year diploma, an associate degree, and a baccalaureate degree. Canada, for the most part, has a two-tier system consisting of a three-year diploma and a baccalaureate degree.

The two countries also have dissimilar views on mandatory continuing education as a part of relicensure. The premise of mandatory continuing education is that professionals lack the motivation to maintain knowledge and skills voluntarily, and therefore, require legislation to ensure professional competency (Urbano, Jahns, & Urbano, 1988). In the United States, a number of states require evidence of continuing education for relicensure (Millonig, 1985a). In Canada, two key nursing organizations have published their position on mandatory education. The College of Nurses maintains that mandatory continuing education lessens the professional responsibility of the individual nurse in that credits could be accumulated to meet set requirements but not the specific learning needs of the individual nurse and therefore, have questionable influence on the quality of practice (College of Nurses of Ontario, 1980). The College assumes that all nurses are motivated to maintain knowledge and skills, and place the responsibility for continuing education on each individual RN. "Each registrant is personally responsible for maintaining and expanding initial professional competence" (College of Nurses of Ontario, 1988, p. 7).

The Registered Nurses' Association of Ontario likewise believes that participation in continuing education should be voluntary. Mandatory education is costly and restrictive and not compatible with current theories of adult education as the learners are not in control of the learning process. Additionally, it does not take into account informal learning experiences. The Registered Nurses' Association also emphasizes that the onus is on nurses to identify and act on their personal needs for continuing education, and to maintain the standards of nursing practice by investing time and energy in professional development, including: assessing learning needs, setting career goals, formulating and implementing educational objectives, as well as, evaluating learning and quality of practice (Registered Nurses' Association of Ontario, 1980).

The Principal Nursing Officer of Health and Welfare, Canada also values voluntary continuing education. Attendance can be legislated but learning and behavioural change

cannot. Mandatory education would foster dependence on legislation rather than independence and responsibility on the part of the professional (Flaherty, 1975). On the other hand, voluntary continuing education encourages nurses to assess their own learning needs, develop plans for meeting these needs and utilize available opportunities for learning (Flaherty, 1975).

The second gap in the literature is that of time. Most motivational research was published in the late 1970s and the early 1980s. The most recent American study was published in 1988, and the most recent Canadian study in 1976. It is questionable whether these findings are still relevant for nurses in 1992.

Participation in continuing education activities helps to enhance professional competency and maintain standards of nursing practice. However, the cost containment measures currently underway in the Canadian health care system have reduced resources for continuing education programs. Nurse educators need to understand what motivates RNs to participate in continuing education programs and incorporate these motivators into program planning and development. In this way, the available resources will be used effectively, increasing and maintaining the professional competency of practicing nurses.

Problem Statement

Why do nurses attend continuing education activities? This question is the focus of the study presented here. Specifically, this study will determine what motivates nurses to participate in continuing education activities. The primary questions are whether basic nursing education, employment status, clinical area and position, as well as readiness for self-directed learning influence Canadian nurses' decisions to participate in continuing education activities. Other individual variables (e.g., age) will also be examined.

Specifically, the following questions will be addressed:

1. Do registered nurses, who differ with respect to basic nursing education preparation, employment status, and clinical area and position, also differ in their motivation to participate in continuing education?
2. Do nurses with high self-directed learning readiness differ in their motivation for continuing education from nurses with low self-directed learning readiness?
3. Do nurses participating in credit courses differ in their motivation for continuing education relative to nurses participating in noncredit courses?
4. Do nurses participating in activities in the workplace (e.g., educational sessions) differ in their motivation for continuing education from nurses participating in activities outside of the workplace (e.g., community college courses)?

Outline of the Remainder of the Document

The review of the literature will examine the relationship between participation and motivational orientation, personal characteristics, and self-directed learning readiness. The review will include studies from education, health care, and nursing. Chapter 3 will describe the subjects, instrumentation, and the procedures involved in data collection. One-way anovas are used in Chapter 4 to determine the effect of independent variables on dependent variables. Multiple stepwise regression is used to determine the existence of positive and negative relationships between predictor and criterion variables. Chapter 5 will interpret the findings as well as discuss study limitations and implications for practice and future research.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

The review of the literature will investigate the influence of factors like motivational orientation, personal characteristics, and self-directed learning readiness on participation in continuing education activities. Deterrents for participation will also be discussed. The review will highlight studies within the fields of education, health care, and nursing.

Theoretical Framework

The expectancy theory of motivation consists of four variables: expectancy, outcomes, instrumentality, and valence (Simpson, 1988). Two types of expectancy exist: "effort to performance" and "performance to outcomes". Effort to performance expectancy is the amount of effort required to accomplish an appropriate performance. Performance to outcomes expectancy is when individuals believe that positive outcomes will occur because of an effective performance and therefore, are motivated to perform effectively (Simpson, 1988). Outcomes are the consequences of the behaviour or the reward system (Pfeiffer, 1991). Outcomes may be intrinsic (e.g., autonomy) or extrinsic (e.g., promotion; Sample, 1984). Instrumentality relates first-level outcomes (e.g., performance) to second-level outcomes (e.g., rewards; Pfeiffer, 1991). Valence is the perceived value placed on first and second-level outcomes and has motivating power for the individual (Pfeiffer, 1991).

As an example of practical application of the expectancy theory, nurses may attend a skills review workshop to increase their quality of patient care. This effort can lead to a desired level of performance (effort to performance expectancy). The knowledge gained at the workshop results in nurses improving their performance at the bedside. Performance leads to a desired outcome (performance to outcomes expectancy). Rewards may consist of increased confidence and a new role as resources (outcomes). If nurses believe that attendance at the workshop has led to the rewards (instrumentality), they will likely continue to attend inservices and are motivated to do so as a result of

positive outcomes (valence). Expectancy theory states that motivation is greater with increased instrumentality (individuals believe that certain behaviours lead to rewards), increased valence (outcomes have positive value for individuals), and increased expectancy (individuals possess the ability to perform at the desired level; Pfeiffer, 1991).

Motivational Orientation

What motivates adults to participate in continuing education activities? In 1961, Houle conducted pioneering work in which he interviewed 22 individuals identified as active learners. These subjects varied in age, gender, race, social status, religion, marital status, and level of formal education. In spite of these differences, Houle identified three types of learners: goal-oriented, activity-oriented, and learning-oriented. Learning for goal-oriented individuals begins with an identified need or interest (Cross, 1981) and is perceived to be useful in solving problems and meeting particular objectives (Houle, 1961). Goal-oriented learners use education to achieve specific objectives (Houle, 1961). Activity-oriented individuals participate in learning for the sake of the activity itself rather than to develop a skill or gain knowledge (Cross, 1981). Learning-oriented individuals learn for the sake of learning (Houle, 1961). Houle also cited three elements of motivation, including, recognition of a need or interest, the will to do something about it, and the opportunity to do so. Houle's typology of learners was crucial because it motivated further studies of motivation, including the work of Boshier.

In 1971, Boshier carried out a study to determine what motivated adults to participate in continuing education courses. He developed the Education Participation Scale (EPS) to measure motivational orientation. Twelve major motivational orientations were discovered. Six of these orientations were socially-oriented: social welfare, social sharing, social contact, social conformity, improvement and escape and interpersonal facilitation. Two were job-related: other-directed and inner-directed

professional advancement. Four were learning-oriented: intellectual recreation, cognitive interest, educational compensation and educational supplementation.

Morstain and Smart (1974) replicated Boshier's (1971) study and obtained six major factors: social relationships, external expectations, social welfare, professional advancement, escape/stimulation, and cognitive interest. The students surveyed placed the most importance on the motivational orientations of professional advancement, cognitive interest, and social welfare. The factors in both studies were similar. Using a modified version of the EPS, Boshier and Riddell (1978) determined that cognitive interest was the most influential motivator, followed by social contact, and social welfare. Escape/ stimulation was the least influential. In 1985, Boshier and Collins tested Houle's typology by analyzing EPS data from 54 previous studies. A three-cluster solution was evident following analysis. The first cluster consisted of cognitive interest items and was mapped with Houle's "learning-oriented" learning style. Cluster two resembled "activity -oriented" learners and was composed of items normally labeled social stimulation, social contact, external expectations and community service. The third cluster was bound by professional advancement and most closely resembled "goal-oriented" learning. The three clusters of learners added support to Houle's typology. The most current version of the EPS consists of seven factors: communication improvement, social contact, educational preparation, professional advancement, family togetherness, social stimulation, and cognitive interest (Boshier, 1991).

Other studies examining motivation were conducted using different data collection instruments. In 1964, Sheffield cited five learning orientations including learning, sociability, personal-goal, societal-goal and need-fulfillment. Johnstone and Rivera (1965) found that the three most common reasons for participating in continuing education included: to become a better person, to prepare for a new job and to learn more about a current job. The most influential reason for beginning and continuing a learning project according to Tough (1968), was to use or apply knowledge and skill.

Burgess (1971) discovered that reasons for participation factored into the following groups: the desire to know, the desire to reach a common goal, the desire to reach a social goal, the desire to reach a religious goal, the desire to take part in social activity, the desire to escape, and the desire to comply with formal requirements. Although the terminology used differs, the above studies are in agreement with the findings of Boshier-- that reasons for participation in continuing education were variable and may be related to society, job, or learning.

Aslanian and Brickell (1980) hypothesized that transition or "moving from one status in life to another requires the learning of new knowledge, new skills, and/or new attitudes or values" (p. 34). A particular event occurs which precipitates the decision to learn at a particular point in time. Specifically, learning is required to succeed in the new environment. Transitions thought to motivate learning included changes in job or career (e.g., promotion), changes in family life (e.g., marriage, children, divorce), and changes in leisure (e.g., more free time). Cross (1981) stated that the motivational research supported the belief that most adults undertake learning in order to solve a specific problem, rather than to learn a particular subject, thereby demonstrating a problem-centered orientation to learning.

Following a review of the literature, Darkenwald and Merriman (1982) concluded that the reasons for participation are usually multiple and cannot necessarily be deduced from the content or purposes of the learning activities chosen. In 1986, Graham found that the most common reasons for participation were to satisfy job requirements and self-improvement. Together, the review of the general motivational literature revealed that professional advancement, cognitive interest, professional knowledge, and social welfare were the most common influences of participation.

Health Professionals

A number of studies were undertaken to examine motivational orientations of health professionals (e.g., pharmacists and physicians but excluding nurses) with respect to

participation in continuing education using the Education Participation Scale and other similar instruments. For example, Mergener and Weinswig (1979) used a modified version of the EPS to examine motivational orientations of pharmacists. Competency-related curiosity was most influential in the decision to participate. Compliance with an external influence and community service had moderate influence. Professional advancement had little to moderate influence as did interpersonal relations and escape from routine. Mergener replicated the study in 1981. He found that pharmacists residing in a state without a continuing education requirement placed greater influence on the motivational orientations of competency-related curiosity, community service, escape from routine and professional advancement relative to pharmacists from a state with a continuing education requirement who placed greater influence on compliance with an external influence. Motivational factors remained stable over the two years between studies except for pharmacists from a state that changed from optional education requirements to mandatory education requirements. In this state, compliance with an external influence increased in importance as competency-related curiosity declined.

Scanlan and Darkenwald (1985) used the EPS to study the motivational orientations of physiotherapists, respiratory therapists, and medical technologists. There were no significant differences between participants in terms of age, gender, marital status, level of educational attainment, years of experience, total family income and location of practice. As with pharmacists, the most influential factors were cognitive interest, professional advancement, and social welfare.

Richards and Cohen (1980) reviewed the medical literature and organized their findings into five categories or reasons for physicians' attendance in continuing education programs. The categories were professional obligation, interest in the subject, validation of prior learning, attaining specific learning objectives, change of pace, and social contact with other physicians. Cervero (1981) also studied motivational orientations of physicians. Reasons for participation were grouped into four factors: maintain and

improve professional competence and service to patients; enhance personal and professional position; understand oneself as a professional and interact with colleagues. The first two factors were most influential.

In 1981, Ray studied the motivations of recreation professionals to participate in continuing education. Previous continuing education activity was the best predictor of participation followed by reinforcement from significant others.

Overall, the research examining health professionals concludes that professional knowledge, cognitive interest, professional advancement, and community service are generally the most influential factors in professionals' decisions to participate in continuing education programs.

Nurses

What motivates nurses to participate in continuing education activities? In 1979, O'Connor investigated whether several demographic variables had an effect on motivational orientation. The two most common motivational orientations were professional knowledge and improvement in social welfare skills or a desire to better serve the community. No significant relationships existed between motivational orientation and the variables of basic nursing education and employment. O'Connor (1982a) published similar findings following a second study. Using the EPS instrument, she found that improving professional knowledge was the strongest influence followed by seeking professional advancement and social welfare skills. Thomas (1986) also used the EPS to discover that the main reasons for participation were professional knowledge and professional advancement. The results of this investigation are similar to O'Connor's (1979, 1982a) work. Another study also examined reasons for continuing education attendance. Nurses reported reasons similar to the findings of other studies including, self-improvement, to learn more in a specific field and to satisfy the need to keep abreast of changes (Puetz, 1980). Millonig (1985a) used the EPS to examine the relationship between motivation toward learning and participation in continuing education activities.

A significant relationship was found between participation in continuing education and the motivational orientations of professional advancement and external expectations. This finding is surprising in that external expectations was not a motivational orientation in the studies conducted by O'Connor (1979, 1982a), or any other investigator using the EPS. Millonig speculates that this inconsistent finding may be related to an increased emphasis on the baccalaureate degree as the entry to nursing practice.

Urbano used the Education Participation Scale in 1988 to determine the relationship between motivational orientation and participation in mandatory professional continuing education. Lethbridge (1989) found that professional advancement, professional knowledge, and social welfare were positive motivational factors. These findings are congruent with previous studies using EPS where the prime motivators were cognitive interest or professional knowledge, professional advancement and to a lesser extent, community service.

Six studies were completed using different data collection instruments. Matthews and Schumacher used their own questionnaire in 1979 to assess the participation factors that influenced RNs to attend continuing education activities. The highest rated factors were the relatedness of the topic to one's job or clinical specialty, a personal interest in a particular topic and a perceived need for information. Toebe, Armstrong and Watson (1982) also used their own questionnaire to determine that the most important reasons for enrollment were the need to update knowledge and the desire for personal satisfaction. These results reflect those of other studies investigating reasons for participation (Lethbridge, 1989, O'Connor, 1979, 1982a, Puetz, 1980).

Dolphin (1983) determined that the two most important attendance motivations were increased job competence and documentation of personal and professional growth. Five factors were discovered in a study undertaken by DeSilets and reviewed by Abruzzese (1990). These factors included professional improvement and development, professional service, collegial learning and interaction, personal benefits and job security

and professional commitment and reflection. Ateah (1991) investigated reasons for Canadian nursing students returning to school for a degree. The most influential reasons were professional advancement, improved working conditions, personal well-being, social relations and professional knowledge. The findings of the above studies are similar to previous studies in spite of the employment of different instruments.

Waddell (1993) completed a meta-analysis of nursing studies examining reasons for participation in continuing education. Motivational orientation explained 46% of the variance in participation with external expectations and cognitive interest explaining 11% and 12% respectively. Demographic data explained 25% of the variance with income and area of practice explaining 6% and 7% respectively. It was concluded that motivational orientation represented the primary factor in choosing to participate in continuing education.

Generally, the most influential motivators cited in the nursing literature were professional knowledge, professional advancement, and social welfare. This finding was consistent throughout the educational literature and the literature examining other health professionals.

Personal Characteristics Influencing Participation in Continuing Education

A number of studies have been carried out to investigate personal characteristics influencing participation in continuing education activities. In an early study, Johnstone and Rivera (1965) highlighted a number of characteristics influencing adults in their educational pursuits. Equal numbers of men and women participated in educational activities. One half of participants were under 40 years of age and three quarters were under 50 years of age. Job considerations were more relevant for younger adults than for older adults as a reason for participation. Older adults were more interested in general information, social contacts, and leisure time enjoyment. The majority of participants held jobs in white-collar occupations. It was also found that participation was greater if

formal education was higher. Douglass and Moss (1968) discovered that gender, level of occupation, and marital status were not significantly associated with participation. Family status influenced participation. Participation increased as the number of children under 19 years of age increased.

Like Johnstone and Rivera (1965), Douglass and Moss (1968) also found that educational level was strongly associated with participation, with participation increasing as a function of level of education. Respondents 55 years of age and older participated the least. The highest participation was in the middle-age range. These results were similar to those found by Cross (1981) following a review of the literature. She determined that interest and participation in continuing education starts to decline in the 30's, continues to decline gradually in the 40's and drops dramatically for those older than 55 years of age.

In more recent studies, Morstain and Smart (1974) discovered a relationship between motivational orientations and other factors influencing participation. Young adults scored higher on the social relationship scale than did older adults. Men were primarily motivated by external expectations while women were more motivated by cognitive interest. Men had similar social welfare scores at each age level while these scores declined with age for women.

Boshier (1977) sampled participants of general noncredit adult education night courses. He found younger participants were more likely to be enrolled because of external expectations and less likely to be enrolled because of cognitive interest than older participants. Married participants were more likely to be enrolled for professional advancement and unmarried participants more likely to be enrolled for external expectations and less likely for cognitive interest. Those participants with the lowest educational qualifications were more likely to be enrolled for professional advancement and external expectations. Women were more motivated by need for escape, social welfare, and cognitive interest, whereas men were more motivated by professional

advancement. Boshier's (1977) findings regarding gender and marital status differ from those of Douglass and Moss (1968). Following a review of the literature, Darkenwald and Merriman (1982) determined that a weak association existed between age, gender, socioeconomic status and motivational orientations.

In 1983, Boshier and Collins completed an analysis of 48 studies using the Education Participation Scale. Men were more inclined to participate for social contact, social stimulation, professional advancement, community service, and external expectations, whereas women were slightly more inclined to be enrolled for cognitive interest. Single respondents, when compared to married respondents, obtained significantly higher scores on all factors except cognitive interest. Younger respondents were more inclined to participate for social contact, social stimulation, professional advancement, community service, and external expectations, whereas, older adults were more likely to participate for cognitive interest. Those participants with no or few children were influenced by social stimulation and professional advancement. Participants in credit courses were more likely to be enrolled for social stimulation, professional advancement, community service, and external expectations, whereas those enrolled in noncredit courses were more motivated by cognitive interest.

A survey of adult education in Canada (Devereaux, 1985) revealed many interesting facts. The participation rate was greater for women than men. The highest participation occurred in the following age groups: 25-35, 35-45, and 17-24 years of age. Enrollment declined markedly after age 45, a finding congruent with other studies. Single women were most likely to enroll. Consistent with other studies, participation increased as a function of education (Douglass & Moss, 1968; Johnstone & Rivera, 1965). A greater number of men enrolled in job-related courses which was a finding congruent with Boshier's (1977) work. Graham (1986) reported that participating in education to satisfy job requirements was more influential for full-time than part-time students. Overall, it

was determined that younger adults participated more than older adults, and that participation increased as educational attainment increased.

Health Professionals

Two studies examined other factors influencing participation for other health professionals. Mergener and Weinswig studied pharmacists in 1979. There was no significant difference in motivation as a function of gender. In relation to type of practice, pharmacists employed in chain stores scored lower on competency-based curiosity than pharmacists employed in independent stores, hospitals, clinics, or nursing homes. Pharmacists participating in other-directed activities scored higher than those participating in self-directed activities.

Scanlan and Darkenwald (1985) also studied the relationship between motivational orientations and other factors for physiotherapists, respiratory therapists and medical technologists. Respondents between 21 and 26 years of age scored higher on professional advancement than did respondents 45 years of age or greater (a finding similar to Johnstone & Rivera, 1965). Like Boshier (1977), the researchers found that females scored higher on cognitive interest than males. However, unlike the findings of Boshier (1977), no difference occurred as a result of marital status. In terms of educational attainment, those participants with graduate degrees scored highest on social relationships; those with baccalaureate degrees scored highest on social welfare and those without degrees scored highest on external expectations. Differences did not occur as a function of professional advancement and cognitive interest. Respondents with less work experience scored higher on professional advancement than more experienced respondents. Full-time workers ascribed greater influence to professional advancement than did part-time workers. Workers employed in hospitals scored higher on professional advancement while those employed in non-hospital settings scored higher on social relationships. Participants employed in staff or administrative positions scored

highest on professional advancement than did those in private practice. Participants in educational positions scored highest on social relationships. Active members of professional associations scored highest than inactive members on social welfare and social relationships. As well, members scored higher than nonmembers on professional advancement. Respiratory therapists scored highest on external expectations, professional advancement and escape/stimulation. Physiotherapists scored highest on social welfare, thus demonstrating that health professionals differ with respect to motivational orientations for continuing education.

Nurses

The only Canadian study examining the relationship between personal characteristics and participation in continuing education was published by Clark and Dickinson (1976). They discovered that nurses in supervisory positions participated more often in continuing education activities than did staff nurses. Part-time RNs participated more often than full-time RNs. This particular finding was not congruent with other studies looking at this factor. It was also found that a lower level of participation existed for graduate nurses of hospital training programs. This differs from O'Connor's (1979, 1982a) findings that there was no significant relationship between motivational orientation and basic nursing education. However, O'Connor (1982a) found a relationship between motivational orientation and employment; nurses employed full-time scored higher than did part-time nurses on the factors of professional knowledge and professional advancement. This finding was confirmed by Scanlan and Darkenwald (1985).

Curran (1977) established that diploma graduates enrolled less frequently in credit courses and rated themselves as less active than did nurses from associate degree and baccalaureate degree programs. This finding is similar to Clark and Dickinson's (1976). However, unlike Clark and Dickinson (1976), Curran found that staff nurses read the nursing literature less often but attended workshops more frequently than nurses

employed in other positions. This finding is not repeated in other studies. In terms of employment status, full-time RNs had greater participation in continuing education than did part-time RNs. Nurses working in medical-surgical and critical care areas reported reading more and attending more workshops.

Puetz (1980) reported that diploma graduates were least likely to attend continuing education, associate degree graduates were most likely to attend, and baccalaureate graduates were slightly more likely than not to attend programs. Staff nurses were least likely to attend as were part-time staff. Acute care nurses participated more than nurses in long-term care. The influence of clinical area of practice was similar in Curran's (1977) research.

Schoen (1982) and Trammell (1984) discovered that the factor of initial nursing program was not a significant predictor of continuing education participation. This finding is comparable to O'Connor's (1979, 1982a). Schoen (1982) also determined that participation was predicted best by current employment status; nurses who worked more had greater participation.

Millonig (1985b) reported in another study that nurses with master's degrees had the highest mean number of hours of participation followed by diploma, baccalaureate and associate degree graduates. Staff nurses participated least frequently while administrators participated most frequently. These findings are similar to those of Clark and Dickinson (1976) and Puetz (1980).

Overall, personal characteristics that appear influential in participation for nurses are level of position (administrators participated more than staff nurses), employment status (full-time staff participated more than part-time staff), and clinical position (acute care nurses participated more than long-term care nurses). Disagreement exists regarding the influence of basic nursing education.

Self-Directed Learning

Self-direction can be defined as a method of organizing instruction (e.g., an activity) or as a characteristic of individual learners (e.g., a learner sets goals in order to achieve a particular outcome; Candy, 1991). For the purposes of this paper, self-direction will be considered a goal or outcome. Candy (1991) described six advantages of self-directed learning: an alternative to the perceived inflexibility of conventional education, allows adults to set their own objectives and achieve these through individual approaches, allows for different teaching and learning styles, leads to enhanced learning through increased motivation, models democratic principles and behaviours by avoiding the imposition of values and attitudes on learners, and encourages curiosity and self-directed inquiry. Candy (1991) also highlights four dimensions of self-direction. The first is personal autonomy. Learners can formulate learning goals and plans independently of others and, therefore, increase their autonomy. Self-management and the independent pursuit of learning are other dimensions of self-direction. Learners are able to decide what activities and resources are necessary to achieve set goals, when and at what pace to learn, estimate progress, detect and deal with learning blocks and set aside time and money for learning (Tough, 1979). The fourth dimension is that the learner has control over the instructional event in terms of evaluation, goals, and motivation.

In 1977, Guglielmino developed the Self-Directed Learning Readiness Scale (SDLRS). The purpose of this instrument was to measure the extent to which individuals perceive themselves to possess the skills and attitudes often associated with self-directed learning (Brockett, 1985b). The SDLRS consists of eight factors: openness to learning opportunities, self-concept as an effective learner, initiative and independence in learning, informed acceptance of responsibility for one's own learning, love of learning, creativity, future orientation, and ability to use basic study and problem-solving skills (Guglielmino, 1978).

A few studies have been undertaken using the Self-Directed Learning Readiness Scale. Three studies focused on the relationship between self-directed learning readiness and personal characteristics. Long and Agyekum (1983) found that a positive association existed between age and educational achievement and SDLRS scores. Older students and students with higher educational attainment were more self-directed as reflected by higher SDLRS scores. Brockett (1985c) discovered that age was not related to self-directedness but like Long and Agyekum (1983), he found that subjects with greater number of years of schooling tended to have higher SDLRS scores. Guglielmino, Guglielmino and Long (1987) also determined that years of education were positively correlated with SDLRS scores. In addition, they found that females had significantly higher scores than males, and that older respondents had lower scores than younger respondents.

Two studies examined the relationship between SDLRS scores and teaching styles. Kasworm (1983) established that a self-directed learning course (i.e., a program of study requiring individual learners to set their own goals and objectives for learning) positively influenced self-directed learning readiness in a majority of participants, whereas Caffarella and Caffarella (1986) found that the use of learning contracts had no effect on self-directed learning readiness. In summary, there is a positive association between educational attainment and self-directed learning readiness and inconsistent associations between self-directed learning readiness and teaching style.

Nurses

O'Kell (1988) reported no significant relationships between SDLRS scores, age and nursing specialty. In fact, SDLRS scores decreased with each year of school for student nurses. Two studies examined the relationship between SDLRS scores and teaching style. Teaching self-directed learning in the classroom did not increase SDLRS scores (Wiley, 1983). Nursing students with a preference for low structure who completed a self-directed learning project increased their SDLRS scores while students with a

preference for high structure who completed a self-directed learning project experienced decreased scores. Nurses with higher SDLRS scores spent more time learning than nurses with lower scores and more time on self-directed learning projects than teacher-directed learning projects (Dixon, 1991).

Three studies were implemented using different data collection instruments. Nurses had greater involvement in self-directed learning projects than formal inservice programs (Moran, 1977). Vaz (1986) studied one aspect of self-directed learning: the reading of professional journals. Staff nurses with one to four years of experience and nurses with 35 or more years of experience reported the highest levels of reading. The most important reasons for reading journals were to keep up on professional issues, to help deal with patient care problems, and to learn about nursing care. Emblen and Gray (1990) discovered that nurses spent more time on self-directed learning projects that were of professional interest than on projects that were of nonprofessional interest. Overall, master's-prepared nurses were more involved in self-directed learning projects than baccalaureate or diploma prepared nurses. Baccalaureate nurses were motivated to become involved to update knowledge, whereas master's-prepared nurses were motivated to develop professionally.

Overall, studies utilizing the SDLRS determined that a positive relationship existed between educational attainment and self-directed learning readiness. Consistent correlations were not found for age or teaching style.

Deterrents to Participation in Continuing Education

Motivational orientations and other factors influencing participation in continuing education have been examined. It may also be helpful to examine deterrents to participation in order to increase our understanding of motivation. Johnstone and Rivera (1965) described three barriers to participation: disposition, situation, and information. Dispositional barriers have been reported as attitudes, beliefs, values, and perceptions

about oneself as a learner that may inhibit participation in learning activities (Cross, 1981; Darkenwald & Merriman, 1982). For example, statements like, "I'm too old to learn" or "I'm not smart enough" are believed to reflect values that lead to decreased motivation. Situational barriers arise from one's situation at a given time (e.g., lack of time or money, family responsibilities; Cross, 1981). Informational barriers involve a lack of awareness of educational opportunities. Based on a review of the literature, Cross (1981) described institutional barriers involving practices and procedures discouraging working adults from participation, for example, inconvenient schedules or locations and lack of interesting courses.

Darkenwald and Valentine (1985) studied nonparticipating adults. They reported six factors that acted as deterrents: time constraints, lack of confidence, lack of course relevance, cost, personal problems, and low personal priority. They proceeded to compile their results with those described by Johnstone and Rivera (1965) and Cross (1981). Three factors matched the situational category: time constraints, cost, and personal problems. The institutional category matched with lack of course relevance but failed to match with other examples provided by Cross (1981). The dispositional category matched with lack of confidence. The factor "low personal priority" was not related to the previous studies.

Health Professionals

Scanlan and Darkenwald (1984) studied barriers to participation in continuing education for health professionals. Nonparticipants were defined as not attending organized continuing education activities within the past year. Six factors were found to be influential in deterring participation: cost, work constraints, family constraints, lack of quality of available programs, lack of benefit and disengagement. This study also supported the earlier work of Cross (1981).

Nurses

Four authors wrote about deterrents to participation within the profession of nursing. Based on the literature and personal experience, Miller (1975) concluded that many factors prevented nurses from attending continuing education activities. These included previous negative educational experiences, difficulty in stating learning needs, inability to specify learning needs, and personal insecurities. Puetz (1980) found that the reasons that were most influential in nurses' decisions not to attend continuing education activities were family obligations, inconvenient location, and conflicts with work responsibilities. Factors affecting attendance were money and time according to Parochka (1985).

The only Canadian study examining deterrents of participation was completed by Blais, Duquette, and Painchaud (1989). The sample group included nonparticipant diploma nurses. Five clusters of reasons were revealed: low priority for work-related activities, absence of external motivators (e.g., lack of rewards and benefits for attendance), irrelevance of additional formal education for professional practice, incidental costs (e.g., conflict between schedule and location of courses, costs involved in making arrangements to attend), and lack of information and effective support.

Summary

The review of the education, health professions, and nursing literature indicates that the most common reasons for participating in continuing education activities are professional knowledge (also stated as relatedness of topic to job, need for information to keep abreast of changes), professional advancement (e.g., preparation for a new role or position, increased job competence), social welfare (e.g., a desire to better serve the community), and cognitive interest (e.g., to learn for the sake of learning). Personal characteristics and self-directed learning readiness also influence the learner's decision to participate in continuing education activities. Participation is greatest for younger students and full-time workers. Participation increases as the level of education

increases. Learners with high self-directed learning readiness scores participate more than learners with low scores. Personal characteristics and self-directed learning readiness are also related in that learners with greater education are more self-directed.

Further study of why nurses participate in continuing education is warranted in order to fill gaps in the nursing literature relating to differences between American and Canadian nursing education systems and addressing whether findings from the late 1970s and early 1980s remain relevant in 1993. The study described in the following chapters will examine the effect of various demographic variables on motivational orientation and self-directed learning readiness.

CHAPTER THREE: METHODOLOGY AND PROCEDURES

This chapter describes the subjects, instrumentation, and methodology of the study carried out here. The questionnaire response rate is discussed. Reliability and validity studies of the Education Participation Scale (EPS) and Self-Directed Learning Readiness Scale (SDLRS) will be examined. The section on methodology includes a report on a pilot study of the nursing survey, as well as the process of distribution and return for the larger study.

Subjects

Six hundred and eighty-four registered nurses employed at a large community hospital in southern Ontario received copies of the study questionnaire. Registered nurses working in positions that did not specifically require nursing credentials were excluded. Of the 684 questionnaires distributed, 149 were returned. Seven questionnaires were not usable. Ten respondents completed two of the three questionnaires. In total, 142 questionnaires were usable (21%). A number of factors contributed to the low return rate. Other surveys were administered in the hospital during the same time period, leading to an unwillingness on the part of the staff to complete yet another questionnaire. Changes in staffing and reduction in services led to a decrease in staff morale. Nurses perceived that the questionnaires were too lengthy, and as a result, did not want to commit the time necessary to complete them. The SDLRS was perceived to be difficult to complete because of negatively stated items and a complex scale (a 5-point scale with responses ranging from "almost never true of me" to "almost always true of me"). It was not possible to send follow-up letters to non-respondents since the questionnaires were not coded for respondent identification in order to ensure confidentiality. In general study populations, the return rate of surveys without follow-up tends to be less than 50% (Holm & Llewellyn, 1982) and a return rate of 20-35% is not uncommon (Oyster, Hanten, & Llorens, 1987).

Table 1 provides descriptive information (means and standard deviations) about the respondents based on age, years of nursing practice, and length of current employment. The mean age of the respondents was 39.7 years with a range between 22 and 60 years. The average number of years of nursing experience was 15.25 with a range between 1 and 40 years while the average length of current employment was 8.11 years with a range between 1 and 29 years.

The majority of respondents were married ($n = 100$ or 70.4%), 14 were divorced (9.9%) and 28 single (19.7%). Most of the respondents had obtained a diploma as basic nursing preparation ($n = 121$ or 85.2%) while 21 (14.8%) had obtained a degree. The majority worked full-time ($n = 85$ or 59.5%) and in positions as staff nurses ($n = 113$ or 79.6%). Fifty-seven staff worked part-time (40.1%). Fourteen respondents were administrators (9.9%), eight were educators (5.6%), and seven worked in other types of clinical positions (4.9%). The clinical areas where most staff nurses worked included medicine/surgery ($n = 51$ or 35.9%) and critical care ($n = 33$ or 23.2%). Eighteen nurses worked in obstetrics (12.7%), 14 in long-term care (9.9%), 10 in psychiatry (7%), four in pediatrics (2.8%), and 12 in other areas (8.5%). Thirty nurses had obtained an undergraduate ($n = 23$ or 16.2%) or graduate ($n = 7$ or 4.9%) degree in nursing since graduation from a basic nursing program. Twenty-three nurses had obtained a diploma ($n = 15$ or 10.6%), a baccalaureate degree ($n = 6$ or 4.2%), or a master's degree ($n = 2$ or 1.4%) in professions other than nursing. A small group of nurses ($n = 39$ or 27.5%) were currently studying to obtain the following certificates or degrees: baccalaureate degree in nursing ($n = 20$ or 51.2%), master's degree in nursing ($n = 3$ or 7.6%), clinical certificates ($n = 12$ or 30.7%), and certificates or degrees in other fields ($n = 4$ or 10.2%). One hundred and three nurses (72.5%) were not currently studying. Thirty-two nurses (22.5%) had enrolled in a credit course over the past year, 40 (28.2%) had enrolled in noncredit courses, and 29 (20.4%) had enrolled in both credit and

Table 1

Mean and Standard Deviations of Participants as a Function of Age, Years of Practice,
and Length of Current Employment

	Age	Years of practice	Length of current employment
<u>M</u>	39.7	15.25	8.11
<u>SD</u>	9.38	9.34	6.6
<u>n</u>	140	140	141

noncredit courses. Sixteen nurses (11.3%) participated in learning activities outside of the workplace, 16 (11.3%) inside of the workplace, and 102 (71.8%) participated both outside and inside of the workplace.

Instrumentation

Education Participation Scale (EPS)

Description

Three questionnaires were used during the data collection phase of the survey. The first was the Education Participation Scale (EPS) originally designed by Boshier (1971; see Appendix A). The purpose of this instrument is to determine the motivational orientations or reasons for participation in adult education activities (Boshier, 1971). The EPS was initially published in 1971 as a 48-item questionnaire with a nine-point Likert scale ranging from "very much influence" to "very little influence". Over time, revisions of the instrument have led to the development of different versions, with the most recent being a 42-item questionnaire with a four-point scale ranging from "no influence" to "much influence". The recent version of the EPS consists of seven factors: communication improvement, social contact, educational preparation, professional advancement, family togetherness, social stimulation, and cognitive interest (Boshier, 1991). The EPS is scored by adding the responses for each factor together in order to obtain a separate score for all seven factors which can range from 6 to 24. A score of 6 indicates that the factor is minimally influential when deciding to participate in continuing education while a score of 24 indicates that the factor is very influential as a reason for participation in continuing education. The average scores for this study are 9.12 for communication improvement (133 respondents), 8.97 for social contact (132 respondents), 13.07 for educational preparation (133 respondents), 1.27 for professional advancement (142 respondents), 7.66 for family togetherness (133 respondents), 8.41 for social stimulation (133 respondents), and 17.05 for cognitive interest (133 respondents).

Reliability and Validity

Five studies have specifically examined the reliability and validity of the EPS. Four studies demonstrated reliability and one determined validity. Reliability is the extent to which the instrument consistently measures the attribute it is designed to measure while validity is the degree to which an instrument measures what it was designed to measure (Polit & Hungler, 1985). In the health professional and nursing literature, many investigators modified the EPS to suit their samples, therefore, it is difficult to derive reliability and validity from these studies (e.g., Lethbridge, 1989; Mergener & Weinswig, 1979; O'Connor, 1979, 1982a; Thomas, 1986). Boshier (1971) obtained high test-retest reliability for the 48-item questionnaire ranging from 0.44 to 1.0. He concluded that this version of the questionnaire was reliable. Morstain and Smart (1974) also measured the reliability of the 48-item questionnaire. They found that the measure of internal consistency was relatively high and that estimates of reliability ranged from 0.72 to 0.86. Their findings were consistent with Boshier (1971) in that the reliability of the instrument was supported. Later, Boshier (1976) measured the reliability of the 40-item version with test-retest reliabilities ranging from 0.44 to 1.00 with an average of 0.81. Scanlan and Darkenwald (1985) measured the reliability of the 40-item EPS at 0.78. Boshier (1991) also measured reliability and validity of the most recent version of the EPS, a 42-item questionnaire on a 4-point scale. It was concluded that this version of the instrument had high test-retest reliability ranging between 0.56 and 0.75 and high alpha reliability ranging between 0.76 and 0.91. Concurrent validity was established by comparing the most recent version of the EPS to previous versions and ranged between 0.52 and 0.71.

Self-Directed Learning Readiness Scale (SDLRS)

Description

The second instrument used was the Self-Directed Learning Readiness Scale (Guglielmino, 1978; see Appendix B). It is designed to measure the extent to which respondents consider themselves to possess the skills and attitudes often associated with self-directed learning (Brockett, 1985b). The original version of the questionnaire was 41 items; the most recent version consists of 58 items measured on a 5-point Likert scale ranging from "Almost never true of me; I hardly ever feel this way" to "Almost always true of me; there are very few times when I don't feel this way". The SDLRS consists of eight factors: openness to learning opportunities, self-concept as an effective learner, initiative and independence in learning, informed acceptance of responsibility for one's own learning, love of learning, creativity, future orientation, and ability to use basic study and problem-solving skills (Guglielmino, 1978). The SDLRS score is obtained by adding the responses to particular items together to achieve a total score that can range from 58 to 290. A score of 58 indicates a low readiness for self-directed learning and a score of 290 indicates a high readiness for self-directed learning. The average total score for the 142 respondents in this study is 224.06.

Reliability and Validity

Unlike the Education Participation Scale, more discussion has occurred in the literature regarding the reliability and validity of the SDLRS. The internal reliability of the SDLRS was estimated to be between 0.79 and 0.91 (Wiley, 1983). Brockett (1985a) compared reliability of the original 41 item version to the more recent 58 item tool and found a reliability coefficient of 0.87 for both, thus suggesting that the reliability is high.

Some researchers argue that the school and book-oriented definition of self-direction may decrease the content validity of the SDLRS and, therefore, the appropriateness of its use for adults with low levels of formal education (Brockett, 1985a; Brookfield, 1986;

Long, 1987). While Long (1987) supported the internal consistency of the instrument, he agreed with Brockett (1985a) that the SDLRS was reliable and valid for use with a young adult sample with above average educational attainment. Similarly, Brookfield (1986) suggested that the tool was suited to measure adults with an average or above average level of formal education who rely on books and journals for information and questionable for adults with low levels of formal education who use fellow learners as a primary source of information. On the other hand, Caffarella and Caffarella (1986) questioned the use of the SDLRS for adults with high levels of schooling since graduate students had very high pretest scores in their sample. Field (1989) stated that the most frequently cited characteristics of the scale (e.g., factor structure, reliability) were based on the original 41-item version and not the revised 58-item version. Other concerns included the presence of a number of items that appeared to be connected with readiness for self-directed learning but had low correlation with the total SDLRS scores, and that only three of the eight factors achieved an acceptable level of reliability. Based on these findings, Field (1989) recommended that the tool was not valid. In response to Field's (1989) comments, Guglielmino (1989) stated that a new factor analysis was completed for the 58-item scale, resulting in outcomes similar to previous findings. As well, the most recent data analysis revealed split-half reliability to be 0.94.

Torrance and Mourad (1978) determined that the original SDLRS had construct validity by computing correlation between it and 11 established instruments ($p < 0.03$ for all measures). They enhanced their initial findings by conducting a second study (1979) in which they correlated SDLRS scores with scores from a similar instrument and obtained factor reliability ranging between 0.64 and 0.87. Long and Agyekum (1983) supported the general and divergent validity of the SDLRS based on significant associations between SDLRS scores and the variables of age and educational level. However, they found that convergent validity was lacking. Crook (1985) found weak support for face validity but concluded that the tool had minimal predictive validity.

Bonham (1991) did not support construct validity of the instrument because of the meaning implied for high versus low scores in the literature. A low score would indicate a dislike for learning as opposed to a preference for having others plan learning; a high score would indicate a love for learning and not readiness for self-direction.

The third instrument was a personal data survey designed to collect demographic information regarding selected characteristics of nurses (e.g., age, basic nursing preparation, length of current employment; see Appendix C). This tool was developed by the researcher and consisted of circling the appropriate response for each category.

Procedures

A pilot study was undertaken over a three-week period to assess the adequacy of the nursing survey. The Education Participation Scale (EPS) and Self-Directed Learning Readiness Scale (SDLRS) were also included in the pilot study. Eleven staff nurses with similar characteristics to the largest subgroup of subjects (staff nurses working on five medical-surgical units) were included in the pilot study. The participants were encouraged to comment on length, completion time, and clarity of the survey. Five nurses completed the questionnaires and survey in their entirety and stated that they had no difficulty in doing so. The others did not fill out the questionnaires but provided feedback nonetheless. General comments included "looks okay" (made by two nurses) and "no difficulties" (four nurses). Specific feedback regarding the nursing survey included the use of a format similar to that used by the Registered Nurses' Association of Ontario, and difficulty differentiating between credit and noncredit courses. Three nurses stated that the survey was clear and that they experienced no difficulties completing it. One respondent found the EPS repetitive. One nurse expressed difficulty with the four negatively worded items on the SDLRS stating, "I had to think for a while and read it several times in order to answer these questions". Other comments included, "the response scale was unclear and I needed to really concentrate", "time-consuming", and "stupid, silly questions". These kinds of concerns regarding the SDLRS may have

limited the return rate for the larger study. The length of time required to complete the questionnaires was approximately 20 minutes. In general, the feedback obtained from the pilot study was positive with few changes required.

Following ethical approval from the hospital and Brock University, the questionnaire packages were distributed to the work areas of staff nurses. A meeting was held with each nursing unit director to discuss the purpose of the study and the process of questionnaire distribution. The questionnaires were distributed to staff nurses by the nursing unit director of each unit. Nurses who did not work on a clinical unit (e.g., nursing administrators, educators) received their questionnaires through the specific work area's mail system. Each package consisted of a covering letter explaining the purpose of the study and assuring the confidentiality of the responses (see Appendix D), an instruction sheet to assist with the completion of questionnaires (see Appendix E), a nursing survey to elicit demographic data, the EPS, and the SDLRS. Questionnaires were returned to an envelope or box left on the unit. Some respondents chose to mail their questionnaires directly to the investigator. Initially, it was anticipated that two weeks was sufficient time for completion of the questionnaires. However, many nursing unit directors requested extensions of two to three weeks in order to allow staff on shift to participate and to increase participation in general. As a result of the extensions, the time required for data collection was four months.

Data collection involved the completion of two questionnaires examining motivational orientation and self-directed learning readiness. A third survey collected relevant demographic information.

In summary, this study investigated the motivation for continuing education of 142 registered nurses. Three questionnaires were used to elicit data from the available sample which included staff nurses, educators, and administrators.

Analysis of the data collected by the use of the three instruments is discussed in Chapter 4. One-way anovas were used to determine the effect of the independent

variables on the dependent variables, for example, whether basic nursing education influences self-directed learning readiness. A stepwise multiple regression model was used to determine the relationship between predictor variables and criterion variables, for example, are age and motivational orientation related?

CHAPTER FOUR: FINDINGS

One-way anovas were used to determine the effect of independent variables on dependent variables, specifically whether basic nursing preparation, employment status, level and area of clinical position, and individual differences influenced nurses' motivation to participate in continuing education activities and self-directed learning readiness. The Tukey-Kramer post-hoc comparison test was used to determine specific differences, as there was an unequal number of subjects across the comparison groups (Kirk, 1982).

A stepwise multiple regression model was used to determine the relationship between several predictor variables and one criterion variable, specifically the predictor variables of age, length of practice, and length of current employment and the criterion variables of motivational orientation and self-directed learning readiness. As well, multiple regression analyses were carried out to determine the relationship between self-directed learning readiness and motivational orientation for continuing education.

Education Participation Scale (EPS)

One-Way Anova Analyses

There were no significant main effects for basic nursing education and employment status on motivational orientation [$F(1, 127) \leq 1.564, p > .05$]. Nurses with degrees did not differ in motivational orientation from nurses with diplomas. Likewise, motivational orientation did not differ between nurses working full-time and nurses working part-time. The educational preparation and cognitive interest mean factor scores and standard deviations are listed by clinical area in Table 2. There was a main effect for clinical area on the educational preparation factor of the EPS [$F(6, 126) = 3.27, p < .005$]. Differences existed between nurses working in medical/surgical areas and obstetrics ($q = 4.66, p < .05$) and nurses working in critical care areas and obstetrics ($q = 4.83, p < .05$), such that medical/surgical nurses and critical care nurses placed greater emphasis on educational preparation when deciding to participate in continuing

Table 2

Educational Preparation and Cognitive Interest Factor Scores on the Education Participation Scale as a Function of Clinical Area

	Medical- Surgical	Psychia- try	Critical care	Long- term care	Obste- trics	Pedia- trics	Other
Educational preparation factor							
<u>M</u>	14.10	10.37	14.53	12.30	10.44	12.25	12.08
<u>SD</u>	4.23	2.92	4.68	2.86	3.36	5.12	3.62
n	48	8	30	13	18	4	12
Cognitive interest factor							
<u>M</u>	16.93	15.12	18.63	16.23	14.50	19.00	18.91
<u>SD</u>	4.73	4.94	4.05	4.16	5.09	2.16	3.05
n	48	8	30	13	18	4	12

Note. Maximum EPS score is 24.

education than did obstetrical nurses. Scores did not differ between long-term care, pediatrics, psychiatry, and other clinical areas ($q \leq 3.67, p > .05$). In addition, there was a main effect for clinical area on the cognitive interest factor [$F(6,126) = 2.45, p < .028$] such that critical care nurses were more influenced to participate in continuing education because of cognitive interest than were obstetrical nurses ($q = 4.46, p < .05$). Scores did not differ between nurses in other clinical groups ($q \leq 3.81, p > .05$).

The EPS family togetherness mean factor scores and standard deviations are listed by level of position in Table 3. There was a main effect for level of position [$F(3,127) = 3.52, p < .01$]. Practitioners in the "other" group (e.g., clinical and occupational health specialists) had greater EPS scores on the family togetherness factor than did staff nurses, educators, and administrators ($q = 4.06, p < .01, q = 3.97, p < .05$, and $q = 4.07, p < .05$ respectively). The EPS scores did not differ between staff, educators, and administrators ($q \leq 1.20, p > .05$).

Mean scores and standard deviations for the family togetherness factor are listed by marital status in Table 3. A significant main effect was revealed for marital status [$F(3,130) = 3.40, p < .037$] on the family togetherness factor of the EPS. Married respondents had higher scores than did single respondents ($q = 3.68, p < .05$). Scores did not differ between divorced and single respondents ($q < 2.04, p > .05$).

The educational preparation mean factor scores and standard deviations are listed by enrollment in credit or noncredit courses in Table 4. A significant main effect was found for enrollment in credit and/or noncredit courses on the educational preparation factor of the EPS [$F(2, 91) = 7.23, p < .001$]. Respondents who enrolled in both credit and noncredit courses had greater scores than did respondents who enrolled in non-credit courses only ($q = 5.36, p < .01$). Scores did not differ significantly between those enrolled in credit courses and those enrolled in noncredit courses ($q \leq 2.76, p > .05$). A main effect was not revealed for participation in continuing education activities inside or outside the workplace [$F(2, 123) \leq 2.829, p > .05$]. Scores did not

Table 3

Family Togetherness Factor Scores on the Education Participation Scale as a Function of Level of Position and Marital Status

	Level of position			
	Staff	Educator	Administrator	Other
<u>M</u>	7.61	6.75	7.07	10.57
<u>SD</u>	2.68	1.16	1.54	4.19
<u>n</u>	104	8	14	7

	Marital status		
	Married	Divorced	Single
<u>M</u>	7.98	7.76	6.48
<u>SD</u>	2.85	3.34	1.05
<u>n</u>	93	13	27

Note. Maximum EPS score is 24.

Table 4

Educational Preparation Factor Scores on the Education Participation Scale as a Function of Enrollment in Courses and Formal Continuing Education

	Enrollment in courses		
	Credit	Non-credit	Both
<u>M</u>	13.35	11.45	15.46
<u>SD</u>	4.30	4.36	3.68
<u>n</u>	31	35	28

	Formal continuing education	
	Working on a degree or certificate	Not working on a degree or certificate
<u>M</u>	15	12.26
<u>SD</u>	4.28	3.97
<u>n</u>	39	94

Note. Maximum EPS score is 24.

differ between nurses studying inside the workplace and nurses studying outside the workplace.

Mean scores and standard deviations for the EPS of educational preparation factor are listed by formal education in Table 4. There was a main effect for studying for a degree or certificate [$F(1, 131) = 12.45, p < .001$]. Nurses currently working on a degree or certificate had greater scores for the educational preparation factor than did nurses not engaged in formal study ($q = 4.98, p < .01$). Main effects were not found for highest nursing degree and highest degree obtained in another discipline [$F(2, 18) \leq 2.612, p > .05$].

Multiple Regression Analyses

A stepwise regression analysis was performed to determine the relationship between the predictor variables of age, length of practice, and length of current employment, and the criterion variable of motivational orientation as measured by the EPS. Results of this analysis are presented in Table 5. The variable age was entered in the first step and accounted for 9% of the variance for the factor of communication improvement [$F(1, 126) = 12.06, p < .001$]. Length of practice and length of current employment did not contribute significantly to the communication improvement factor [$F(1, 126) \leq 1.236, p \geq .05$].

Results of the stepwise regression analysis for age, length of practice, length of current employment, and motivational orientation are presented in Table 5. The variable age was entered in the first step and accounted for 4% of the variance for the factor of family togetherness [$F(1, 126) = 5.39, p < .022$]. Length of practice and current employment did not contribute beyond the first step of the analysis [$F(1, 126) \leq 0.103, p \geq .05$].

Results of the stepwise regression analysis for motivational orientation and age, length of practice, and length of current employment are presented in Table 6. The variable length of current employment was entered in the first step and accounted for 8%

Table 5

Communication Improvement and Family Togetherness Factor Scores on the Educational Participation Scale as a Function of Age

Communication improvement factor						
Step	Independent variable	R ²	Beta	df	F	p
1	Age	0.09	0.30	1, 126	12.07	< .001
Family togetherness factor						
Step	Independent variable	R ²	Beta	df	F	p
1	Age	0.04	0.20	1, 126	5.39	< .022

Note. Length of practice and length of current employment were not included in the regression equation.

Table 6

Professional Advancement Factor Scores on the Education Participation Scale as a
Function of Length of Current Employment

Step	Independent variable	Length of current employment				
		R^2	Beta	df	F	p
1	Length of employment	0.08	0.28	1, 135	11.51	< .001

Note. Not included in this regression were age and length of practice.

of the variance for the factor professional advancement [$F(1, 135) = 11.51, p < .001$]. Age and length of practice did not significantly contribute beyond the first step of the analysis [$F(1, 135) \leq 0.419, p > .05$].

Self-Directed Learning Readiness Scale (SDLRS)

One-Way Anova Analyses

The main effects of basic nursing preparation, employment status, clinical area, and level of position on self-directed learning readiness were not significant [$F(3, 136) \leq 1.415, p \geq .05$]. Nurses with degrees and nurses with diplomas did not differ in self-directed learning readiness (SDLR). SDLR scores did not differ between nurses employed full-time and nurses employed part-time. Nurses working in medicine/surgery, psychiatry, critical care, long-term care, obstetrics, and pediatrics also did not differ in SDLR scores. Staff nurses, educators, administrators, and nurses working in other clinical positions did not differ in SDLR scores. The main effect of marital status was not significant [$F(2, 139) = 1.389, p > .05$]. SDLR scores did not differ between married, divorced, and single nurses.

A main effect was not found for participation in credit or noncredit courses [$F(2, 98) = 1.297, p > .05$]. Nurses participating in credit courses did not differ from nurses participating in noncredit courses in relation to SDLR scores. Mean scores and standard deviations for self-directed learning readiness are listed as a function of participation in continuing education in Table 7. A significant main effect was found for participation in continuing education outside or inside the workplace [$F(2, 131) = 3.14, p < .05$]. Respondents who participated in continuing education activities both outside and inside the workplace had higher scores on the SDLRS than those participating inside the workplace only ($q = 3.54, p < .05$). Scores were not significant between nurses attending continuing education activities outside of the workplace and nurses attending activities inside of the workplace ($q \leq 2.50, p > .05$).

The mean scores and standard deviations of the SDLRS scores are listed as a function of highest degree obtained in nursing in Table 7. A one-way anova revealed a significant main effect for highest degree obtained in nursing [$F(2, 139) = 3.52, p < .032$]. However, the Tukey-Kramer did not show a significant difference between diploma, baccalaureate, and master's prepared nurses on SDLRS scores ($q \leq 2.85$, critical $q = 3.3, p > .05$). A main effect was not found for highest degree obtained in another discipline [$F(2, 20) = 2.811, p > .05$].

Mean scores and standard deviations for self-directed learning readiness are also listed as a function of participating in formal continuing education in Table 7. There was a main effect for enrollment in a degree or certificate program [$F(1, 140) = 5.47, p < .021$]. Nurses working on a degree or certificate had greater scores than did nurses not studying formally ($q = 3.31, p < .05$).

Multiple Regression Analyses

Results of the stepwise regression analysis for self-directed learning readiness as measured by the SDLRS and motivational orientation as measured by the EPS are presented in Table 8. The EPS factor professional advancement was entered in the first step and accounted for 18% of the variance in self-directed learning readiness [$F(2, 129) = 28.3, p < .01$]. In the second step, the factor cognitive interest was added and accounted for an additional 5% of the variance [$F(2, 129) = 9.23, p < .01$]. None of the remaining variables contributed significantly beyond the second step of the analysis [$F(2, 129) \leq 0.633, p \geq .05$].

A stepwise regression analysis was performed to determine the relationship between the predictor variables of age, length of nursing practice, and length of current employment, and the criterion variable self-directed learning readiness; results of this analysis are presented in Table 9. The variable length of current employment was entered in the first step and accounted for 4% of the variance for self-directed learning

Table 7

Self-Directed Learning Readiness as a Function of Participation in Continuing Education, Highest Degree in Nursing, and Formal Continuing Education

	Participation in continuing education		
	Outside the workplace	Inside the workplace	Both
<u>M</u>	225.31	203.62	226.99
<u>SD</u>	38.80	23.61	35.47
<u>n</u>	16	16	102
	Highest degree in nursing		
	Diploma	Baccalaureate	Masters
<u>M</u>	220.30	235.30	247.14
<u>SD</u>	36.64	20.68	25.47
<u>n</u>	112	23	7
	Formal continuing education		
	Working on a degree or certificate	Not working on a degree or certificate	
<u>M</u>	234.97	219.92	
<u>SD</u>	29.20	35.94	
<u>n</u>	39	103	

Note. Maximum SDLRS score is 290.

readiness [$F(1, 135) = 5.3, p < .02$]. Age and length of practice did not contribute significantly beyond the first step of the analysis [$F(1, 135) \leq 3.07, p > .05$].

Table 8

Self-Directed Learning Readiness as a Function of Motivational Orientation

Step	Independent variable	Motivational orientation				
		R ²	Beta	df	F	p
1	Professional advancement factor	0.18	-0.41	2, 129	28.3	< .01
2	Cognitive interest factor	0.23	0.23	2, 129	9.23	< .01

Note. Not included in the regression equation were the factors: communication improvement, social contact, educational preparation, family togetherness, and social stimulation.

Table 9

Self-Directed Learning Readiness as a Function of Length of Current Employment

Step	Length of current employment					
	Independent variable	R ²	Beta	df	F	p
1	Length of employment	0.04	-0.19	1, 135	5.3	< .02

Note. Not included in the regression equation were age and length of practice.

Summary

Question 1

Do registered nurses, who differ with respect to basic nursing education preparation, employment status, and clinical area and position, also differ in their motivation to participate in continuing education?

Nurses who differed with respect to basic nursing education and employment status did not differ in their motivational orientation or self-directed learning readiness. Nurses who differed with respect to clinical area and level of position also differed in motivational orientation. Medical/surgical nurses and critical care nurses placed more emphasis on educational preparation when deciding to participate in continuing education than did obstetrical nurses. Critical care nurses were more influenced to participate in continuing education because of cognitive interest than obstetrical nurses. Specialized practitioners were more motivated to participate in continuing education because of family togetherness than were staff nurses, administrators, and educators.

Question 2

Do nurses with high self-directed learning readiness differ in their motivation for continuing education from nurses with low self-directed learning readiness?

Nurses with high self-directed learning readiness differed in motivational orientation from nurses with low self-directed learning readiness. Nurses influenced by the factor professional advancement when making a decision to participate in continuing education were not as self-directed as nurses who were less influenced by this factor. Nurses influenced by the factor cognitive interest were more self-directed than nurses who were not as influenced by cognitive interest.

Question 3

Do nurses participating in credit courses differ in their motivation for continuing education relative to nurses participating in noncredit courses?

Nurses participating in credit and noncredit courses differed from nurses participating in noncredit courses with respect to motivational orientation but not self-directed learning readiness. Nurses enrolled in both credit and noncredit courses were more influenced to participate because of the factor educational preparation than nurses enrolled in noncredit courses only.

Question 4

Do nurses participating in activities in the workplace (e.g., educational sessions) differ in their motivation for continuing education from nurses participating in activities outside of the workplace (e.g., community college courses)?

Nurses participating in continuing education activities both outside and inside of the workplace differed from nurses participating inside the workplace relative to self-directed learning readiness but not motivational orientation. Nurses participating in continuing education activities only within the workplace were less self-directed than nurses participating in activities both inside and outside the workplace.

Other Individual Differences

Nurses differing in age, marital status, and length of current employment differed in motivational orientation. Nurses currently studying for a degree or certificate also differed in motivational orientation relative to nurses not studying for such a degree or certificate. Formal study in a degree or certificate program and length of current employment also affected self-directed learning readiness. Older nurses were more likely to participate in continuing education because of the communication improvement and family togetherness factors than younger nurses. Married respondents were more likely to be influenced by the factor family togetherness than single respondents when deciding to participate in continuing education activities. Nurses with greater lengths of employment were more likely to participate in continuing education because of the factor professional advancement than nurses who had been employed for a shorter period of time. Nurses studying formally were more influenced by the factor educational

preparation than nurses not studying formally. Nurses enrolled in a degree or certificate program were more self-directed than nurses not enrolled in such programs. Nurses employed in an organization for a short period of time were more self-directed than nurses employed in an organization for a longer period of time.

CHAPTER FIVE: IMPLICATIONS

The final chapter will interpret the findings initially discussed in the previous chapter in relation to the Education Participation Scale and the Self-Directed Learning Readiness Scale. The interpretation of the findings will be followed by a discussion of the limitations of the study and implications for nursing practice and research.

Interpretation of Findings

Education Participation Scale (EPS)

Significant main effects did not occur between educational participation scale (EPS) scores and basic nursing education. This is not surprising since there is disagreement within the literature regarding the influence of basic nursing education (Clark & Dickinson, 1976; Curran, 1977; Millonig, 1985b; Puetz, 1980; Schoen, 1982; Trammell, 1984). The failure to find differences may have also been influenced by the small number of degree nurses that participated in this study (only 21 out of 121 nurses had a degree). Additionally, an increasing number of nurses, regardless of their educational background, may be aware of the need to maintain up-to-date knowledge in order to provide quality nursing care. Recent changes in nursing practice have increased the awareness of the importance of continuing education. For example, technology has increased the number of skills and procedures that nurses undertake when providing care at the bedside. Many of these advanced nursing skills are not included in the curriculum of basic nursing programs, therefore, creating the need to continue to study following graduation. The importance of continuing education within the nursing profession may outweigh the influence of basic nursing education.

The number of hours worked did not affect participation in continuing education activities. This finding is also surprising since prior research reported that full-time staff had greater participation in continuing education than part-time staff (Curran, 1977; O'Connor, 1982a; Scanlan & Darkenwald, 1985; Schoen, 1982). The emphasis on continuing education within the nursing profession may have a more substantial impact

on staff motivation to participate in continuing education than employment status. As well, more nurses are working part-time as a result of economic downsizing. Nurses who valued continuing education participation while working full-time are probably not likely to abandon this value when their employment status changes.

Critical care nurses were more motivated to participate in continuing education because of educational preparation and cognitive interest than obstetrical nurses. Critical care areas tend to be most affected by changes in technology and practice because of high levels of patient acuity. Therefore, nurses practicing in these areas may be more likely to participate in continuing education activities in order to practice effectively and safely. For example, the critical care areas have a greater number of acutely ill patients who require intensive monitoring using various devices than do obstetrical areas. Medical/surgical nurses were more motivated to participate in continuing education because of educational preparation than obstetrical nurses. Recent bed and unit closures have led to increasing diversification of medical/surgical units in relation to patient acuity and disease. For example, patients in the immediate post-operative period or patients with acute infection would have been admitted to an intensive care unit in the past but are now admitted to medical/surgical units. Nurses working in these areas may participate in continuing education in order to practice competently, particularly when caring for patients with unfamiliar diseases. Obstetrical areas tend to be more specialized with less diversity, therefore, nurses practicing in these areas may not value participation in continuing education as a way to "keep up" with changes. Other researchers also found that critical care nurses participated in continuing education more so than nurses working in other areas (Curran, 1977; Puetz, 1980). Participation scores may not have differed between nurses working in long-term care, pediatrics, and psychiatry because technological change tends to impact these areas less directly.

This study examined those nurses with clinical specialties who acted in roles other than staff nurse, educator, or administrator in order to determine whether specialization

influenced motivational orientation. Practitioners with clinical specialties and in roles other than staff nurse or educator were more motivated to participate in continuing education because of family togetherness than staff nurses and educators. Nursing specialists may be the only persons in their organization acting in a particular role, and therefore, do not have colleagues with similar positions or are not affiliated with a particular department or unit. These specialists may participate in continuing education to develop collegial ties or relationships with family members in health-related professions or others in similar positions outside of the hospital. Previous studies did not examine the motivational orientations of nurses employed in roles other than staff nurse, educator, and administrator. In this study, EPS scores did not differ between staff nurses, educators, and administrators. This is a surprising finding since the nursing literature states that administrators participate in continuing education activities more frequently than do staff nurses (Clark & Dickinson, 1976; Millonig, 1985b; Puetz, 1980). This discrepancy with previously reported findings may be a result of the small sample size of educators (n=8) and administrators (n=14) relative to staff nurses (n = 113). Differences may have been more evident if the groups were comparable in size and if the general return rate of the study had been higher, resulting in larger groups overall.

Respondents enrolled in both credit and noncredit courses were more influenced to participate in continuing education because of educational preparation than respondents enrolled in noncredit courses only. Those enrolled in both types of courses are perhaps more likely to be working towards attaining a nursing degree than those enrolled only in noncredit courses. A degree in nursing has greater value within the nursing profession than a certificate in a nursing specialty. It would be expected that respondents taking only credit courses would be more influenced by educational preparation than those taking noncredit courses, however, this was not the case. Perhaps this group of nurses is more interested in the degree program as a means to increase knowledge rather than a way to advance their careers. As well, nurses enrolled in noncredit courses only may be

using educational opportunities like workplace activities or workshops to update knowledge of nursing care.

The highest degree held in nursing or another discipline, participation in continuing education either outside or inside the workplace, and length of practice did not affect the EPS scores and has not been previously reported in the literature. An advanced degree did not influence participation and may be a result of small group size (7 had master's degrees in nursing, 2 had master's degrees in other disciplines). Participation in continuing education outside or inside the workplace did not influence motivational orientation. Perhaps this particular variable was not influential since the majority of respondents participated both outside and inside the workplace anyway ($n = 102$). Nurses may value the content of the learning experience more so than the location of the experience. Length of nursing practice did not impact on motivational orientation. This variable may have not been influential because the need for continuing education in order to practice competently remains consistent throughout nurses' practice. Beginning nurses may require continuing education in order to increase the basic knowledge gained from the basic nursing program, whereas advance nurses with greater experience may require continuing education in order to adapt to changes in technology and practice.

Older nurses were more motivated to participate in continuing education because of communication improvement and family togetherness than younger nurses. Older nurses may participate in courses that assist in improving language skills in order to cope with daily responsibilities as staff nurses and changes in the nursing profession. Nursing educational programs in Canada have evolved over many years. In the past, hospital-based training programs had a very practical focus that emphasized nursing skills. Nurses graduating from these programs were experts in performing nursing skills. More recently, diploma and degree programs have placed a greater emphasis on communication skills, for example, writing and presentation of written materials. Nurses graduating from these programs tend to have more advanced language skills than older

nurses who graduated from more practical programs. It is not surprising that older nurses were more motivated to participate in continuing education because of family togetherness since older nurses tend to have greater family responsibilities than younger nurses. In the literature, age had an effect on which motivational orientations were influential in a decision to participate in education, with older adults more likely to participate for cognitive interest than younger adults (Boshier & Collins, 1983). The discrepancy between the findings of this study and that of the literature in relation to motivational orientation and age may be related to the characteristics of the groups surveyed. The respondents in this study who were motivated to participate because of communication improvement were employed as staff nurses. The older adults surveyed by other researchers may have had different characteristics or life experiences that resulted in different motivational orientations.

Married respondents were more likely to be influenced by family togetherness than single respondents when deciding to participate in continuing education activities. This finding differs from that of other researchers. Boshier (1977) found that married participants were more likely to enroll for professional advancement than single participants. Other researchers found that marital status was not significantly associated with participation (Douglass & Moss, 1968; Scanlan & Darkenwald, 1985). Married respondents probably have greater family responsibilities than single respondents and would consider these responsibilities when making a decision to participate in continuing education activities.

Nurses studying formally at the time of this study cited educational preparation as an influential motivational factor. Twenty out of 39 participants currently studying were working towards a baccalaureate degree in nursing. Perhaps these nurses are attending a degree program in order to meet specific career goals. For example, current hiring practices reflect that a baccalaureate degree in nursing is necessary in order to work in management and educational specialties. The expectation that educators and

administrators will have advanced educational preparation, limits career opportunities for diploma nurses and enforces the importance of continuing education. The influence of enrollment in credit and/or noncredit courses and degree or certificate programs has not previously been reported in the literature.

Some participants were influenced to participate in continuing education because of professional advancement and the length of their current employment. Nurses in positions for long periods of time were more likely to participate in continuing education because of professional advancement than nurses in positions for shorter periods of time. Nurses who spend substantial periods of time in one position may be more likely to seek changes in position. Often such a change cannot occur until certain educational criteria are met, therefore, nurses seeking to fulfill these criteria will be motivated to participate in continuing education because of professional advancement. Length of current employment and its impact on participation has not been previously studied in the literature.

Self-Directed Learning Readiness Scale (SDLRS)

Basic nursing preparation, employment status, level of position, clinical area, participation in credit or noncredit courses, degree held in another discipline, age, marital status, and length of practice did not affect self-directed learning readiness. These variables were not studied in previous research. The failure to find differences in SDLR between diploma and degree nurses may have been related to the small number of degree nurses in this study (only 21 out of 121 nurses had a degree). As well, an increasing number of nurses, regardless of educational background, may be aware of the importance of acquiring up-to-date information in order to practice safely. For example, the ability to practice safely within a hospital setting requires nurses to competently perform advanced nursing skills. Basic nursing programs ensure that nurses are competent when performing basic skills only, since time does not allow for proficiency at all skills. Therefore, a need is created for advanced knowledge when beginning practitioners enter

the workplace. Self-directed nurses may participate in continuing education activities in order to practice competently. Nurses with less self-direction may participate in continuing education in order to meet performance expectations of others, for example, nursing unit directors.

The number of hours worked (full-time or part-time) did not affect SDLR. The emphasis on continuing education within the nursing profession generally and within the workplace specifically may have a greater impact on SDLR than employment status. Part-time and full-time nurses may be expected by nursing unit directors to implement a personal educational plan as part of annual performance appraisals or may choose to participate in continuing education in order to increase confidence when providing nursing care. As well, more nurses are working part-time as a result of downsizing. Nurses who are self-directed while working full-time are probably not likely to become less self-directed when their employment status changes.

Level of position did not impact on SDLR. Self-directed nurses will probably continue to participate in continuing education regardless of position in order to perform work responsibilities competently. Other-directed nurses will likely experience pressure to participate in continuing education from within the workplace, for example, from colleagues, regardless of level of position. Also, the lack of impact on SDLR may be related to the small sample size of the educators ($n = 8$), administrators ($n = 14$), and those with clinical specialties ($n = 7$) relative to staff nurses ($n = 113$). Differences in self-direction may have been more evident if the groups were comparable in size.

Clinical area did not impact on SDLR. Nurses who are self-directed will likely continue to update their knowledge apart from the clinical area in which they work. Nurses who are other-directed may wait for others to set educational goals for them rather than initiate their own in spite of the type of unit on which they work.

Participation in credit or noncredit courses did not influence SDLR. Self-directed nurses who have specific educational plans in mind may attend either credit or noncredit

courses depending on how a particular educational goal can best be achieved. Other-directed nurses who do not have educational plans like pursuing a nursing degree, may wait for others to suggest or mandate specific goals and attend whatever course will meet that goal.

SDLR was not affected by degrees held in other disciplines. The failure to find an effect may have been related to the small number of nurses with education in other disciplines (15 had diplomas, 6 had baccalaureate degrees, and 2 had master's degrees) relative to those that did not have degrees in other disciplines ($n = 119$). Differences in SDLR may have been more evident if the groups were comparable in size.

Age did not influence SDLR. Nurses who are self-directed when they are young are probably not likely to become less self-directed as they age. Conversely, young nurses who are other-directed are probably not likely to become more self-directed with age.

SDLR was not affected by marital status. The failure to find an effect may be a result of the small sample size of single respondents ($n = 28$) and divorced respondents ($n = 14$) relative to married respondents ($n = 100$). Perhaps, differences in SDLR may have been more evident if the groups were comparable in size.

Length of practice did not influence SDLR. If beginning practitioners are self-directed it seems unlikely that they would become less self-directed as they gain experience. Conversely, if beginning practitioners are other-directed, then they may not become more self-directed with experience.

The motivational orientation, professional advancement was correlated negatively and significantly with scores on the SDLRS. Nurses who were most influenced to participate in continuing education because of professional advancement were less self-directed than nurses who were not as influenced by professional advancement. Within the nursing profession the criteria required in order to attain certain positions are fairly consistent as demonstrated by current hiring practices, for example, nurse managers should have nursing degrees. Therefore, nurses who participate in continuing education

in order to achieve a certain goal may be other-directed instead of self-directed, that is, greatly influenced by expectations within the profession or working environment or require more structure or instruction. The relationship between motivational orientation and self-directed learning readiness has not been reported in previous literature.

Cognitive interest was correlated positively and significantly with scores on the SDLRS. Nurses who were most influenced to participate in continuing education because of cognitive interest were more self-directed than nurses who were not as influenced by cognitive interest. This is not a surprising finding since nurses who participate in continuing education to satisfy an interest are presumably highly self-directed. Within the typical workplace, a great deal of educational time is used for compulsory programs. Nurses who wish to participate in continuing education activities to meet other interests must take additional personal time to do so. Attending continuing educational activities on personal time requires self-direction. The relationship between EPS scores and SDLRS scores was not previously reported in the literature.

Nurses participating in continuing education activities only within the workplace were less self-directed than nurses participating in activities both inside and outside the workplace. Many nursing unit directors monitor attendance at workplace educational sessions for performance appraisals. Nurses attending only workplace education are more likely to be other-directed, or influenced by expectations of the nursing unit director, whereas nurses participating in educational activities both inside and outside the workplace may be more self-directed. Attending an educational activity outside the workplace requires more effort than attending an activity inside the workplace. Typically, nurses attending an outside activity would be required to select and pay for the activity and attend on personal time. This variable was not studied in previous research.

Nurses with higher levels of education did not have significantly higher self-directed learning readiness scale (SDLRS) scores than nurses with diplomas. In fact, the scores were uniformly high for all three groups (diploma = 220.30, baccalaureate = 235.30,

master's = 247.14). Although master's-prepared nurses achieved higher scores, the difference was not statistically significant. This finding is unexpected since a positive relationship has been established in the literature between educational attainment and SDLRS scores (Brockett, 1985b; Emblen & Gray, 1990; Guglielmino, Guglielmino, & Long, 1987; Long & Agyekum, 1983). The similarity of scores obtained on the SDLRS by nurses at all three educational levels may have been influenced by the philosophy within the nursing profession that nurses are individually responsible for maintaining their own competency through participation in continuing education. For example, many nursing unit directors require nurses to monitor their own attendance at continuing education activities for performance appraisal. The similarity of scores and the unexpected findings as compared to the American literature may also reflect the difference between Canadian and American nursing professions, in that continuing education is not mandatory in Canada.

Differences in SDLRS scores did exist when comparing nurses enrolled in a degree or certificate program to those not enrolled in a formal program of study. Nurses studying formally achieved higher scores than those not studying formally. Nurses who complete the decision-making process necessary to select a program of study, enroll in the selected course, and achieve success are likely to be self-directed, as this often requires personal time and expense. Previous research did not examine this variable.

Length of current employment was negatively and significantly correlated with scores on the SDLRS. Nurses employed in an organization for a short period of time were more self-directed than nurses employed for longer periods of time. Nurses new to an organization may spend more time and effort reviewing institutional policies and procedures and role expectations in addition to clinical knowledge and procedures in order to perform effectively. Nurses who have been employed for a greater period of time in an organization are not likely to spend time reviewing hospital policies and role expectations but instead focus only on relevant clinical education. Newer nurses may

appear to be more self-directed than nurses with longer employment but may in reality have more information to learn. This relationship was not examined in previous studies.

Summary

In summary, basic nursing education, employment status, participation in continuing education activities inside or outside the workplace, highest degree obtained in nursing or other disciplines, and length of practice did not affect motivation to participate in continuing education activities. However, level of position, clinical area, participation in credit or noncredit courses, age, marital status, formal study in a degree or certificate program, and length of current employment significantly influenced nurses' decisions to participate in continuing education activities. Basic nursing education, employment status, clinical area, level of position, participation in credit or noncredit courses, age, marital status, highest degree obtained in another discipline, and length of practice did not affect self-directed learning readiness. However, participation in continuing education activities either outside or inside the workplace, formal study in a degree or certificate program, and length of current employment significantly affected nurses' self-directed learning readiness. The EPS factors professional advancement and cognitive interest had a significant relationship with self-directed learning readiness. It must be remembered, however, that the generalizability of these results are limited due to the low return rate of the study.

Limitations

The first limitation of this study is related to instrumentation. The study utilized self-report instruments that can lead to response bias and extreme-response set (Polit & Hungler, 1985). Response bias is the tendency of the responder to answer favorably in order to present a positive image. Continuing education and attendance at continuing education activities is valued in the nursing profession. Nonattenders may misrepresent their actions and intentions, when in reality, they are not participants or have not participated in any continuing education activities within the past year. Response bias

may be overcome by ensuring respondent anonymity and then explaining to potential respondents how this anonymity is maintained. The assurance of confidentiality may encourage participants to respond with frankness and without fear of judgment.

Response set is the tendency of some respondents to consistently express attitudes in terms of an extreme response (e.g., Agree Strongly) or a middle-range response (e.g., Somewhat Agree). Reading each question on a survey tool carefully and pondering the response requires a great deal of time and energy. For many respondents it may be easier and quicker to respond with a middle-range or extreme response. As well, if a questionnaire is lengthy, the respondents may begin with good intentions but become fatigued and as a result respond with a middle-range response in order to finish the questionnaire quickly. One of the criticisms of the SDLRS that emerged from the pilot study was that it was very lengthy. Problems with response bias and set may be overcome by comparing participation records kept in clinical areas to completed questionnaires. Participation records and questionnaires could be matched through a numbering system that would also maintain confidentiality.

The order of the questionnaires in the package given to each subject may have produced a sequence effect. A sequence effect relates to how the order of the questionnaires impacts the respondents' willingness or ability to complete each questionnaire. The questionnaires for this study were placed in order according to number of questions, for example, the nursing survey with 17 questions was followed by the EPS with 42 questions, and then the SDLRS with 58 questions. The respondents may have been fatigued when they answered the SDLRS and as a result, may have been tempted to answer with a response set. Altering the order of the questionnaires for half of the packages and then comparing the results to the other half may help to determine if the placement of the questionnaires contributed to a response set or sequence effect.

Another concern related to instrumentation is the reliability and validity of the Education Participation Scale (EPS) and the Self-Directed Learning Readiness Scale

(SDLRS). The reliability and validity of the original versions of the EPS have been established. However, only one study has examined the reliability and validity of the most recent EPS version. Although the findings were positive, a greater degree of confidence in the instrument could be achieved with further study of its reliability and validity. In general, more research is available that investigates the reliability and validity of the SDLRS, however, the findings related to the most current version are not conclusive. Disagreement between researchers is evident in the literature in relation to the instrument's reliability and validity, for example, there is debate regarding the appropriateness of its use for adults with low levels of education.

A final concern related to instrumentation is the scoring of the EPS as compared to the scoring of the SDLRS. Each factor on the EPS is scored separately so that the factors that are most or least influential in deciding to participate in continuing education are readily identified. The factors on the SDLRS are scored together leading to a total score for readiness for self-directed learning. The calculation of a total score for SDLR creates a situation where valuable information is lost, for example, it is not known which of the eight factors positively influenced SDLR. Perhaps then the SDLRS scores are not as meaningful as the EPS scores because they lack specificity.

A further limitation related to study design is that of generalizability of the results. The return rate of the study was low (21%) thus limiting the ability to generalize the findings to the general population of registered nurses. The return rate may have increased if the investigator presented the purpose of the study and the questionnaire package to all staff groups. In addition, follow-up activities may have increased the rate of questionnaire return. Follow-up letters and packages could have been re-sent to all potential respondents with a note indicating that those who had already returned the questionnaires could ignore the second package. Conversely, if the original packages were coded for respondent identification, then follow-up could be sent to non-respondents only.

Another limitation related to generalizability is that the sample was an available sample of nurses working in a community hospital. It may be questionable whether these community hospital nurses represent the average nurse working in the province of Ontario. Nurses working in teaching hospitals may have greater opportunity to participate in continuing education activities than nurses working in community hospitals. Perhaps the difference in working environment between teaching and community hospitals may lead to differences between nurses in motivation or self-direction. As well, there may be a greater percentage of degree nurses working in teaching hospitals than community hospitals. Degree nurses are more likely to seek positions in the teaching hospitals where they receive clinical experience. Community hospitals usually provide clinical experience for students in nursing diploma programs.

Nurses working in teaching and community hospitals may also differ with respect to age and marital status. Teaching hospitals are usually located in the downtown core, whereas community hospitals are most often situated in suburban areas. It is not uncommon for professionals to move to the suburbs in order to establish a family and home. Therefore, one may assume that community hospital nurses are more likely to be older and married with children and that teaching hospital nurses are more likely to be younger and single. In addition, it may be difficult to compare nurses with degrees to nurses with diplomas because the degree group is so small (21 nurses with degrees versus 121 nurses with diplomas). If the premise that degree nurses are more likely to seek employment in teaching hospitals is reasonable, then it is not surprising that the degree group is small compared to the diploma group since the study took place in a community hospital. Difficulty may also arise when attempting to generalize the results to other educators and administrators as a consequence of group size (8 educators and 14 administrators).

Implications

Implications for practice involve program planning and delivery. Program planners should decide in advance through a needs assessment what benefits their expected audience hopes to gain by attending a particular educational activity (Cervero, 1981). Program planners could not only administer a needs assessment to determine areas of interest but also encourage potential participants to complete the Education Participation Scale in order to determine motivational orientation. The identification of such motivators may assist in developing and delivering continuing education programs that are beneficial, relevant, and address identified learning needs of potential participants. For example, the results of a needs assessment could reveal the types of educational sessions required by medical/surgical nurses in order to meet the motivational orientation of cognitive interest.

Educators should also seek ways to increase participation when delivering programs through effective facilitation and motivational strategies. A brief summary of the literature on facilitation of adult learning suggests that educators consider using the following strategies when designing and delivering educational programs. Increase motivation and self-confidence by creating meaningful learning opportunities with low levels of risk and threat. Address the goals and expectations of learners, for example, arrange inservices for critical care nurses that meet their need for educational preparation. Provide accurate information and encourage collaboration and self-direction. Convey a sense of enthusiasm and empathy. Allow the learners to control the learning process, for example, provide learning packages for self-directed nurses who value professional advancement as another option for meeting educational goals. Utilize the learners' existing knowledge and experience when designing a learning plan and engaging in learning activities. Create a supportive, flexible climate for learning, for example, plan educational sessions at convenient times and locations for those participants motivated by family togetherness (Brookfield, 1986; Candy, 1991; Cross,

1981; Knowles, 1975; Puetz, 1987; Scheller, 1993; Torrence, 1993; Wlodkowski, 1985). The creation of a learning environment that is conducive to learning will foster a sense of satisfaction, responsibility, and achievement in the learner and maintain or increase learner participation (Torrence, 1993).

An environment conducive to learning that creates positive outcomes for the learner is a practical example of expectancy theory, the theoretical framework of this study. Expectancy theory states that motivation is greater with increased valence (Pfeiffer, 1991). Valence is the value placed on the outcomes of learning by the learner and has motivating power for the learner (Pfeiffer, 1991). Identifying the motivational orientation of potential participants through needs assessments may lead to effective program planning and delivery in a supportive environment which in turn may produce positive outcomes or rewards for the learner. These positive outcomes may increase instrumentality (the linkage of performance to rewards) which also increases motivation (Pfeiffer, 1991). The learner believes that participation in continuing education activities produces positive rewards, for example, an increase in confidence, improved ability to perform a task, or a sense of achievement.

Implications not only exist for practice but for future research as well. Studies could be implemented which would address the question of motivation and continuing education but differ in study design. A randomized sample could be created from the membership lists of a nursing organization, for example, the College of Nurses of Ontario whose membership includes all registered nurses in Ontario. The results of such a study could be generalized to reflect all nurses practicing in Ontario and may assist in the development of province-wide educational programs as well as provide information for nursing leaders examining mandatory continuing education that has become an issue due to changes in health care legislation. Another dimension of a future study could involve comparing nursing staff in similar-sized teaching hospitals to nursing staff in community hospitals or nursing staff in urban hospitals to nursing staff in rural hospitals.

Previous studies have not examined the influence of the working environment on the decision to participate in continuing education activities or on self-directed learning readiness. Studies that investigated the type of hospital in which nurses were employed may provide information as to whether the work environment has a positive, negative, or null effect on motivation and self-directed learning readiness. Nursing leaders of hospitals where educational program delivery was shown to negatively impact motivational orientation or self-directed learning readiness could then undertake measures to lessen the negative impact. For example, the motivational strategies discussed under implications for practice could be incorporated into program planning and delivery.

Yet another study could examine what motivates registered nursing assistants to participate in continuing education and compare their motivational orientations to those of registered nurses in order to provide relevant educational programs for registered nursing assistants that meet their role-specific learning needs.

Practitioners working in critical care and medicine/surgery were more motivated to participate in continuing education for the reason of educational preparation than nurses in obstetrics, long-term care, pediatrics, and psychiatry. This finding is a concern since a lack of motivation for educational preparation may impact on the quality of nursing care provided. Nurses working in obstetrics, long-term care, pediatrics, and psychiatry need to be asked why they participate in continuing education, if indeed they do, and why educational preparation is not a motivating factor. Findings from this type of study may assist in the provision of educational programs of interest that also incorporate information regarding relevant changes in practice and technology.

Nurses participating in continuing education within the workplace only were less self-directed than nurses participating in activities both inside and outside the workplace. Further research could provide answers to the following questions by using a survey approach. What are the differences between nurses who participate at the workplace and

nurses who participate outside the workplace? Does one group receive a "better" education than the other and, therefore, provide a higher quality of nursing care? Are there implications for educational planners in terms of the types of programs provided in the workplace?

Further studies are also needed to investigate deterrents to participation in continuing education. Such information would assist in planning and delivering effective programs that would be of interest to nurses who currently do not participate in continuing education. In addition, more research is needed to examine why some nurses undertake formal study in a degree or certificate program and why others do not, as well as the differences between nurses enrolled in credit courses and nurses enrolled in non-credit courses. The answers to these questions may assist university and college educators in the decision-making processes around curriculum and allocation of financial and human resources.

Age was a factor that influenced reasons for participation in continuing education activities. More specific study on age-related motivational orientations could provide valid information to use when planning educational programs. For example, an instructor developing an educational session for a group that varied in age could incorporate learning strategies appropriate for each age group represented.

Nurses employed in the hospital for longer periods of time were less self-directed than nurses new to the organization. Does this group of nurses only participate in continuing education if it is perceived to be mandatory or necessary for practice? What learning situations are conducive for self-direction? How can educators and administrators encourage these nurses to assume greater responsibility for their own learning? Further research is necessary to address these concerns.

Further insight into motivation for continuing education may be obtained through the implementation of qualitative studies. Small focus groups could be organized which incorporated nurses from all work areas and information regarding motivation and

continuing education directly derived from the participants by using a structured interview guide. Results from the focus groups could be compared to quantitative surveys and records of continuing education.

In summary, the investigation of the question, "What motivates registered nurses to participate in continuing education activities?" has led to a number of interesting findings. The major findings include:

1. Nurses who differed with respect to basic nursing education and employment status did not differ in their motivational orientation or self-directed learning readiness. Nurses who differed with respect to clinical area and level of position also differed in motivational orientation.
2. Nurses with high self-directed learning readiness differed in motivational orientation from nurses with low self-directed learning readiness.
3. Nurses participating in credit and noncredit courses differed from nurses participating in noncredit courses with respect to motivational orientation but not self-directed learning readiness.
4. Nurses participating in continuing education activities both outside and inside of the workplace differed from nurses participating inside the workplace relative to self-directed learning readiness but not motivational orientation.
5. Nurses differing in age, marital status, and length of current employment differed in motivational orientation. Nurses currently studying for a degree or certificate also differed in motivational orientation relative to nurses not studying for such a degree or certificate. Formal study in a degree or certificate program and length of current employment also affected self-directed learning readiness.

The study has also produced an abundance of related questions concerning nurses and their participation in continuing education. Many opportunities exist for researchers to investigate these issues and in turn impact on future nursing practice and research in Canada.

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EDUCATION PARTICIPATION SCALE

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A-Form

Published by Learningpress Ltd
Box 46403, Station G, 3760 West 10th Avenue, Vancouver, B.C. V6R 4G7 Canada

**TO WHAT EXTENT DID THESE REASONS INFLUENCE
YOU TO ENROL IN YOUR ADULT EDUCATION CLASS?**

Think back to when you enrolled for your course and indicate the extent to which each of the reasons listed below influenced you to participate. *Circle* the category which best reflects the extent to which each reason influenced you to enrol. *Circle one* category for each reason. No reason for enrolling is better than any other reason. Be *frank*. There are *no* right or wrong answers.



1.	To improve language skills	No Influence	Little Influence	Moderate Influence	Much Influence
2.	To become acquainted with friendly people	No Influence	Little Influence	Moderate Influence	Much Influence
3.	To make up for a narrow previous education	No Influence	Little Influence	Moderate Influence	Much Influence
4.	To secure professional advancement	No Influence	Little Influence	Moderate Influence	Much Influence
5.	To get ready for changes in my family	No Influence	Little Influence	Moderate Influence	Much Influence
6.	To overcome the frustration of day to day living	No Influence	Little Influence	Moderate Influence	Much Influence
7.	To get something meaningful out of life	No Influence	Little Influence	Moderate Influence	Much Influence
8.	To speak better	No Influence	Little Influence	Moderate Influence	Much Influence
9.	To have a good time with friends	No Influence	Little Influence	Moderate Influence	Much Influence
10.	To get education I missed earlier in life	No Influence	Little Influence	Moderate Influence	Much Influence
11.	To achieve an occupational goal	No Influence	Little Influence	Moderate Influence	Much Influence
12.	To share a common interest with my spouse or friend	No Influence	Little Influence	Moderate Influence	Much Influence
13.	To get away from loneliness	No Influence	Little Influence	Moderate Influence	Much Influence
14.	To acquire general knowledge	No Influence	Little Influence	Moderate Influence	Much Influence
15.	To learn another language	No Influence	Little Influence	Moderate Influence	Much Influence
16.	To meet different people	No Influence	Little Influence	Moderate Influence	Much Influence
17.	To acquire knowledge to help with other educational courses	No Influence	Little Influence	Moderate Influence	Much Influence

18.	To prepare for getting a job	No Influence	Little Influence	Moderate Influence	Much Influence
19.	To keep up with others in my family	No Influence	Little Influence	Moderate Influence	Much Influence
20.	To get relief from boredom	No Influence	Little Influence	Moderate Influence	Much Influence
21.	To learn just for the joy of learning	No Influence	Little Influence	Moderate Influence	Much Influence
22.	To write better	No Influence	Little Influence	Moderate Influence	Much Influence
23.	To make friends	No Influence	Little Influence	Moderate Influence	Much Influence
24.	To prepare for further education	No Influence	Little Influence	Moderate Influence	Much Influence
25.	To give me higher status in my job	No Influence	Little Influence	Moderate Influence	Much Influence
26.	To keep up with my children	No Influence	Little Influence	Moderate Influence	Much Influence
27.	To get a break in the routine of home or work	No Influence	Little Influence	Moderate Influence	Much Influence
28.	To satisfy an enquiring mind	No Influence	Little Influence	Moderate Influence	Much Influence
29.	To help me understand what people are saying and writing	No Influence	Little Influence	Moderate Influence	Much Influence
30.	To make new friends	No Influence	Little Influence	Moderate Influence	Much Influence
31.	To do courses needed for another school or college	No Influence	Little Influence	Moderate Influence	Much Influence
32.	To get a better job	No Influence	Little Influence	Moderate Influence	Much Influence
33.	To answer questions asked by my children	No Influence	Little Influence	Moderate Influence	Much Influence
34.	To do something rather than nothing	No Influence	Little Influence	Moderate Influence	Much Influence
35.	To seek knowledge for its own sake	No Influence	Little Influence	Moderate Influence	Much Influence
36.	To learn about the usual customs here	No Influence	Little Influence	Moderate Influence	Much Influence
37.	To meet new people	No Influence	Little Influence	Moderate Influence	Much Influence
38.	To get entrance to another school or college	No Influence	Little Influence	Moderate Influence	Much Influence
39.	To increase my job competence	No Influence	Little Influence	Moderate Influence	Much Influence
40.	To help me talk with my children	No Influence	Little Influence	Moderate Influence	Much Influence
41.	To escape an unhappy relationship	No Influence	Little Influence	Moderate Influence	Much Influence
42.	To expand my mind	No Influence	Little Influence	Moderate Influence	Much Influence

Name _____ Sex _____ Birthdate _____
 Date of Testing _____ Location of Testing _____

QUESTIONNAIRE

INSTRUCTIONS: This is a questionnaire designed to gather data on learning preferences and attitudes towards learning. After reading each item, please indicate the degree to which you feel that statement is true of you. Please read each choice carefully and circle the number of the response which best expresses your feeling.

There is no time limit for the questionnaire. Try not to spend too much time on any one item, however. Your first reaction to the question will usually be the most accurate.

RESPONSES

ITEMS:

1. I'm looking forward to learning as long as I'm living.
2. I know what I want to learn.
3. When I see something that I don't understand, I stay away from it.
4. If there is something I want to learn, I can figure out a way to learn it.
5. I love to learn.
6. It takes me a while to get started on new projects.
7. In a classroom, I expect the teacher to tell all class members exactly what to do at all times.
8. I believe that thinking about who you are, where you are, and where you are going should be a major part of every person's education.
9. I don't work very well on my own.

	<i>Almost never true of me; I hardly ever feel this way.</i>	<i>Not often true of me; I feel this way less than half the time.</i>	<i>Sometimes true of me; I feel this way about half the time.</i>	<i>Usually true of me; I feel this way more than half the time.</i>	<i>Almost always true of me; there are very few times when I don't feel this way.</i>
1	1	2	3	4	5
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4	1	2	3	4	5
5	1	2	3	4	5
6	1	2	3	4	5
7	1	2	3	4	5
8	1	2	3	4	5
9	1	2	3	4	5

	<i>Almost never true of me; I hardly ever feel this way.</i>	<i>Not often true of me; I feel this way less than half the time.</i>	<i>Sometimes true of me; I feel this way about half the time.</i>	<i>Usually true of me; I feel this way more than half the time.</i>	<i>Almost always true of me; there are very few times when I don't feel this way</i>
10. If I discover a need for information that I don't have, I know where to go to get it.	1	2	3	4	5
11. I can learn things on my own better than most people.	1	2	3	4	5
12. Even if I have a great idea, I can't seem to develop a plan for making it work.	1	2	3	4	5
13. In a learning experience, I prefer to take part in deciding what will be learned and how.	1	2	3	4	5
14. Difficult study doesn't bother me if I'm interested in something.	1	2	3	4	5
15. No one but me is truly responsible for what I learn.	1	2	3	4	5
16. I can tell whether I'm learning something well or not.	1	2	3	4	5
17. There are so many things I want to learn that I wish that there were more hours in a day.	1	2	3	4	5
18. If there is something I have decided to learn, I can find time for it, no matter how busy I am.	1	2	3	4	5
19. Understanding what I read is a problem for me.	1	2	3	4	5
20. If I don't learn, it's not my fault.	1	2	3	4	5
21. I know when I need to learn more about something.	1	2	3	4	5
22. If I can understand something well enough to get a good grade on a test, it doesn't bother me if I still have questions about it.	1	2	3	4	5
23. I think libraries are boring places.	1	2	3	4	5
24. The people I admire most are always learning new things.	1	2	3	4	5

25. I can think of many different ways to learn about a new topic.
26. I try to relate what I am learning to my long-term goals.
27. I am capable of learning for myself almost anything I might need to know.
28. I really enjoy tracking down the answer to a question.
29. I don't like dealing with questions where there is not one right answer.
30. I have a lot of curiosity about things.
31. I'll be glad when I'm finished learning.
32. I'm not as interested in learning as some other people seem to be.
33. I don't have any problem with basic study skills.
34. I like to try new things, even if I'm not sure how they will turn out.
35. I don't like it when people who really know what they're doing point out mistakes that I am making.
36. I'm good at thinking of unusual ways to do things.
37. I like to think about the future.
38. I'm better than most people are at trying to find out the things I need to know.
39. I think of problems as challenges, not stopsigns.
40. I can make myself do what I think I should.

*Almost never true of me;
I hardly ever feel this way.*

*Not often true of me; I
feel this way less than half
the time.*

*Sometimes true of me; I
feel this way about half
the time.*

*Usually true of me; I feel
this way more than half
the time.*

*Almost always true of me;
there are very few times
when I don't feel this way*

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41. I'm happy with the way I investigate problems.
42. I become a leader in group learning situations.
43. I enjoy discussing ideas.
44. I don't like challenging learning situations.
45. I have a strong desire to learn new things.
46. The more I learn, the more exciting the world becomes.
47. Learning is fun.
48. It's better to stick with the learning methods that we know will work instead of always trying new ones.
49. I want to learn more so that I can keep growing as a person.
50. I am responsible for my learning — no one else is.
51. Learning how to learn is important to me.
52. I will never be too old to learn new things.
53. Constant learning is a bore.
54. Learning is a tool for life.
55. I learn several new things on my own each year.
56. Learning doesn't make any difference in my life.
57. I am an effective learner in the classroom and on my own.
58. Learners are leaders.

	<i>Almost never true of me; I hardly ever feel this way.</i>	<i>Not often true of me; I feel this way less than half the time.</i>	<i>Sometimes true of me; I feel this way about half the time.</i>	<i>Usually true of me; I feel this way more than half the time.</i>	<i>Almost always true of me; there are very few times when I don't feel this way.</i>
	1	2	3	4	5
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14	1	2	3	4	5
15	1	2	3	4	5
16	1	2	3	4	5
17	1	2	3	4	5
18	1	2	3	4	5
19	1	2	3	4	5
20	1	2	3	4	5

Please do not write your name or any form of identification on this survey.

NURSING SURVEY

Please circle the response that is most relevant to you in your current work position.

1. Age: _____ years
2. Gender:
male female
3. Marital status: married divorced widowed single
4. Number of children: _____
5. Basic nursing preparation: diploma degree other (specify _____)
6. Employment status: full-time part-time other (specify _____)
7. Position: staff nurse educator administrator other (specify _____)
8. Clinical area of practice:
medical-surgical psychiatry critical care long-term care obstetrics
paediatrics other (specify _____)
9. Highest degree held in nursing: diploma baccalaureate masters
10. Highest degree held in other profession: diploma baccalaureate masters
11. Are you currently working on a degree/certificate? yes no
If yes, specify _____
12. Years of practice: _____
13. Length of current employment: _____
14. Do you belong to a professional nursing organization? yes no
15. Over the past year have you enrolled in?: credit courses non-credit courses both
16. Which kind(s) of continuing education have you participated in during the past year?:
reading professional journals videos workshops inservices conferences courses
resource people
17. If you have participated in continuing education activities over the past year have they been?
outside hospital inside hospital both inside and outside



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What Motivates Registered Nurses to Participate in Continuing Education Activities?

Researchers: Beverley Powell, RN, BNSc 823-2467 (home); 848-7395

Vera Woloshyn, PhD (Faculty of Education, Brock University)

Dear Registered Nurse,

I am a graduate student at Brock University. In order to complete the degree of Master of Education, I am undertaking a study to investigate factors that motivate registered nurses to participate in continuing education activities. I am writing this letter to request your participation in this study. The primary question of the study is whether basic nursing education, employment status, clinical area and position, and self-directed learning readiness influence the decision to participate in continuing education for nurses in the Canadian workforce. Other individual differences (e.g. age) will be examined as well.

Continuing education activities include both credit or non-credit courses, certificate programs, workshops, conferences, inservices, journal readings or videos. These activities may take place either inside or outside of the hospital. I am most interested in the continuing education activities related to your current work position that you have participated in over the last year.

Participation in this study is voluntary and is by no means part of your professional duties at the hospital. If you choose to participate, I will ask you to complete two short questionnaires. These questionnaires will take no longer than 20 minutes to complete. An envelope will be available on your unit for dropping off the questionnaires once you have finished them. Your responses to the questionnaires will be completely confidential; you will not be asked to identify your name or specific work area.

Thank you for participating in the study. The results of the study will be presented to all nursing staff at a future date. If you have any questions or comments concerning the study, please feel free to contact me.


Beverley Powell, RN, BNSc.

WHAT MOTIVATES REGISTERED NURSES
TO PARTICIPATE IN
CONTINUING EDUCATION ACTIVITIES?

QUESTIONNAIRE INSTRUCTIONS

Enclosed you will find a demographic information sheet (Nursing Survey) and two short questionnaires (Education Participation Scale and Self-Directed Learning Readiness Scale). A "Computer Answer Sheet" has also been included.

We are asking you to complete these questionnaires at your leisure. When completing the Nursing Survey, please record your answers on the actual survey. For the remaining two questionnaires, we ask that you use the Computer Answer Sheet to record your responses. It is important that you complete the Education Participation Scale FIRST, recording your answers in the FIRST COLUMN of the Computer Answer Sheet. Use the SECOND AND THIRD COLUMNS of the Computer Answer Sheet to complete the Self-Directed Learning Readiness Scale.

For each of these questionnaires, the Computer Answer "A" corresponds to the first item in the left hand column of the questionnaires (No Influence, Almost Never True). The same pattern is used for subsequent letters (i.e., B=Little Influence, B=Not Often True).

Although it is our preference that you use the Computer Answer Sheet, if you are uncomfortable with this scoring procedure, you may record your answers on the questionnaires. In any case, please do not write your name or your work area on any of these sheets.

When finished, return both the questionnaires and the Computer Answer Sheet to either the SURVEY BOX in your work area or your manager. The questionnaires will be collected approximately two weeks after their distribution. We thank you in advance for your time and effort in completing these questionnaires.

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