The McGill Model of Nursing: Health and Learning in Older Adults

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<u>Abstract</u>

The primary purpose of this study was to explore the concepts of health and learning in the McGill Model of Nursing by examining the relationships between sense of coherence, self-directed continuing learning, and psychological well-being in a sample of white, middle class, English-speaking, elderly adults in a large, urban, longterm care residence. The secondary purpose was to contribute to the testing of the measurement instruments for use in studies with older adults. A quantitative, nondirectional, correlational design, using a sample of convenience, found a high positive correlation between sense of coherence and psychological well-being and a moderate positive correlation between sense of coherence and self-directed continuing learning. The results lend support to the relationship between health and learning in the McGill Model of Nursing and to the relevance of the model to gerontological nursing in long-term care. Further research is required to examine the relationship in other elderly populations.

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<u>Résumé</u>

Cette étude avait pour objectif principal d'étudier les concepts de santé et d'apprentissage dans le modèle de services infirmiers de McGill. Pour ce faire, les relations entre un sens de cohérence, un apprentissage continu dirigé par soi-même et le bien-être psychologique ont été examinées chez adultes anglophones de race blanche, appartenant à la classe moyenne, et demeurant dans une large résidence de soins prolongés en milieu urbain. Un objectif secondaire du projet était de contribuer à évaluer les instruments de mesure utilisés dans la recherche portant sur les personnes âgées. Le modèle utilisé (quantitatif, corrélationnel et non directionnel, et basé sur un échantillon de convenance) a montré qu'il existe une forte corrélation positive entre un sens de cohérence et le bien-être psychologique, et une corrélation positive modérée entre un sens de cohérence et un apprentissage continu dirigé par sol-même. Ces résultats corroborent l'hypothèse de relations entre la santé et l'apprentissage, présente dans le modèle de services infirmiers de McGill, et confirment que ce modèle est approprié pour les soins prolongés aux personnes âgées. De plu amples recherches sont nécessaires pour étudier ces relations dans d'autres populations de personnes âgées.

Dedication

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Dedicated, with love and gratitude, to my husband Brian for his constant strength; my parents and family for their love and support; my mentors Mary Buzzell and Mary Gibbon for their wisdom; my instructors Dr. Barbara Anne Gooding and Professor Florence MacKenzie for their persevering faith; and to little Michael for joy during long study days.

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CHAPTER 1

Introduction

This research examined the McGill Model of Nursing, a conceptual model for nursing practice, through a study of older adults in a long-term care setting. The introduction will first outline the use of conceptual models in nursing practice and the potential value of the McGill Model of Nursing in gerontological nursing. It will then identify the study variables, the primary and secondary purposes of the study, the research questions, and the conceptual framework for the study.

A conceptual model of nursing consists of concepts and the relationships among them. Different conceptual models of nursing are distinguished from each other by the particular concepts and relationships that are put forth as most important in guiding the practice of nursing (Fawcett, 1984; Stevens, 1984). Although the names of the concepts may be the same in different models, each model provides a unique interpretation of the concepts and how they are related to each other. In the various fields of nursing practice, different models are applied depending upon their theoretical relevance and their usefulness in a given population. For example, the relevance of a conceptual model to gerontological nursing depends on the extent to which it assists nurses to understand and promote the health of older adults.

The value of a model is determined by the guidance it gives to nursing practice in a particular setting at a given time and by the direction it provides for that nursing practice in the future (Stevens, 1984). Over time, conceptual models of nursing may be tested and refined by examining them in various populations and settings across different fields of nursing practice.

The McGill Model of Nursing is one of the many conceptual models that have been developed for nursing practice and presented in the nursing literature for analysis, evaluation, and further explication through implementation and research. Two of the central concepts in the McGill Model of Nursing are health and learning. Theoretical and empirical work in the development of the McGill Model of Nursing has produced descriptions of health and learning and their proposed relationship. Gottlieb and Rowat (1987) indicated that further research is required to achieve a clearer interpretation of these central concepts and to test the relationship between them in various nursing settings. Similarly, Lindeman (1985) emphasized that the relationship between health and learning in this model must be clarified and put to the test in studies of clients in different social and cultural settings.

In response to these calls for further research, this study examined the concepts of health and learning in the McGill Model of Nursing in the field of gerontological

nursing. The population of interest was older adults living in long-term care settings. The specific kind of long-term care setting was a large residence for senior citizens.

The interpretation of health and learning in the McGill Model of Nursing may make it a useful model in nursing practice with older adults in long-term care settings. Two reasons for this are as follows:

1. The McGill Model of Nursing provides a conceptualization of health that takes into account the chronic illnesses and physical changes that are common in the older population in long-term care settings.

2. The McGill Model of Nursing views the older adult as an active learner with the potential to experience health, well-being, and development throughout the later years.

At this stage, precise conceptual definitions of health and learning in the McGill Model of Nursing and the instruments to measure them have not been formulated (Kravitz & Frey, 1989). Therefore, two other concepts were selected to represent health and learning in this study. The concepts were chosen because (a) they have conceptual definitions that are similar to the interpretations of health and learning in the McGill Model of Nursing, and (b) instruments have been developed and tested to measure the concepts in the research setting.

The concept selected to measure health was sense of coherence, and the measurement instrument was the

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Orientation to Life Questionnaire (Antonovsky, 1987). The concept selected to represent learning was silf-directed continuing learning, and the measurement instrument was the Oddi Continuing Learning Inventory (Oddi, 1984, 1986).

The term <u>health</u> is often used in conjunction with the term <u>well-being</u>; frequently they are used interchangeably. In the literature on the McGill Model of Nursing, the meaning of well-being is not clearly identified. Thus, to examine the relationship between health and well-being in the McGill Model of Nursing, the concept of well-being was added to this study. Psychological well-being was selected to represent well-being, and the measurement instrument was the Affect Balance Scale (Bradburn, 1969).

In summary, three concepts were selected to serve as the main variables in this research. They were sense of coherence, self-directed continuing learning, and psychological well-being.

Purpose and Research Questions

The primary purpose of this study was to explore the concepts of health and learning in the McGill Model of Nursing by examining the relationships between sense of coherence, self-directed continuing learning, and psychological well-being in older adults. The study addressed three research questions:

1. To what extent are sense of coherence and self-directed continuing learning present in older adults

who are living in a large long-term care residence for senior citizens?

 Does a relationship exist between sense of coherence and self-directed continuing learning in these older adults?
 Are sense of coherence and self-directed continuing learning related to the psychological well-being of these older adults?

The secondary purpose was to contribute to the testing of the instruments used to measure sense of coherence, selfdirected continuing learning, and psychological well-being for use in studies of older adults.

Conceptual Framework

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The development of the McGill Model of Nursing was initiated in the 1970's by Dr. Moyra Allen, then Research Director of the School of Nursing at McGill University. The model was initially derived and examined in primary care community settings (Allen, 1983). It is intended to be a broad-based model and, as such, it has been studied and tested by the McGill School of Nursing and in various hospitals and community nursing services in Canada (Kravitz & Frey, 1989).

A commonly accepted metaparadigm for examining the central concepts in conceptual models of nursing involves four parameters: person, environment, health, and nursing (Fawcett, 1984). A brief overview of the McGill Model of Nursing by these four parameters is presented here. The overview reveals that while health is the focus of the McGill Model of Nursing, learning is the process by which health is facilitated and improved. Thus, the concept of learning is evident in all four parameters.

<u>Person</u>. The person, who may be an individual or family, is engaged in a purposeful and meaningful process of development throughout the life span. In the course of this developmental process, the person is an active learner who is motivated to assume responsibility for health and who is capable of learning from experiences and building upon them over time and across situations (Allen, 1986; Gottlieb & Rowat, 1987). The McGill Model of Nursing focuses on assisting the person to recognize this learning potential and to direct it towards healthful coping and development in the course of life experiences (Warner, 1981).

Environment. Based on the social learning theory by Bandura (1977), learning is stimulated by the ongoing interaction between the person and the environment. This interaction provides the contexts for learning healthful ways of living. An important part of the nurse's role 1s to facilitate learning experiences by creating new environments or modifying existing ones in a way that helps the person learn healthful behaviors and perspectives and achieve healthful outcomes (Gottlieb & Rowat, 1987).

<u>Health</u>. Health is described as a dynamic behavioral and developmental process that continues throughout the life

span in the context of both the customary and crisis events of life (Allen, 1983; Gottlieb, 1982; Warner, 1981). The three main behavioral components of health are coping, development, and learning. Coping involves problem-solving behaviors. Development involves goal-achieving and personal growth-promoting behaviors. Learning is the process by which these behaviors are acquired, expanded, and transferred across situations and over time. For example, as one learns problem-solving behaviors, one builds a sense of mastery to cope with familiar situations and a repertoire of problem-solving approaches to bring to new situations. An individual and family can learn healthful ways to cope with problems, to work towards their valued goals, and to find meaning in life events (Allen, 1980, 1982, 1983, 1986; Warner, 1981). In this way, health encompasses a number of behaviors, beliefs, and attitudes that are learned through a lifelong process of personal discovery, reflection, and active participation in one's life experiences (Gottlieb & Rowat, 1987).

<u>Nursing</u>. Nursing is viewed as the science of health promoting interactions (Allen, 1986; Kravitz & Frey, 1989; Pugnaire, 1981). The goal of nursing is to facilitate and strengthen the individual's and family's health by engaging them in an active or reflective learning process in the context of their life experiences (Gottlieb & Rowat, 1987). The client (individual or family) and the nurse collaborate

in mobilizing the client's strengths, resources, and learning potential towards personal development and healthful ways of coping.

The nurse adopts a facilitative role so that the behaviors and direction for healthful, meaningful living emanate as much as possible from the client. The nurse encourages the client to participate actively and reflectively so as to learn behaviors, knowledge, and attitudes that become resources in future situations (Allen, 1983; Kravitz & Frey, 1989; Warner, 1980). In this active approach, learner characteristics such as motivation and initiative are relevant (Allen, 1986), and assessment of the client as a learner becomes important.

Assessment of the client as a learner is exploratory, collaborative, and continuous. It takes into account the personality characteristics and behavioral patterns of the client as well as the broader socioeconomic and environmental context. Some of the relevant characteristics of the client as a learner are learning readiness, learning and problem-solving styles, motivation and energy to work on health-related matters, and the goals, needs, history, and interests of the client (Gottlieb, 1982; Gottlieb & Rowat, 1987).

The time frame in which this learning occurs is often long-term (MacKenzie, 1981). Health-related situations frequently evolve over extended time periods, such as in

chronic illness or developmental experiences. Consequently, persistence is also a relevant learner characteristic to be assessed.

In summary, health involves a lifelong learning process (Allen, 1986). The major role of the nurse is to assist the individual and family to be active, reflective learners in the course of coping with their life experiences and in developing qualitatively through them.

The McGill Model of Nursing highlights at least three ways in which the concept of learning may assist nurses in understanding and promoting the health of older adults. First, when health is viewed as a lifelong process of learning how to cope with problems and how to develop through life experiences in a qualitative way, there is a shift in focus away from deficits and towards vigorous exploration of the strengths, competencies, and potential of older adults. This shift challenges the nurse to see older adults and their families as active learners and to focus on how their learning can be facilitated. It leads the nurse to consider how the older person's environment, family context, and life events may be used to stimulate ongoing development.

Second, a view of health as a continuous learning process suggests that the meaning of health to the person may change over the life course. There is the potential for the meaning of health to be expanded to new or deeper dimensions in the course of the many experiences of change that are encountered in older adulthood. In this way, health in the later years may be somewhat different from other times in life, but there is the potential for new experiences of personal development that may only be possible as one grows older.

Third, in the McGill Model of Nursing, the concept of health is different from, and independent from, the concept of illness (Allen, 1981). The model rejects the view of health and illness as opposite poles of one continuum. Rather, health and illness are depicted on separate continua and can, therefore, occur at the same time. The most desirable scenario occurs when an individual or family is located on the high end of the health continuum and the low end of the illness continuum, shown as the upper left guadrant in Figure 1.

An important implication of the distinction between health and illness is that health can be actively facilitated by nurses regardless of the presence or absence of illness. In certain situations, the illness state may be quite advanced with little hope of improvement while the health of the client may hold much potential for maintenance or improvement. Thus, even in situations of long-term, irreversible or terminal illness, nursing can focus on the health dimension.



<u>Figure 1</u>. The relationship between health and illness (Allen, 1981; Kravitz & Frey, 1989)

CHAPTER 2

Literature Review

This review of the literature addresses the concepts of learning and health in the McGill Model of Nursing. It presents a selection of theoretical and empirical works that pertain to the three variables used to examine learning and health in this study: self-directed continuing learning, sense of coherence, and well-being.

Learning

A review of the nursing literature revealed that most of the learning-oriented research tends to focus on teaching strategies implemented by clinical nurses and instructional methods used in nursing curricula and staff education. Although the nurse is frequently advised to assess the learning characteristics of the client, there is less research to guide this aspect of the nurse's role. Relevant research can be found in the fields of adult learning and educational gerontology; however, generally it has not been synthesized and tested for application in gerontological nursing practice. The McGill Model of Nursing has generated some research on the role of the nurse as a facilitator of the client's health-related learning. A qualitative study by Gottlieb (1981, 1982) supported the need for further research that would assist nurses in the assessment of the client as a learner and in the selection of interventions to facilitate the client's learning process.

Increasingly, the gerontological nursing literature conceptualizes aging as a developmental process and the older adult as an active learner in this process (Ebersole & Hess, 1985; Gelein, 1983; Katch, 1983; Reed, 1983; Ross, 1982). In a significant treatise, Reed (1983) distinguished between growth and development and then addressed the relationships between learning, development, and well-being in older adults. Growth, which refers to quantitative changes in achieving the physical maturation of a living organism, can be viewed as declining once adulthood is reached. In contrast, development is a qualitative transformational process that continues throughout the life span of the person.

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In Reed's exposition, learning from experience is essential to an older adult's development and well-being: "During the course of development, individuals become increasingly able to learn from experience, i.e., to impose meaning on their experiences and integrate them in a way that enhances personal development and well-being" (p. 22). The older adult's well-being depends primarily on the "ability to purposefully transform the current context with all of its problems and contradictions into energy for development" (p. 19). In this way, development is stimulated by the changes, events, and conflicts that occur in the older adult's life.

Reed concluded that nurses can help older adults use their experiences, including illness, life crises, relocation, and dying, to deepen their personal development and to achieve well-being in the context of their daily lives. Reed's description of the facilitative role of the nurse and the relationships between learning, development, and well-being is consistent theoretically with the McGill Model of Nursing.

Descriptive research findings also lend support to the investigation of how a learning orientation towards life experiences may be related to health and well-being in older adults. Thorne, Griffin and Adlersberg (1987) applied a constant comparative phenomenological approach to explore the meaning of health to a sample of fifteen well seniors. The respondents related their capacity for learning to their capacity for health and development. Rather than a narrow interpretation of learning as the acquisition of knowledge . in a formal setting, they described learning in terms of the initiative to seek out learning experiences and to interpret life events as learning opportunities. Their responses emphasized a self-directed orientation towards lifelong learning.

Qualitative research by LeBlanc (1987) also highlighted the importance of a self-directed orientation towards health and well-being in older adults. LeBlanc interviewed six adults, 75 to 82 years of age, who lived independently and

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who were identified as experiencing emotional well-being. They identified self-directedness as one of the strengths that sustained their sense of integrity despite the losses and changes in their lives. Self-directedness included a sense of responsibility for their lives and active involvement in overcoming health problems. This is similar to the description of the person as an active learner in the McGill Model of Nursing.

Through research conducted at the School of Nursing at Northern Illinois University, Oddi (1986) defined the concept of self-directed continuing learning and developed the Oddi Continuing Learning Inventory to measure this learning orientation in the research setting. Following a review of the literature, Oddi (1987) concluded that the term <u>self-directed learning</u> was used most frequently to mean the specific learning strategy of self-instruction. She proposed that initiative and persistence were more important descriptors of self-directed learning, and that selfdirected learners may use many learning strategies other than the self-instruction method.

Oddi selected a broader approach of studying self-directed learning as a <u>general orientation towards</u> <u>learning</u> rather than as a <u>specific method</u> of learning. She emphasized this distinction by labelling her concept <u>self-</u> <u>directed continuing learning</u>. She described a self-directed continuing learning orientation as composed of "the

personality characteristics of individuals whose learning behavior is characterized by initiative and persistence in learning over time through a variety of learning modes" (Oddi, 1986, p. 98).

A self-directed continuing learner demonstrates the ability to initiate and persist in learning without immediate or obvious external reinforcement; motivation for competence and self-actualization; high self-esteem and self-confidence; ability to adapt to change and tolerate ambiguity; the use of a variety of learning modes; and a positive attitude towards learning as a continual, enjoyable activity. In contrast, the non-self-directed continuing learner exhibits reliance on extrinsic forces to stimulate learning; a tendency to stop on encountering difficulties; fear of failure and low self-confidence; avoidance of new ideas and activities; a narrow range of learning modes; and little interest in learning except to meet specific goals and low-order needs (Oddi, 1986).

Furthermore, a self-directed continuing learning orientation was described as sustaining a developmental process. It did this by enabling the individual:

to extract information and learn from life, be it via self-planned learning projects, participation in formal or informal group learning activities, or reflection on personal performance and life experiences. The pleasure and satisfaction derived from learning enhance

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the individual's self-confidence and promote receptivity to learning; thus, the self-directed continuing learner tends to initiate and persist in learning, exhibiting a trend of behavior directed toward increasing growth and self-fulfillment through learning (Oddi, 1986, p. 99).

This conceptual description of self-directed continuing learning is consistent with the developmental learning process in the McGill Model of Nursing. It also encompasses many of the characteristics of the client as a learner, such as initiative and persistence, that the nurse seeks to assess and promote.

Oddi (1987) identified various advantages to studying self-directed learning as an enduring orientation towards learning rather than as a specific learning method. First, self-directed continuing learning can be studied regardless of the particular learning methods that are preferred by the learner or that are available in a given setting. Second, it addresses psychological characteristics, such as motivation and persistence, that may be more important than the ability to carry out one's learning projects independently. Third, it allows for guidance from external resources.

These advantages are relevant to the study of the McGill Model of Nursing because they accommodate the different learning behaviors of clients from varying

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educational levels, health-related situations and settings. They also allow for the role of the nurse as a facilitator in the client's learning process.

Qualitative research by Check and Wurzbach (1984) also differentiated between (a) learning as an orientation that pervades one's daily living and (b) education in a structured format or formal setting. They administered a 21-item questionnaire to 30 adults (65 to 96 years of age; median 83 years) drawn in equal numbers from both an intermediate and a minimal care residence. Although most of the respondents did not view structured education as an option for them, they expressed a strong belief in lifelong learning and identified the discovery of new ideas as their primary reason for learning.

In their analysis of future directions for research on self-directed learning, Caffarella and O'Donnell (1987) called for more research on the nature of the self-directed adult learner and described Oddi's approach as an exciting direction. Brookfield (1985) emphasized that the primary purpose of self-directed learning is development of the person and society through the conscious scrutiny of beliefs, values, and behaviors. He cautioned against unsubstantiated generalizations that all adults are selfdirected learners. Methodological and theoretical critiques by Brookfield (1984, 1985) and Oddi (1987) concurred that research instruments must move beyond

measuring skills for self-instruction; they must investigate the characteristics of self-directed learners in order to construct a more comprehensive understanding of selfdirected learning and its relationship to development.

Brockett (1983, 1987) identified the study of selfdirected learning as essential to understanding the older adult as a learner. After reviewing a number of studies and reports, he concluded that older adults appear more active in learning when the definition of participation is expanded from formal education to include self-directed learning projects. He noted that self-directed learning activities were even reported among isolated older adults of low socioeconomic status, although at a lower frequency (Brockett, 1983). Brockett (1987) concluded that older adults in residential homes and public housing are largely an overlooked segment of the population in the research on adult learning.

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Brockett (1985a) raised the possibility of producing positive consequences by facilitating a self-directed learning orientation in older adults. He reported a statistically significant, albeit weak, positive correlation between life satisfaction and self-directed learning readiness in a sample of 64 adults, 60 years of age and older. He pondered whether interventions that promote selfdirected learning might also increase life satisfaction and quality of life. A similar question in nursing might ask

whether actions that facilitate a self-directed continuing learning orientation also contribute to the health and wellbeing of older adults. Similarly, Fisher (1986) suggested that, whereas some predictors such as previous educational attainment cannot be altered by the practitioner, there is value in identifying those factors that can be promoted by facilitative interventions.

Thus, this study addressed whether a self-directed continuing learning orientation is related to the sense of coherence and well-being of older adults. The relevance for gerontological nursing is that this study seeks an increased understanding of the health-promoting characteristics and behaviors that can be protected, nurtured, facilitated and, when necessary, rehabilitated in older adults.

<u>Health</u>

In an examination of the concept of health in gerontology, Gelein (1983) pointed out that there is abundant literature and research regarding the diseases and chronic illnesses associated with aging. She charged that health care professionals have learned much less about the principles of health in old age and the ways to promote and protect healthy aging. As a result, the meaning of health as perceived by older adults remains unclear, and the construct validity of many instruments for measuring their health becomes questionable. She called for the development of a science of health that would guide nurses in maximizing

the personal and environmental resources that contribute to health in older adults. This would require research questions and methods designed to increase nurses' understanding of the meaning of health to older adults. Her recommendation coincides with the objective of the McGill Model of Nursing to generate a knowledge base for nursing as the science of health promoting interactions (Kravitz & Frey, 1989).

Gelein (1983) recommended some key components for inclusion in a model of health for older adults. The model should acknowledge the active role of the older adult in interaction with the environment. She proposed that health be viewed as a continuous, multidimensional process of realizing one's potential through the use of internal and external resources. This process would include striving for social, cultural, and self-actualization goals beyond physiological needs, and it would be possible with or without disease. The person would choose from options: (a) to learn new behaviors to acquire the resources needed to meet personal needs; (b) to alter the environment or find new ones amenable to one's needs; or (c) to remain in an environment with limited resources that restrict the fulfillment of one's health potential. These recommendations resemble the interaction between the person and the environment in the developmental learning process in the McGill Model of Nursing.

Theoretical similarities also exist between sense of coherence as described by Antonovsky (1979, 1984, 1986, 1987) and health as interpreted in the McGill Model of Nursing. Both models reject a health-illness dichotomy. Instead, they focus on how and why one achieves and improves one's position on a health continuum. They assume that tension-producing events are a ubiquitous aspect of life and that perceived stressors have the potential for a positive or negative impact on one's health, or both. Therefore, both models seek to understand the factors that produce healthful outcomes.

≁ • The McGill Model of Nursing interprets health as a process of learning, coping, and development in the context of the usual and crisis events of life. Antonovsky (1987) described sense of coherence as a relatively stable disposition derived from a long-term pattern of coping with tension-producing situations, evaluating one's coping efforts, and developing a flexible, resourceful approach to life situations such that healthful outcomes are usually achieved. Upon examination, the interplay of coping, learning, and development that constitutes health in the McGill Model of Nursing is similar to the pattern of coping, evaluating, and integrating that builds a strong sense of coherence. Thus, sense of coherence may provide a valuable contribution in explicating the concept of health in the McGill Model of Nursing and in understanding the differences

among older adults as active learners in the health process. Following a systematic analysis and evaluation of Antonovsky's model, Sullivan (1989) concluded that sense of coherence may add in a major way to nursing's understanding of the link between personality dispositions and health in the context of stressful environments.

Sense of coherence is a relatively stable disposition derived from the pattern of one's life experiences. Sense of coherence is defined conceptually as:

a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement.

(Antonovsky, 1987, p. 19).

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These three areas represent the three components of sense of coherence, that is, the comprehensibility, manageability, and meaningfulness of one's life experience.

Comprehensibility means that one's experiences over time involve consistency and cognitive sense; they may not be desirable, but they are viewed as orderly in the process of life rather than as chaotic and inexplicable. Manageability involves a balance of overload and underload so that one develops a confidence in one's strengths and external resources and does not feel like a helpless victim. Meaningfulness is the motivational component in which experiences make emotional sense and are worthy of one's energy. Meaningfulness is developed through participation in the decision-making that affects one's life.

Sense of coherence is a disposition possessed by all individuals to varying degrees. It is represented by a continuum. The relative stability of an individual's position on this continuum results largely from the reinforcing effect of one's experiences. An individual with a strong sense of coherence seeks experiences, information, feedback, and coping resources that contribute to a sense of comprehensibility, manageability, and meaningfulness in one's life. A person with a weak sense of coherence tends to repeat ineffective behaviors, such as not evaluating the effect of one's coping efforts or not using available resources, thereby perpetuating a weak sense of coherence. Significant changes in one's sense of coherence would require a dramatic event followed by a consistent new pattern of resources and reinforcing experiences.

Just as a self-directed continuing learning orientation does not refer to a specific learning method, sense of coherence is not defined by the use of specific coping methods. Rather, a strong sense of coherence is demonstrated by flexibility in (a) devising or mobilizing a

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Sense of coherence cannot be assessed by observing discrete behavior in a single incident. Short-term behavioral responses to acute trauma, threat, or loss may not be different in individuals with either a strong or a weak sense of coherence. Rather, a strong sense of coherence will be distinguished from a weak one by how the person deals with the impact of the stressor over time (Antonovsky, 1987; Antonovsky & Sagy, 1986).

Antonovsky (1987) identified numerous factors that may determine the formation of a strong or a weak sense of coherence. Examples are socioeconomic conditions, cultural and religious influences, political and historical milieu, education, family context, social support, and one's cognitive, affective, and attitudinal characteristics. Such factors, referred to as Generalized Resistance Resources, contribute to a strong sense of coherence to the extent that they provide a pattern of experiences characterized by comprehensibility, manageability, and meaningfulness.

The foregoing descriptions of self-directed continuing learning and sense of coherence suggest that a relationship

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may exist between them. There are three possible directions for such a relationship. First, it is plausible that a strong self-directed continuing learning orientation contributes to one's sense of coherence by increasing the comprehensibility, manageability and meaningfulness of one's experiences. For example, the initiative, persistence, and motivation of the self-directed continuing learner may assist the individual to seek, use, and evaluate different coping resources and strategies. Second, a strong sense of coherence, or the factors contributing to it, may provide a foundation for developing a strong self-directed continuing learning orientation. Third, a reciprocal relationship may exist in which self-directed continuing learning and sense of coherence interact in a mutually supportive way.

<u>Well-Being</u>

The terms <u>health</u> and <u>well-being</u> are often used simultaneously in the literature, but the distinction between these two terms is not always clear (Lawton, 1984). In some cases, health pertains to physiological status, and well-being adds the psychosocial dimension. In other cases, health and well-being are used as a unitary term referring to the irreducible or multidimensional nature of health in which one's subjective perception is an integral part (Okun, Stock, Haring, & Witter, 1984; Zautra & Hempel, 1984).

Kravitz and Frey (1989) indicated that one purpose of the McGill Model of Nursing is to generate a knowledge

base for nursing as the science of health promoting interactions. To achieve this, the refinement of the concepts in the model must evolve, mainly inductively, from nursing practice and research. Consequently, premature closure on the definition of core concepts such as health has been avoided, and well-being has not been separated from health. In selecting well-being as a variable in this study, the objective was to help identify the relation of well-being to health and learning in the McGill Model of Nursing.

Ebersole and Hess (1985) refer to well-being as the most desirable position on a wellness continuum. They too hold the position that health and wellness are more than the absence of disease, and that "even in chronic illness and dying there is an optimum level of wellness and well-being attainable for each individual" (p. 145). In this way, they consider the wellness approach to be the most equitable in evaluating and promoting the health potential of older adults.

Ebersole & Hess (1985) described wellness, which incorporates well-being, as an ongoing process, as "a state of being and feeling that one strives to achieve" (p. 148). Wellness is defined as "a balance between one's environment, internal and external, and one's emotional, spiritual, social, cultural, and physical processes" (Ebersole & Hess, 1985, p. 146). This balance does not refer to a homeostasis

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that is occasionally and temporarily disrupted by illness and other life events. Rather, the balance is dynamic, involving a continuous, active process in the context of numerous experiences of change, loss, and disequilibrium. This view of well-being as a dynamic balance, an active process, and a continuous striving is compatible with the view of health as a lifelong learning process and the client as an active learner in the McGill Model of Nursing.

In his research on psychological well-being, Bradburn (1969) also conceptualized well-being as a dynamic balance. The conceptual premise of his work is that different experiences can occur in one's life simultaneously, producing both positive and negative feelings over a given period of time. Consequently, psychological well-being is not demonstrated by the absence of negative feelings but by the dynamic balance between positive and negative feelings over a specified time period.

The conceptualization and measurement of well-being as a dynamic balance of positive and negative feelings is relevant in studying its relationship to self-directed continuing learning and sense of coherence. A person with a strong self-directed continuing learning orientation may be more able to seek and achieve a balance of positive feelings over negative feelings. For example, the self-directed continuing learner demonstrates the ability to persist

towards higher-order goals despite barriers and is more likely to view new situations as learning opportunities.

Similarly, a strong sense of coherence does not shield a person from difficult experiences or negative feelings, such as loneliness and grief. Persons with a strong sense of coherence may be more likely to deal effectively with negative feelings because of an inner confidence that the source of their negative feelings can be surmounted; an ability to find other sources of positive feelings; or an ability to find solutions that will reduce the negative feelings.

It is plausible that a relationship between sense of coherence or self-directed continuing learning and wellbeing may be measured most accurately when studied over a long period of time. In a crisis situation, a measure of current happiness or well-being may not identify differences between the feelings of a person with a strong sense of coherence and someone with a weak sense of coherence. Rather, the differences would be expected to occur over time as they coped with the impact of the experience. Nevertheless, barring major crises, it is reasonable to expect that, over a period of a few weeks, persons with a strong sense of coherence would be more likely to deal with their experiences in ways that contribute to a balance in favor of positive feelings.

Conceptually, Antonovsky (1979, 1987) separated sense of coherence and health from well-being. He identified sense of coherence as a major determinant of health with the power to explain why various micro- and macrosocial factors contribute to health. In testing the concept of sense of coherence, he considered it essential that health have a specific definition that would differentiate it from the broader, multidimensional construct of well-being. He constructed a definition of health based on the individual's subjective experience of pain and functional limitation and the health professionals' assessment of prognosis and degree of professional intervention required (Antonovsky, 1979). In this way, Antonovsky developed a functionally and physiologically-oriented definition of health in order to study how and why that health is achieved and improved. In contrast, the McGill Model of Nursing has taken a wide view of health to avoid premature closure on the meaning of health, such as to older adults.

More recently, Antonovsky (1987) has acknowledged that the study of a relationship between sense of coherence and well-being is an area for research. The examination of this relationship is relevant to gerontological nursing. Older adults are likely to demonstrate movement down a continuum that is based on physiological and functional parameters only (Ebersole and Hess, 1985; Gelein, 1983). Research suggests that the meaning of health to older adults is

broader. For example, in the qualitative study by Thorne et al. (1987), fifteen older adults indicated that a sense of competence, social connectedness, and meaning in their lives was more important than physical comfort and abilities. When viewed as a science of health promoting interactions, nursing is interested not only in the health behaviors that delay the onset and speed of physical and functional decline but also those behaviors that promote well-being, even in the presence of irreversible changes and losses in the later years.

Finally, the impetus to examine the relationship between sense of coherence, self-directed continuing learning, and psychological well-being was also drawn from the extensive research that has been conducted on the correlates of subjective well-being. Reviews (George & Landerman, 1984; Larson, 1978; Zautra & Hempel, 1984) of this research have identified perceived health $(\underline{r's} = .2 - .4)$ as the strongest correlate of subjective well-being, followed by socioeconomic status $(\underline{r's} = .1 - .3)$. The correlations reveal that most of the variance in subjective well-being remains unaccounted for by these variables. Consequently, Zautra and Hempel (1984) concluded that the "present research has not contributed much to our understanding of the psychological basis for a connection between well-being and physical health beyond documentation of a basic association between them" (p. 96). Some authors

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(Costa & McCrae, 1980a, 1980b; Gelein, 1983; Zautra & Hempel, 1984) postulated that long-term dispositional characteristics may be stronger correlates of well-being than the situational and demographic variables that have been studied thus far. Other reviewers (George & Landerman, 1984; Stutsman, Okun, & Stock, 1984-85) called for further research on subjective well-being despite the large amount that has already been done. This study followed these recommendations by exploring the relationship between psychological well-being and the long-term dispositions, sense of coherence and self-directed continuing learning.

In summary, a common theme emerged across this literature review of learning, health, and psychological well-being: Positive and negative experiences are an inevitable, ubiquitous, and simultaneous aspect of life. Healthful aging is viewed increasingly as a lifelong developmental process in which adults use their life experiences to achieve a sense of competence, personal development, and meaning. The self-directedness, initiative, and persistence to learn from one's experiences, through active participation and reflection, have been related descriptively to the potential for health, development, and well-being. Sense of coherence offers a conceptual basis for studying how these learning characteristics may contribute to health, development, and

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CHAPTER 3

Methods

Research Design

The study employed a quantitative, nondirectional, correlational design at the interval-ratio level of measurement.

Sample and Setting

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The target population was older adults living in large long-term care residences. The accessible population involved the residents of a large, urban, senior citizens residence. The residents were 60 years of age or over and required varying degrees of assistance with personal care and activities of daily living, ranging from very little assistance to daily nursing care. Residents with cognitive dysfunction requiring extensive supervision were generally living in the special care sections of the residence and were excluded from the study.

The residence was a non-profit facility operated under the direction of a voluntary board of directors. It had a capacity for 350 residents in private rooms. It included five sections which provided varying levels of care. This allowed a resident who required increased or decreased assistance to relocate within the residence on a short-term, long-term, or permanent basis. There was a Director of Nursing and a diversified activity program. Regular physician services were available on site. Numerous other services included meals in common dining rooms and housekeeping.

The sample was drawn from the two sections in which the residents were most independent. Each section was operated under the direction of a head nurse and a senior matron who was not a registered nurse. In the evenings, there was a registered nursing assistant in each section and one registered nurse for both sections. Assistance was available for procedures such as personal hygiene, medications, dressings, and blood pressure monitoring. One section was a high-rise building and the other was bi-level with larger bathing facilities and wider corridors. Residents with mobility limitations or some cognitive impairment were more often located in the latter section.

A nonprobability sampling method, the sample of convenience, was used to obtain a sample of 60 respondents. This sample size met the requirements of power statistics analysis for a nondirectional correlational study (Cohen, 1977), using the parameters of .05 significance level, a 0.4 effect size, and power of 0.9. The multivariate statistical procedure multiple regression was applied in this study. A large ratio of subjects to independent (predictor) variables is recommended for multiple regression (Kleinbaum, Kupper, & Muller, 1988). The sample size in this study provided 30 subjects per independent variable in the multiple regression and met the criterion for a large sample.

The criteria for inclusion in the study were as follows:

1. Sixty years of age or over.

2. Ability to understand and to speak English.

3. Cognitive ability to provide informed consent and answer the questionnaires.

4. Provision of informed consent.

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The assessment of cognitive status involved a judgement of the resident's ability to answer six different questionnaires. These questionnaires contained questions in the past, present, and future tenses and were answered on response scales involving words or both words and numbers. Because of the complexity of cognitive status, it can be difficult to assess in a single meeting. For this reason, when the researcher was uncertain of a respondent's cognitive ability, the assessment of the nursing staff was the primary criterion for including data from a respondent in the statistical analysis.

The sampling procedure involved two stages as shown in Figure 2. The first screening was conducted by the Director of Nursing using the inclusion criteria. There were 115 residents excluded because of cognitive impairment; severe vision, hearing, and communication difficulties; and acute illness. This excluded the residents living in the special care sections. The second screening was conducted in the research field and continued throughout the data collection period. Eligibility was determined by the researcher's observations of the residents and consultation with the head nurses who knew the residents well. Sixty-one residents were deemed ineligible because of cognitive impairment; severe hearing or vision deficits; and illness, bereavement, or travelling.

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The researcher contacted 106 of the remaining 160 potential respondents. In 32 cases, the researcher did not finish or use the interview because of the respondents' cognitive difficulties in responding to the quantitative scales; vision or hearing deficits severe enough to jeopardize the accuracy of the responses; and fatigue from recent illness or bereavement. Thirteen persons (12%) refused to participate in the study for personal reasons, including protection of one's privacy and overload from other commitments. In total, 61 eligible interviews were conducted. These respondents included only one resident younger than 70 years; therefore, a decision was made to limit the sample to residents 70 years or over to provide a more specific designation of the sample. In total, the sampling procedure produced a sample of 60 respondents.



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Measurement Instruments

Seven instruments were used in this study:

1. Orientation to Life Questionnaire (Antonovsky, 1987) to measure sense of coherence.

2. Oddi Continuing Learning Inventory (Oddi, 1986) to measure self-directed continuing learning.

3. Affect Balance Scale (Bradburn, 1969) to measure psychological well-being.

4. A single question instrument to measure overall happiness.

5. A visual analogue scale to measure self-perception of health.

6. Demographic Data Inventory to obtain descriptive information about the respondents.

7. A visual analogue scale to measure the respondents' approach to problems and life experiences from the perception of the registered nurses and senior matrons.

Orientation to Life Questionnaire. Sense of coherence was measured by the Orientation to Life Questionnaire (see Appendix A) that was developed and tested by Antonovsky (1987) for use as a self-administered or researcheradministered survey instrument. The questionnaire has 29 items. Each item is answered on a seven-point Likert scale. Responses to thirteen items are presented in reverse order to avoid response set bias. There are eleven items to measure comprehensibility, ten for manageability, and eight for meaningfulness, in a mixed arrangement to avoid a discernible pattern. Only a total score is produced; statistical analysis of subscores is considered theoretically inappropriate.

The Orientation to Life Questionnaire was constructed using the facet design method developed by Guttman (see Antonovsky, 1987). In this method, the researcher identifies the facets of a concept and the important elements in each facet. A mapping sentence, which includes the essential facets and elements, is then formulated to show the full scope of the potential questionnaire items.

The instrument was critiqued for face and content validity by four of Antonovsky's colleagues, resulting in minor revisions. Regarding the psychometric properties, Antonovsky (1987) observed that questions were rarely left unanswered, and respondents seemed to enjoy answering the questions. While a number of studies are in progress or yet unpublished, he indicated that the scale had performed well in three studies with elderly populations (A. Antonovsky, personal communication, July 1, 1988).

Antonovsky (1987) reported support for the reliability and validity of the tool from numerous studies conducted by him and independent researchers. The studies produced consistently high Cronbach alpha coefficients for internal consistency from .84 to .93.

A study by Rumbaut (1983), using a sample of 336 undergraduate students, demonstrated support for the validity of the questionnaire (Antonovsky, 1987). Concurrent validity was demonstrated by a correlation of .639 with another sense of coherence questionnaire that was developed by Rumbaut and had tested positively for reliability and validity. Convergent validity was supported by a correlation of .385 with the Rotter Internal-External Locus of Control Scale. To the extent that anxiety involves feelings of unmanageable uncertainty about one's world and about one's competence in it, a negative correlation would be expected between sense of coherence and anxiety. In this way, discriminant validity was suggested by a negative correlation of -.212 with the Sarason Test Anxiety Scale.

Antonovsky (1987) identified subsequent studies by him and independent researchers that also supported the validity of the instrument. One was a test of criterion-related validity in which self-rated health status on a nine-point ladder scale related positively to sense of coherence scores.

In summary, there was sufficient support for the reliability and validity of the Orientation to Life Questionnaire to warrant its use in this study. In addition. the study aimed to contribute to the further assessment of the tool in studies with older adults by (a) testing internal consistency, (b) testing criterion-related

validity in relation to the respondents' perception of their health, (c) providing descriptive information about patterns in the responses from this sample, and (d) providing descriptive information on the process of researcheradministration of the questionnaire.

Oddi Continuing Learning Inventory. Oddi (1984, 1986) developed and tested a 24-item questionnaire to measure self-directed continuing learning (see Appendix B). Each item is measured on a seven-point Likert scale. Responses to five items are presented in reverse order to avoid response set bias. A single total score is produced.

Content validity was determined by a panel of graduate students in law, education, and nursing and by a panel of experts in the study of psychological constructs or selfdirected learning. The instrument was tested for reliability and validity in a prepilot study with 30 students, a pilot study with 287 students, and a validation study with 281 students. Reliability was demonstrated in the validation study by a standardized alpha coefficient of .875 for internal consistency and test-retest reliability coefficient of .893.

Convergent and discriminant validity were tested in relation to four instruments of known reliability and validity. Convergent validity was supported by a positive correlation between the Oddi Continuing Learning Inventory and the Leisure Activity Survey (Litchfield, 1965-66), a

measure of adults' participation in educational activities ($\underline{\mathbf{r}} = .363$, $\underline{\mathbf{p}} = .004$, $\underline{\mathbf{n}} = 68$). Positive correlations were also obtained with three subscales of the Adjective Check List (Gough & Heilbrum, 1983): The Self-Confidence Subscale ($\underline{\mathbf{r}} = .551$, $\underline{\mathbf{p}} \stackrel{\leq}{=} .0001$, $\underline{\mathbf{n}} = 67$); the Endurance Subscale ($\underline{\mathbf{r}} = .539$, $\underline{\mathbf{p}} \stackrel{\leq}{=} .0001$, $\underline{\mathbf{n}} = 67$); and Affiliation Subscale ($\underline{\mathbf{r}} = .265$, $\underline{\mathbf{p}} = .04$, $\underline{\mathbf{n}} = 67$). Convergent validity was not supported with the Change Subscale or with the Rotter Internal-External Locus of Control Scale. Discriminant validity was supported by the lack of correlation with the Shipley Institute of Living Scale (Shipley, 1982), a measure of adult intelligence ($\underline{\mathbf{r}} = .04$, $\underline{\mathbf{p}} = .754$, $\underline{\mathbf{n}} = 65$).

Oddi (1986) concluded that the instrument provides satisfactory reliability and validity when used in entirety. She recommended further testing and refinement through use with different samples, especially adults in the general population.

To date, use of the Oddi Continuing Learning Inventory with older adults has not been published. There are other instruments to measure self-directed learning, notably the Self-Directed Learning Readiness Scale (SDLRS) by Guglielmino (1977). Two studies (Brockett, 1985b; Long & Smith, 1989) have reported findings that question the internal consistency of the SDLRS when used in the older population, especially in samples with less than high school education. As a result, Brockett (1985b) identified a need for different measures of self-directed learning for use in samples of older adults who are heterogeneous or limited in respect to formal education.

The Oddi Continuing Learning Inventory (OCLI) was selected for this study for the following reasons:

1. The use of the OCLI would contribute to the testing of an alternative tool for measuring self-directed learning in older adults.

2. Although many of the residents had completed a minimum of high school, it was reasonable to expect a range of educational backgrounds in a large population of this age group.

 The study had adopted the conceptualization of selfdirected continuing learning by Odd1 (1986, 1987).
The length of the interview was an important consideration. The OCLI has 10 items less than the revised SDLRS for low reading level (Guglielmino, 1988). In the course of the data collection, it became evident that, indeed, a longer interview would have been difficult for many respondents.

The measurement instruments were reviewed by a 70 year old woman living actively in the community and engaged in a variety of formal and private learning activities. Upon reviewing the OCLI, she found the wording in some of the questions to be irrelevant to her current life experience. In particular, many of the questions had words pertinent to a school or work setting, such as teacher, assignments, and manager. Consequently, minor revisions were made to replace or omit potentially irrelevant words for this study while making as little change as possible in the substance of the questions. Substitutions were made in six questions: #2, 3, 11, 12, 15 and 20. Irrelevant examples were omitted from #17 (see Appendix C). Following the revisions, she described the instrument as more meaningful, and she completed previously unanswered questions.

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The revisions were approved by Oddi for the purpose of the study on the condition that the results be submitted to assist her efforts to refine the instrument (L. S. Oddi, personal communication, April 6, 1989). In a pilot test with 17 respondents from the accessible population, the alpha coefficient for internal consistency was .8547. The mean was 117.88 with a standard deviation of 22. These statistics were similar to those reported in Oddi's (1986) validation study.

Affect Balance Scale. Psychological well-being was measured by the Affect Balance Scale. It was developed and tested by Bradburn (1969) using five broad samples involving 2,787 subjects, 18 to 59 years of age, and heterogeneous in respect to race, social class, occupation, and urban-rural residence.

The instrument is based on the premise that psychological well-being comprises two independent

dimensions: positive affect and negative affect. Psychological well-being is the extent to which positive affect predominates over negative affect. 46

The Affect Balance Scale (see Appendix D) is a questionnaire with a single stem question, "During the past few weeks, how often have you felt...". This is followed by 10 feelings; five of the feelings represent positive affect, and five represent negative affect. The feelings are listed in alternating order. The respondent answers the stem question for each of the 10 feelings on a scale of three possible responses: often, sometimes, or never.

There are various ways to calculate a score on the Affect Balance Scale. In this study, the responses for positive affect were scored as 2 for often, 1 for sometimes, and 0 for never. The scoring was reversed for the responses on negative affect. In this way, the lowest possible score was zero, and the highest possible score was 20, with a midpoint of 10. Scores over 10 indicated the extent to which positive affect predominated. Scores less than 10 indicated the degree to which negative affect predominated. This provided a ratio scale for statistical analysis.

The questions refer to general feelings rather than to specific life events in order to allow the respondents to answer in the context of their own situations. The questions are restricted to a recent time frame of the past few weeks so as to focus on current feeling states rather

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than long-term trends that might be more reflective of personality dispositions.

A pilot study (Bradburn & Caplovitz, 1965) (N=2,006) and validation study (Bradburn, 1969) (N=2,787), using the gamma coefficient measure of association, found higher associations (average Q-value =.50-.56) within the positive and negative items, and lower associations (average Q-value =.02-.03) between the positive and negative items. Both the positive and negative items were significantly related, in opposite directions, to the respondent's self-reported happiness. Furthermore, positive affect and negative affect correlated significantly with different variables. These findings supported the premise that positive and negative affect are different dimensions of psychological well-being. Bradburn (1969) also reported a test-retest reliability coefficient of .80 on a subsample (n = 174) tested three days apart.

Other researchers have also found a low correlation between positive and negative affect (Gaitz & Scott, 1972; Stutsman et al., 1984-85) and a moderate correlation between each subscale and the total Affect Balance Scale (Gaitz & Scott, 1972). Most studies have found that some variables correlate significantly with only positive or negative affect, while other variables are related to both (Beiser, 1974; Costa and McCrae, 1980a; Felton, Revenson, &

Hinrichsen, 1984; Gaitz & Scott, 1972; Moriwaki, 1974; Stutsman et al., 1984-85).

Various reviews (Costa & McCrae, 1980a; Gaitz & Scott, 1972; Larson, 1978; McCrae, 1986) of the research on subjective well-being have reported support for the convergent validity of the Affect Balance Scale with other measures of subjective well-being. A study by McCrae (1986) of 62 adults aged 27 to 82 years (mean age = 56.7) found that the validity of the instrument is not contaminated by the social desirability response set bias.

Bradburn's studies did not include older subjects. However, in a review on the measurement of quality of life in older adults, George and Bearon (1980) reported positively on the use of the scale in a number of studies (Bild & Havighurst, 1976; Gaitz & Scott, 1972; Graney, 1975; Moriwaki, 1974). They concluded that the Affect Balance Scale offers methodological and theoretical advantages to the study of affect in the older population.

Responding to various critics of the Affect Balance Scale, McDowell and Praught (1982) conducted a secondary analysis on the psychometric properties of the instrument from its use in the Canada Health Survey 1978-79. Using data that had been obtained from 17,279 noninstitutionalized respondents, 15 years of age and over, they concluded that the Affect Balance Scale offers sufficient conceptual and measurement advantages to warrant its continued use.

Overall Happiness Instrument. For the purposes of comparison and corroboration, the Affect Balance Scale is frequently administered in conjunction with a single, global question on overall happiness: "Taking things altogether, how would you say things are these days - would you say that you are very happy, pretty happy, or not too happy?" (see Appendix E). McDowell and Praught (1982) concluded from the examination of the Canada Health Survey 1978-79 data that the happiness question "probably provided the best single approach to measuring well-being" (p. 958).

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Bradburn (1969) reported a positive association between the scores on the Affect Balance Scale and the answers to the single question on happiness. He concluded, however, that the Affect Balance Scale offered (a) a finer discrimination of well-being than the single question instrument, especially for the large group that selected the answer <u>pretty happy</u> on the single question instrument, and (b) a richer conceptual framework for examining the correlates of well-being. In this study, a positive correlation was expected between the scores on the Affect Balance Scale and the single question instrument on overall happiness.

<u>Health Perception Scale</u>. In a test of the criterionrelated validity of the Orientation to Life Questionnaire, Antonovsky (1987) found a positive relationship between sense of coherence scores and health perception ratings on a

linear scale. In keeping with the secondary purpose of this study to test the measurement instruments in research with older adults, a similar test of validity was conducted. A visual analogue scale was selected for the following reasons:

1. To impose minimal additional demand on the respondents.

To allow the respondents' answers to reflect the 2. various dimensions that determine their perception of their health. The literature indicates that a view of health as mainly a physical phenomenon or as the absence of disease is insufficient in the elderly population in which chronic illness is common (Gelein, 1983). Research on the meaning of health to older adults (Ferraro, 1980; Maddox, 1962; Thorne et al., 1987) has identified numerous factors that influence older adults' perception of their health, such as functional ability, sense of social connectedness, and sense of meaning. The visual analogue scale allows the respondents to integrate the various factors that determine the meaning of health to them and then to communicate this complexity in a simple efficient manner (Aitken, 1969; Bond & Lader, 1974).

3. Research has demonstrated a positive correlation between older adults' subjective perception of their health and its assessment by physicians (Gelein, 1983; Heyman & Jeffers, 1963; LaRue, Bank, Jarvik, & Hetland, 1979; Linn & Linn,

1980). These results suggested that self-report measures provide valid health assessment in conjunction with or in the absence of other sources of health information, and they were recommended for psychosocial research with older adults.

The Health Perception Scale (see Appendix F) was a black 100 mm. horizontal line on white paper. There were no markings on the line. The left end of the scale was marked <u>Poor</u>, and the right end was marked <u>Excellent</u>. The respondents were asked to answer the question, "How would you rate your health at the present time?", by placing a mark anywhere along the line that best fit their answer. Using the same metric ruler for all responses, the distance from the left endpoint to the respondent's mark was measured in millimetres, with zero denoting the lowest possible health perception and 100 denoting the highest possible health perception. This provided a ratio scale for statistical analysis.

Demographic Data Inventory. The one-page Demographic Data Inventory (see Appendix G) collected the following descriptive information about the respondents: age; sex; marital status; years of formal schooling; highest certificate, diploma or degree obtained; previous occupation or daily work; the importance of religion in the respondent's life; and the section of the residence in which the respondent lived. The length of time the respondents

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had lived in the residence was obtained from the nutsing records. Some of these factors, such as years of schooling and religious beliefs, may act as Generalized Resistance Resources that influence one's sense of coherence and coping behavior.

<u>Staff Perception Scale</u>. Brookfield (1984) pointed out that most studies on self-directed learning have used selfreport measures only, and he identified this as a limitation of the research in this field. In order to assist in evaluating the validity of the self-report instruments used in this study, a general perception of the respondents' customary approach to problems and life experiences was obtained from members of the nursing staff for each subject.

The instrument was a single question that was answered on a visual analogue scale (see Appendix H). The question was designed to reflect the key elements of both sense of coherence and self-directed continuing learning. During the formulation process, the question was examined for face validity by two gerontological nurses with clinical and research expertise in long-term care settings. The question was, "In general, to what extent does the person deal with the problems and experiences in his or her life as meaningful challenges or learning opportunities?".

The scale was a 100 mm. black horizontal line with the anchor words Not At All and Always. Thus, a ratio scale was established for statistical analysis.

It was not practical in the research setting to obtain these ratings after each interview; therefore, the ratings for all the respondents were completed at the conclusion of the data collection phase. The head nurses and senior matrons answered the question for each respondent in their sections of the residence. The evening registered nurse answered the question for each respondent in both sections. In this way, three ratings were obtained for each respondent.

Pilot Study

A pilot study was conducted with 17 respondents. The reliability coefficients for internal consistency were satisfactory: the Orientation to Life Questionnaire, .9124; the revised Oddi Continuing Learning Inventory, .8183; and the Affect Balance Scale, .8251. No significant changes were made in the interview process following the pilot study. Data from three interviews were later eliminated from the study due to the questionable cognitive status of the respondents. The data from fourteen interviews in the pilot study were included in the statistical analysis of 60 interviews.

<u>Procedures</u>

The staff were informed of the study by the Director of Nursing through the regular communication channels. The Director of Nursing introduced the researcher to the head nurses and senior matrons at which time the primary purpose

of the research and pertinent procedures were reviewed. A copy of the questionnaire was provided to the head nurses.

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A number of measures were employed to increase the residents' familiarity with the researcher and the study. For example, brief presentations were made at the monthly Residents Council meeting and in each dining room. Also, the researcher was often present in the library and in the lounges before and after meals.

The interview involved six steps: (a) introducing the purpose of the study and the interview process; (b) obtaining informed consent; (c) administering the questionnaires; (d) discussing any questions, thoughts, or feelings raised by the interview; (e) obtaining the date of admission to the residence from the respondent's record, and (f) recording any notes relevant to the use of the instruments in an older population. The average length of the interviews was 83 minutes, with a range of 60 to 150 minutes. The duration of the data collection phase was three months.

The questionnaires were administered by the researcher. They were presented to each respondent in the same order: the Orientation to Life Questionnaire, the revised Oddi Continuing Learning Inventory, the miffect Balance Scale, the single question on overall happiness, the Health Perception Scale, and the Demographic Data Inventory. Each questionnaire was introduced to each respondent in a similar

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way. A sample question was presented for the Orientation to Life Questionnaire and the revised Oddi Continuing Learning Inventory to familiarize the respondents with the response scales. In keeping with the recommendations by Ratzman (1986), various measures were used to accommodate perceptual changes that are common in the older age group. For example, the questionnaires had large print to allow for visual impairments. The researcher validated with the respondents that the consent form, the questionnaires, and the researcher's voice were clear.

Ethical Considerations

A number of measures were employed to uphold the ethical rights of the residents. The consent form is presented in Appendix I. In the group presentations and in the individual meetings with the potential respondents, the researcher aimed to explain the rights and choices of the residents in clear terms. A copy of the signed consent form was given to the respondents. The respondents were asked if they would like to receive a written summary of the results and their answers were recorded on the consent forms. Fifty-seven respondents (95%) requested the feedback.

The names of the respondents were not placed on the questionnaires and were not entered in the computer file. Each respondent was assigned a number which was placed on each questionnaire. The completed questionnaires were stored in a locked room not located at the data collection site.

Requests for participation were made privately, usually in the residents' rooms. During the data collection process, the researcher looked for verbal and nonverbal signs of discomfort or distress.

<u>Data Analysis</u>

The data were analyzed using Pearson's product moment correlation coefficient and the multivariate procedure of multiple regression. Polit and Hungler (1987) indicated that a correlation coefficient of .70 can be considered as quite high in research of a social or psychological nature. Light (1984) recommended attention to the practical significance that may be involved in even a low correlation. Limitations of the Study Methods

The following limitations in the methods must be taken into account when interpreting the results of this study. First, the sample of convenience is a nonprobability sample in which the generalizability of the results is limited. The representativeness of this kind of sample may also be reduced by self-selection bias. Second, an objective standardized test of cognitive status was not conducted with the potential participants as a part of the inclusion criteria. Rather, cognitive ability to participate in the study was determined by a combination of the researcher's observations and consultation with the head nurses who had known the respondents over time. Third, the correlational design of the study did not permit conclusions about causal relationships between the variables. Fourth, although the Oddi Continuing Learning Inventory had been tested for reliability and validity in a younger population of graduate students, it had not been tested with an older population in a nonacademic setting. Even though some of the questions were revised to make them more relevant to the accessible population, the instrument may require further revisions for use with older adults. For example, four questions pertained solely to learning by reading which may be hindered by impaired vision in an elderly population. Finally, there was risk that administration of the questionnaires by the researcher might inadvertently influence the responses, particularly through the response set bias of social desirability.

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CHAPTER 4

Results

The primary purpose of this study was to explore the concepts of health and learning in the McGill Model of Nursing by examining the relationships between sense of coherence, self-directed continuing learning, and psychological well-being in older adults who were living in a large long-term care residence for senior citizens. The findings are divided into three sections. First, descriptive information about the sample is presented as obtained from the Demographic Data Inventory. Second, the results of the data analysis are presented according to each research question. Third, psychometric findings regarding the use of the instruments in this sample of older adults are reported.

Descriptive Information About the Sample

The respondents were white, middle-class, Englishspeaking adults with an age range of 70 to 93 years and a mean of 83.4 years. In the literature, the older population is often divided into three approximate age groupings: the young-old (65-74 years); the middle-old (75-84 years); and the old-old (85 years and older) (Ebersole and Hess, 1985). This sample included mainly the middle-old (53.4%) and the old-old (40%) age groups. Most of the respondents were over 80 years (81.7%) and were female (80%). Almost all of the respondents were widowed (66.7%) or had never married (26.7%). Only two of the men and none of the women were currently married. Table 1 shows the distribution of marital status by sex.

The years of schooling ranged from 3 to 22 years with a mean of 12.4 years (see Table 2). Most of the respondents (76.7%) had obtained a minimum of high school education, and 28% had completed at least one university program.

The majority (63.3%) reported that their primary work had been employment outside the home: 60% in senior administration, professions, business and secretarial positions and 3.3% in trades (see Table 3). These figures included all the men and 54% of the women. The remaining women identified the roles of homemaker, mother, and volunteer as their main previous work. Many of these women indicated that they had also been employed outside the home at various times in their lives.

Religion was described as very important in the lives of 60% of the sample; somewhat important to 25%; and of little or no importance to 15%. Thirty-eight (63.3%) respondents lived in the high-rise section, and 22 (36.7%) lived in the bi-level section. The length of time they had lived in the residence ranged from one month to fifteen years, for an average of 3.5 years. Exactly 50% had lived in the residence for 2.5 years or less, and 75%, for less than five years.

Table 1

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Marital Status by Sex

	Male	Female	Total	<u>&</u>
Widowed	7	33	40	66.7
Never Married	2	14	16	26.7
Married	2	0	2	3.3
Separated/Divorced	1	1	2	3.3
Total (N)	12	48	60	100.0

Table 2

Highest Level of Education By Sex

	Male	Female	Total	98
Masters Degree	1	2	3	5.0
Baccalaureate Degree	5	6	11	18.3
University Diploma	0	3	3	5.0
College Diploma	0	7	7	11.7
Business Certificate	2	10	12	20.0
High School	0	10	10	16.7
Less Than High School	4	10	14	23.3
Total (N)	12	48	60	100.0

Table 3

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Previous Occupation By Sex

	Male	Female	Total	<u> </u>
Senior Administration	5	2	7	11 66
Administration	5	2	,	11.00
Professions	2	11	13	21.66
Business or		10	16	25 55
Secretarial	4	12	10	20.00
Trades	1	1	2	3.33
Homemaker	0	22	22	36.66
Total (N)	12	48	60	99.97

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In summary, the 60 white, middle class, Englishspeaking respondents were mainly female, widowed or never married, had at least high school education, had been employed outside the home, and described religion as somewhat to very important in their lives. Their average age was 83.4 years, and they had lived in the residence for an average of 3.5 years.

Analysis of the First Research Question

To what extent are sense of coherence and self-directed continuing learning present in older adults who are living in a large long-term care residence for senior citizens?

Sense of coherence was measured on the Orientation to Life Questionnaire composed of 29 seven-point Likert scales. Possible scores on this instrument range from 29 to 203 with a midpoint of 116. The respondents' scores ranged from 97 to 189; therefore, all the scores were in the upper twothirds of the possible range. The mean score was 143.5 (SD = 22.9).

The total score on the Orientation to Life Questionnaire is derived from questions pertaining to the three components of sense of coherence: comprehensibility, manageability, and meaningfulness. Whereas sense of coherence is a unitary concept, statistical analysis of the subscores for these components is theoretically inappropriate. However, descriptive analysis may provide useful information about the configuration of sense of coherence in older adults. As shown in Table 4, the highest mean score in this sample was obtained on the questions measuring manageability (5.3). The next highest mean score was for meaningfulness (5.07), and the lowest mean score was for comprehensibility (4.5).

With respect to manageability, the two questions with the highest mean scores (#9, 23) involved external resources, primarily confidence in other people. With respect to comprehensibility, the two questions with the lowest mean scores (#10, 17) pertained to unpredictable changes in the past ten years and in the future.

In all three components of sense of coherence, the lowest mean scores were found mainly for questions referring to the future (#11, 17, 22, 27). For example, the lowest mean score under manageability referred to overcoming difficulties that one is likely to face in the future (#27). Similarly, the two lowest mean scores under meaningfulness concerned the extent to which life in the future will be fascinating or boring (#11) and the degree to which the respondent expects life in the future to have meaning and purpose (#22).
Table 4

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Mean Scores for the Three Components of Sense of Coherence

Mean Scores		
Comprehensibility	Manageability	Meaningfulness
5.51 (#1, Pr)	6.00 (#9. Pr)	5.66 (#7, Pr)
5.43 (#12, Pr)	5.86 (#23, F)	5.56 (#14, Pr)
5.28 (#19, Pr)	5.38 (#6, P)	5.48 (#4, Pr)
5.06 (#5, P)	5.26 (#25, P)	5.30 (#8, P)
4.68 (#21, Pr)	5.25 (#20, Pr-F)	5.00 (#16, Pr)
4.31 (#24, Pr)	5.25 (#2, P)	4.70 (#28, Pr)
4.18 (#15, Pr)	5.13 (#13, Pr)	4.50 (#22, F)
4.18 (#26, P)	5.11 (#29, Pr)	4.26 (#11, F)
4.05 (#3, Pr)	5.11 (#18, P)	
3.56 (#17, F)	4.90 (#27, F)	
3.51 (#10, P)		
$\overline{X} = 4.52$	$\overline{X} = 5.32$	$\overline{X} = 5.07$

<u>Note</u>. The numbers in the parentheses refer to the questions in the Orientation to Life Questionnaire. The letters in the parentheses refer to the tense of the questions P =Past, Pr = Present, F = Future. N = 60.

In summary, all the mean scores for sense of coherence were at the midpoint of the scale or higher; therefore, they represented relatively high scores overall. Across the three components that constitute sense of coherence, descriptive analysis indicated that the lower mean scores tended to occur on questions that referred to expectations for the future (comprehensibility), overcoming difficulties that may be encountered in the future (manageability), and the meaning of life in the future (meaningfulness).

Self-directed continuing learning was measured on the revised Oddi Continuing Learning Inventory composed of 24 seven-point Likert scales. Possible scores ranged from 24 to 168 with a midpoint of 96. The respondents' scores ranged from 74 to 153; therefore, all the scores fell in the upper two-thirds of the possible range. The mean score was 117.8 (SD = 16.4).

When the mean scores for the 24 questions on the instrument were listed in descending order, a descriptive examination suggested that the scores could be divided into five clusters (see Table 5). The first cluster (#5, 8, 15, 22) referred generally to the proactive drive of selfdirected continuing learning, such as resisting pressure from others and regulating one's own work. The second cluster (#1, 16, 18) emphasized persistence, such as completing tasks. The third cluster reflected initiative, such as seeking the views of others. The fourth cluster involved seven questions (#2, 12, 17, 20, 21, 23, 24), many of which had been difficult for the respondents to interpret. The fifth cluster, and the lowest mean scores, involved six questions (#3, 7, 9, 10, 11, 19) that dealt with specific learning methods, such as volunteering for group activities or reading professional journals. These methods tended to require vision or hearing.

There were no statistically significant correlations between sense of coherence and the demographic variables. A positive correlation was found at a statistically significant level between self-directed continuing learning and years of schooling ($\underline{r} = .2724$, $\underline{p} = .018$); however, this correlation was weak. A weak inverse relationship was found at a statistically significant level between self-directed continuing learning and the length of time the respondents had lived in the residence ($\underline{r} = .2361$, $\underline{p} = .035$).

Table 5

Mean Scores for Self-Directed Continuing Learning Arranged In Clusters

Cluster		Question No.	Mean Score
1.	Proactive Drive	5 8 22 15	6.28 6.25 6.11 6.05
2.	Persistence	16 18 1	5.85 5.55 5.45
3.	Initiative	6 13 4 14	5.78 5.33 5.31 4.93
4.	Problems with Interpretation or Relevance of Question	2 21 20 17 23 24 12	4.80 4.66 4.65 4.65 4.60 4.60 4.51
5.	Specific Learning Methods Implying Vision or Hearing	3 10 11 7 19 9	4.36 4.20 4.20 3.95 3.73 1.90

The perceptions of the head nurses, evening nurse, and senior matrons were obtained to help in assessing the reliability of the self-report instruments for sense of coherence and self-directed continuing learning. Before comparing the staff ratings and the respondents' self-report scores, correlations were obtained between the staff ratings as a test of their validity. There was a high positive correlation of .7875 ($p \stackrel{\checkmark}{=} .0001$) between the ratings by the head nurses and the evening nurse, accounting for 62% of the variance in their ratings. There were moderate positive correlations between the ratings by the senior matrons and the head nurses (.6629, p = .0001) and the evening nurse (.6838, $p \stackrel{\leq}{=} .0001$), thereby accounting for 43% of the variance in the ratings between the senior matrons and the registered nurses. The ratings by the senior matrons were generally higher than those by the registered nurses. Conversely, the ratings by the evening nurse were generally lower than those by the head nurses and the senior matrons.

Statistically significant correlations were found between the staff ratings and the respondents' self-reported sense of coherence; however, these correlations were low. The highest was a positive correlation of .3455 (p = .008), indicating that 11% of the variance in the respondents' sense of coherence was accounted for in the head nurses' perceptions.

Regarding self-directed continuing learning, only one statistically significant correlation was obtained between the staff ratings and the respondents' self-reported scores. This was a weak positive correlation with the ratings by the evening nurse ($\underline{r} = .3584$, $\underline{p} = .002$; $\underline{r}^2 = .128$).

In summary, there were statistically significant correlations between the self-reported scores and the staff ratings. However, they were low and pertained mostly to sense of coherence. It is important to note that the Staff Perception Scale was not tested for reliability or for convergent validity with the Orientation to Life Questionnaire and revised Oddi Continuing Learning Inventory. Also, the staff ratings were measured on a single question instrument while the respondents' answers were measured on a multiple question instrument. The instruments were not tested for equivalency.

Analysis of the Second Research Question

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Does a relationship exist between sense of coherence and self-directed continuing learning in older adults living in a large long-term care residence for senior citizens?

A moderate positive correlation of .4137 ($\underline{p} \stackrel{\checkmark}{=} .001$) was obtained at a statistically significant level between sense of coherence and self-directed continuing learning. This finding accounted for 17% of the variance in these variables and suggested that a relationship does exist between sense of coherence and self-directed continuing learning in the older adults in this sample.

Analysis of the Third Research Question

Are sense of coherence and self-directed continuing learning related to psychological well-being in older adults who are living in a large long-term care residence for senior citizens?

Psychological well-being was measured on the Affect Balance Scale (Bradburn, 1969), followed by the single question instrument on happiness as a test of convergent validity. The Affect Balance Scale produces a total balance score for psychological well-being and subscores for positive affect and negative affect. The possible range for the total balance score was zero to 20. The possible range for each subscale was zero to 10, with 10 denoting the highest degree of positive affect and the lowest degree of negative affect.

The total affect balance scores ranged from 4 to 20, with a mean score of 12.3 (SD = 3.7). The mean score for positive affect was 5.1 (SD = 1.8). The mean score for negative affect was 7.2 (SD = 2.7), indicating a relatively low level of negative affect. These subscores indicated that the average total balance score was comprised of a low degree of negative affect and a moderate degree of positive affect, thereby producing a small excess of positive affect over negative affect in this sample. The predominance of positive affect was also found in the responses to the single question on happiness. The majority of the respondents described themselves as pretty happy (58.3%), while an additional 20% rated themselves as very happy. In comparison, 21.7% reported being not too happy. These results were similar to those reported in the General Social Survey 1985 for a sample of 2,746 noninstitutionalized adults 65 years and over in which 57.7% reported being pretty happy, 19.1% very happy, and 12.3% not very happy, with 10.9% missing data (Gooding, Sloane, & Amsel, 1988).

The third research question was analyzed by bivariate correlational analysis using Pearson's product moment correlation coefficient and by multivariate analysis using stepwise multiple regression. In the bivariate analysis, a moderate positive correlation of .6831 ($p \leq .001$) was found at a statistically significant level between sense of coherence and psychological well-being. The validity of this finding was supported by a moderate positive correlation ($\underline{r} = .5939$, $\underline{p} \leq .001$) between sense of coherence and happiness.

A statistically significant, although weaker, positive correlation ($\underline{r} = .3214$, $\underline{p} = .006$) was found between selfdirected continuing learning and psychological well-being. However, a statistically significant relationship with happiness was not found.

A multiple regression was performed in which the continuous dependent variable psychological well-being was regressed on the independent variables, sense of coherence and self-directed continuing learning. Only sense of coherence showed a statistically significant partial correlation coefficient ($\underline{R} = .6831$; $\underline{R}^2 = .4666$; $\underline{F}(1,58) = 50.74$, $\underline{p} \stackrel{\leq}{=} .001$). This finding was the same as the bivariate product moment correlation between sense of coherence and psychological well-being, and accounted for 46.6% of the variance in psychological well-being. When sense of coherence was known, self-directed continuing learning contributed no significant ability to predict the level of psychological well-being of the older adults in this study.

Psychometric Testing of the Measurement Instruments

The secondary purpose of this study was to contribute to the testing of the measurement instruments in studies with older adults. Findings are reported regarding the reliability and validity of the Orientation to Life Questionnaire, the revised Oddi Continuing Learning Inventory, and the Affect Balance Scale. Some descriptive information obtained during researcher-administration of the instruments is also presented.

Orientation to Life Questionnaire. The Orientation to Life Questionnaire was tested in this study for reliability and criterion-related validity. Reliability was tested by

the internal consistency method and was supported by a high alpha coefficient of .9038.

Criterion-related validity was tested by using the respondents' perceptions of their health as an external criterion. In theory, one's health status is influenced by one's sense of coherence (Antonovsky, 1987). Therefore, a positive correlation would be expected between the respondents' sense of coherence and their perceptions of their health. A positive correlation would support the criterion-related, or concurrent, validity of the Orientation to Life Questionnaire.

The respondents' perceptions of their health ranged from poor (0) to excellent (100) with a mean score of 59.5. The distribution of scores across the full range of the scale indicated that the Health Perception Scale was sensitive in measuring a wide variability of responses in this sample. A statistically significant relationship was not found between sense of coherence and health perception. Consequently, this finding did not lend support to the criterion-related validity of the Orientation to Life Questionnaire.

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The administration of the questionnaire by the researcher provided an opport nity to make observations about its use in a sample of older adults. Many of the respondents commented that the questions were enjoyable, interesting, and thought-provoking. In almost all the interviews, the respondents provided explanations for their choice of answers or "thought out loud" as they made their selections. There were no unanswered questions in the 60 interviews.

Oddi Continuing Learning Inventory (Revised). A test of the reliability of the revised Oddi Continuing Learning Inventory produced a satisfactory alpha coefficient of .7195 for internal consistency. The item-to-total reliability statistics indicated that the alpha coefficient for the revised instrument would not be improved by removing any of the revised items. Still, the alpha coefficient for the revised instrument was lower than the alpha coefficient of .875 obtained in Oddi's (1986) validation study using the original instrument.

Affect Balance Scale. The Affect Balance Scale was tested in this study for reliability and validity. A test of reliability using the internal consistency method produced a satisfactory alpha coefficient of .7559. Separate tests of the subscales produced alpha coefficients of .6177 for positive affect and .7969 for negative affect.

Following the administration of the Affect Balance Scale, the respondents were asked a single question on overall happiness as a test of the convergent validity of the scale. The validity of the scale was supported by a moderate positive correlation of .6211 ($p \leq .001$). This finding was consistent with reports by other researchers

showing reasonably high correlations between the Affect Balance Scale and other measures of subjective well-being (Bradburn, 1969; Costa & McCrae, 1^c 30a; Gaitz & Scott, 1972; McCrae, 1986).

Further support was found for the construct validity of the scale. The Affect Balance Scale is based on the conceptual premise that positive affect and negative affect are independent concepts that together constitute one's level of psychological well-being. Bradburn (1969) proposed that this conceptualization of well-being would be demonstrated statistically in three ways.

First, the affect balance scores would have a high positive correlation with the positive affect scores and a high inverse relationship with the negative affect scores. In this study, this was supported by a high positive correlation of .7206 ($p \stackrel{<}{=} .001$) between the total balance scores and the positive affect scores, and, when using reversed scoring, by a high inverse correlation of -.8967 ($p \stackrel{<}{=} .001$) between the total scores and the negative affect scores.

Second, there would be a low correlation between the scores on the subscales. This was supported by a weak positive correlation between the scores on the positive affect and the negative affect subscales ($\underline{r} = .2983$; $\underline{p} = .01$; $\underline{r}^2 = .088$).

Third, each subscale would correlate significantly with different variables. Although Bradburn's (1969) studies identified different correlates for each subscale, various researchers (Felton et al., 1984; Gaitz & Scott, 1972; Stutsman et al., 1984-85) have found that some variables were correlated with both positive and negative affect. This study found different correlates for each subscale, except for sense of coherence which was correlated with both positive and negative affect. A moderate inverse relationship was found at a statistically significant level between sense of coherence and negative affect (r = -.6955; p = .001). A statistically significant, but weaker, positive correlation was found between sense of coherence and positive affect (r = .3530; p = .003). Therefore, although sense of coherence was correlated with both positive and negative affect, the correlations were in opposite directions and the inverse correlation with negative affect was stronger.

Negative affect was also correlated inversely with self-directed continuing learning ($\underline{r} = -.4179$, $\underline{p} \stackrel{\leq}{=} .001$). Positive affect was correlated directly, but weakly, with the importance of religion in the respondents' lives ($\underline{r} = .2265$, $\underline{p} = .04$).

In this study, a statistically significant relationship was not found between psychological well-being and the respondents' perceptions of their health. There were also

no significant correlations between the total affect balance scores and any of the demographic variables.

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CHAPTER 5

Discussion

The discussion begins with the secondary purpose of the study regarding the use of the research instruments in studies with older adults. This is followed by comments on the possible effect of the demographic data on the results. The discussion then focuses on the primary purpose of the study. The relevance of the findings to gerontological nursing in long-term care is addressed according to the three research questions respectively. The discussion concludes with some directions for practice and research in gerontological nursing.

Secondary Purpose

The secondary purpose of this study was to contribute to the testing of the instruments that measured sense of coherence, self-directed continuing learning, and psychological well-being for use in studies with older adults.

Reliability. The reliability of the measurement instruments was supported by the high alpha coefficient for the Orientation to Life Questionnaire and the satisfactory alpha coefficients for the revised Oddi Continuing Learning Inventory and the Affect Balance Scale. The reliability of the subscales of the Affect Balance Scale was also supported, although more strongly for the negative affect subscale.

Although the alpha coefficient for the reliability of the revised Oddi Continuing Learning Inventory was satisfactory, it was lower than that obtained in Oddi's (1986) validation study. This may indicate that some items on the instrument are more appropriate for a younger population than for older adults. For example, one third of the questions in the original instrument refer to a school or work setting (#2, 3, 9, 11, 12, 15, 17, 20). Seven of these were revised for this study. Nevertheless, four questions (#9, 10, 13, 19) still deal specifically with reading, and a further three questions (#4, 6, 14) require reading, hearing, or both. At least seven items involve communication and interaction with others (#3, 6, 11, 12, 14, 20, 23). As a result, half the questions in the revised instrument still emphasize vision, hearing, or communication abilities that may be diminishing in the older adult as a result of physiological changes or chronic disease. A further revision of this tool for use with older adults would be to include various ways of learning that are used more frequently by older adults, such as abstraction and reflection.

<u>Validity</u>. The convergent validity of the Affect Balance Scale was supported by the moderate correlation between the total balance scores and the single question instrument on happiness. Some support was also obtained for the construct validity of the Affect Balance Scale.

The lack of a correlation between sense of coherence and perceived health did not lend support to the validity of the Orientation to Life Questionnaire. However, selfperceived health may not be a strong external criterion for testing the validity of the instrument in a sample of older adults in a long-term care residence. Whereas the word health is commonly used to denote physiological status, the respondents' answers may have reflected the frequency of chronic illness and the changes in physical status that are common in the older population. Older adults with a strong sense of coherence may not differ significantly from elders with a weaker sense of coherence in their perception of their physical status. Indeed, a strong sense of coherence may assist the older adult to acknowledge changes in physical comfort and function and to cope more resourcefully with these changes.

A similar interpretation was reported in the General Social Survey 1985 by Health and Welfare Canada (1987). The findings in that survey suggested that older adults expect some changes in the physical aspects of their health and that other factors may modify the impact of these physical changes on their overall happiness and their satisfaction with their health. For example, in the qualitative study by Thorne et al. (1987), fifteen seniors reported that a sense of social belonging and a sense of meaning in their lives were more important than the physical dimension of health.

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ين. ود These findings are consistent with the theory that adjusting to physical changes is one of the developmental tasks of older adults (Erikson, Erikson & Kivnick, 1986; Katch, 1983).

The validity of the respondents' scores for sense of coherence and self-directed continuing learning received some support from the statistically significant, although low, correlations with the staff ratings. Higher correlations were found, however, between the staff ratings and the respondents' psychological well-being. This finding and the moderately high correlations between the staff ratings suggest that the scale measured the staff's perception about some aspects of the study variables but in a general manner only.

Other Properties. The Orientation to Life Questionnaire was effective in engaging the interest of the respondents and maintaining their concentration. The respondents' commented that the questions stimulated a depth of thinking that made their participation worthwhile. This lends support to using the instrument as the first questionnaire when more than one questionnaire is being administered in a study.

Oddi (1986) indicated that refinement of the Oddi Continuing Learning Inventory would require further examination to ensure the questions measure self-directed continuing learning. In this study, a descriptive analysis was conducted on the mean scores for all the questions when they were arranged in descending order. This descriptive analysis separated the questions into five groups which resembled the results of a factor analysis conducted by Oddi (1986) in a study of younger adults. The first three groups of questions had the highest mean scores and emphasized the proactive learning characteristics of the self-directed continuing learner, especially motivation, persistence, and initiative. They included 11 of the 15 items in Oddi's first rotation factor called Proactive Drive.

The fourth group included the three questions that constituted Oddi's second rotation factor. The questions in this group tended to be unclear and less relevant to the respondents. The fifth group resembled Oddi's third rotation. These questions emphasized learning methods that required perceptual skills, especially vision and hearing in a group setting.

Many of the questions on the questionnaire refer to learning by activity more so than learning by cognitive or symbolic methods, such as reflection or life review. Reed (1983) indicated that abstract thinking becomes more important as the adult grows older and seeks to understand the personal meaning of experiences. This suggests that the development of a revised tool for measuring self-directed continuing learning in older adults may be assisted by

qualitative research on the meaning or lived experience of learning for older adults. The centrality of the concept of learning in the McGill Model of Nursing provides a conceptual framework for this kind of phenomenological and methodological research in gerontological nursing. Demographic Information about the Sample

The age and sex distribution of the sample resembled the national census figures that show females over 85 years as the fastest growing segment in the population (Statistics Canada, 1984). Most of the women had high school education or more. Of those who had been employed outside the home as their primary work (54%), half had been in a profession or a senior administration position. These factors contributed to a sample that was characterized by educational and occupational levels above the national averages for the older population (Statistics Canada, 1984). In addition, most of the respondents indicated that religious beliefs were somewhat to very important in their lives.

The demographic profile of the sample suggests that some of the findings may have been influenced by the resources or characteristics of the respondents. In the first place, the data indicate that the respondents possessed a number of Generalized Resistance Resources. Antonovsky (1987) used this term to refer to the numerous resources that build a pattern of life experiences characterized by comprehensibility, manageability, and meaningfulness. Examples include financial stability, education, occupation, religious beliefs, cultural values, and social support. Generalized Resistance Resources are located on continua according to the extent to which they are available to the individual and mobilized in preventing or managing the tension produced by stressful situations. The demographic data indicated that the respondents possessed a number of Generalized Resistance Resources conducive to the development and reinforcement of a strong sense of coherence.

Second, the sample's above average level of education may have contributed to the high scores for self-directed continuing learning. Although the positive correlation between self-directed continuing learning and years of schooling was small, the direction was consistent with this interpretation.

Finally, the sample's relatively high socioeconomic status might account for the lack of a statistically significant relationship between psychological well-being and the demographic variables. Other researchers have generally found socioeconomic status to be the second strongest correlate of subjective well-being (Larson, 1978; Doyle & Forehand, 1984; Klemmack & Roff, 1984). However, in many cases, this relationship was weakened once a certain level of socioeconomic status was achieved (Larson, 1978). Thus, the socioeconomic resources present in this sample may

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explain the lack of any significant correlations between psychological well-being and the demographic variables. Primary Purpose

The literature review for this study indicated that health is commonly defined in terms of physiological status and functional ability. Increasingly, authors in nursing, such as Buzzell (1990), Ebersole and Hess (1985), Gelein (1983), Reed (1983) and Thorne et al. (1987), emphasize that this view of health is too narrow. It does not provide sufficient guidance to nurses in their work with older adults in long-term care situations.

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Conceptual models that focus predominantly on the physical dimensions of health direct attention to the prevention and treatment of illness and disability. While prevention and treatment are essential aspects of health care, they are not adequate for the needs of individuals and families who are trying to live meaningfully and successfully with long-term, irreversible, and deteriorating conditions. There is a need for models that are relevant and useful in long-term care situations where goals such as coping with change and loss, learning to deal with new and increasing demands, and finding meaning and purpose become the indicators of healthful living. Therefore, this study examined a relatively new conceptual model for nursing practice, the McGill Model of Nursing, in a sample of older adults in a long-term care setting.

The McGill Model of Nursing provides a different way of viewing health and the roles of the individual, family, and nurse in long-term care situations. It focuses on health as a dynamic process in which the individual and family are actively involved in learning to cope with their experiences and achieve personal development throughout the life span.

This interpretation of health as a dynamic, lifelong, learning process fosters a purposeful relationship between the client and the nurse in which they have mutual but different roles. It places the individual and family in the role of primary responsibility, decision-making, and selfdetermination. It respects them as learning, coping, and developing, over time and across situations. The nurse becomes a facilitator and carries out a variety of interventions designed to assist the client's learning, without assuming a dominant role. In order to facilitate effectively, nurses must learn about the unique history, circumstances and goals of the individual and family as well as the broader environment that affects their options and resources. Consequently, learning is essential to the process of health for the client and to the process of facilitating health for the nurse.

At this stage in the development of the McGill Model of Nursing, it is necessary to test the conceptual relationship between health and learning. However, instruments to measure health and learning as described in the McGill Model

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of Nursing have not yet been developed. Conceptual definitions developed by other researchers for sense of coherence (Antonovsky, 1987), self-directed continuing learning (Oddi, 1986, 1987), and psychological well-being (Bradburn, 1969) contain similarities to the interpretation of health and learning in the McGill Model. These researchers have also formulated and tested operational definitions for the study of sense of coherence, selfdirected continuing learning, and psychological well-being in research settings. Therefore, it was proposed in this study that an examination of these variables in an older population would contribute to testing and clarifying the concepts of health and learning in the McGill Model of Nursing. The study would also provide information about the relevance and usefulness of the McGill Model of Nursing to gerontological nursing in long-term care.

First Research Question. The first research question addressed the strength of sense of coherence and selfdirected continuing learning in a sample of older adults living in a large long-term care residence. The respondents' total scores indicated that sense of coherence and self-directed continuing learning tended to be high in this sample, with the total scores falling in the upper twothirds of the possible ranges. The mean score for sense of coherence compared favourably to the mean scores for 11 studies conducted with younger adults who were from

different countries and were mainly employed or enrolled in post-secondary education (Antonovsky, 1987). Similarly, the mean score for self-directed continuing learning compared favourably to the mean scores obtained by Oddi (1986) in a validation study with graduate students in law, education, and nursing. Thus, sense of coherence and self-directed continuing learning were demonstrated at levels similar to those exhibited by samples of younger adults engaged in occupations and post-secondary education.

In addition to examining the total scores, a descriptive analysis was also conducted on the subscores for the three components of sense of coherence: comprehensibility, manageability, and meaningfulness. Although sense of coherence is a unitary concept, Antonovsky (1987) postulated that the relative strength of each component may vary in an individual generally or temporarily during a specific life event. He identified eight possible configurations in which the components vary in strength relative to each other. The most stable configuration exists when all three components are high. Thus, in this study, the relatively high mean scores for comprehensibility, manageability, and meaningfulness may be interpreted as demonstrating a strong and stable sense of coherence in this sample.

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The highest mean score was obtained for manageability, followed by meaningfulness and comprehensibility

respectively. A possible explanation for this configuration may be that a change in the familiar order and predictability (comprehensibility) of the respondents' lives as they grow older is being balanced by their perceived ability to cope with the unknown through external resources, such as their families, the staff, and the services and security of the residence (manageability).

Second Research Question. The second research question addressed the relationship between sense of coherence and self-directed continuing learning. A statistically significant positive correlation indicated that a relationship does exist between sense of coherence and selfdirected continuing learning in this sample of older adults. Although the correlation was moderate, the strength and direction suggest that further investigation of this relationship is warranted.

Whereas the design of the study was correlational, conclusions cannot be drawn regarding the existence or direction of a causal relationship between sense of coherence and self-directed continuing learning. Further investigation is necessary to gain a clearer understanding of the relationship; however, it is plausible that the relationship is reciprocal rather than uni-directional. Some possible interpretations of the finding are as follows.

First, a strong sense of coherence involves a feeling of confidence that one's experiences in life are, for the

most part, comprehensible, manageable, and meaningful. This view of life may foster a strong self-directed continuing learning orientation based on the belief that the comprehensibility, manageability, and meaningfulness of life experiences can be discovered or increased by one's own efforts.

Second, a strong self-directed continuing learning orientation may contribute to a strong sense of coherence by providing knowledge, skills and insight that increase respectively the comprehensibility, manageability, and meaningfulness of one's life experiences. Older adults with a strong self-directed continuing learning orientation may possess a history of many successes in dealing with new and challenging situations. They may have learned how to find "discoverable principles" that give a sense of order and meaning to the changes in their lives, even when these changes are undesirable and unpredictable (Antonovsky, 1986, p. 219). The initiative, persistence, and motivation that are characteristic of self-directed continuing learners may strengthen older adults' confidence that the changes in their lives can be managed by drawing on past experiences and by seeking new resources. In this way, both a selfdirected continuing learning orientation and the learning that it generates may serve as Generalized Resistance Resources that strengthen one's sense of coherence.

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Third, Allen (1986) emphasized that two important characteristics of the active learner in the McGill Model of Nursing are the potential to learn health behaviors and the willingness to engage in health work. Antonovsky (1984) proposed that persons with a strong sense of coherence are more likely to actualize their potential by mobilizing the internal and external resources available to them and by engaging in the effort required to maintain and improve their health. The relationship between sense of coherence and self-directed continuing learning in this study may indicate that the initiative and persistence of selfdirected continuing learners contribute to their health potential by increasing their ability to mobilize the resources available to them and their willingness to engage in health-related learning.

An alternative interpretation for the moderate, rather than strong, relationship between sense of coherence and self-directed continuing learning in this study 1s that, in some cases, a strong self-directed continuing learning orientation may inhibit the formation of a strong sense of coherence. One would expect sense of coherence to be strengthened by the openness to new experiences and the tolerance for change that are a part of a strong selfdirected continuing learning orientation. On the other hand, these characteristics might lead a person to continually examine questions, ambiguities, and change in a

way that prevents the closure required for effective action and integration of new learning. Over time, this pattern may strain one's tension-management ability. It may interfere with finding cognitive sense (comprehensibility), a balance between underload and overload (manageability), and personal meaning and decision-making (meaningfulness) in one's life (Antonovsky, 1984, 1986). When viewed from the perspective of the McGill Model of Nursing, this interpretation adds to the importance of assessing each client as a unique learner.

Third Research Question. The third research question addressed whether sense of coherence and self-directed continuing learning were related to the psychological wellbeing of older adults living in a large long-term care residence. The moderately high positive relationship between sense of coherence and psychological well-being was supported by a moderate direct correlation between sense of coherence and overall happiness.

In the conceptual descriptions of sense of coherence and psychological well-being, stressors and negative feelings are identified as inevitable aspects of life. Antonovsky (1987) described sense of coherence as a personality disposition that influences the effectiveness of one's coping strategies in managing tension-producing situations and the emotions triggered by them. Thus, to the extent that a strong sense of coherence contributes to

effective tension management and regulation of negative emotions, a positive relationship would be expected between sense of coherence and psychological well-being. This was supported in this study.

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A person with a strong sense of coherence would also be more likely to view situations as benign or potentially positive and, thereby, be more likely to experience positive emotions. This was supported in this study by a direct relationship between sense of coherence and positive affect.

Similarly, in the course of both positive and negative experiences, a person with a strong sense of coherence would be more likely to experience focused emotions that are amenable to constructive regulation. The person would be less likely to experience diffuse emotions that are aimed broadly at a world in which one feels like a victim. In this study, the above was supported by an inverse relationship between sense of coherence and negative affect which, on the Affect Balance Scale, refers mainly to diffuse emotions such as feeling depressed, restless, or remote from other people.

The correlation between psychological well-being and sense of coherence was higher than the relationship found between psychological well-being and perceived health either in this study or in other studies which have identified perceived health as the strongest correlate cf subjective well-being (George and Landerman, 1984; Larson, 1978; Zautra

and Hempel, 1984). This finding lends support to the view of various researchers (Costa & McCrae, 1980a, 1980b; Gelein, 1983; Zautra and Hempel, 1984) that long-term dispositional characteristics may be stronger correlates of well-being than the situational and demographic variables commonly studied. This attention to long-term dispositional factors is theoretically similar to the McGill Model of Nursing in which the long-term patterns of coping, learning, and developing determine one's health moreso than specific situational variables, such as disease or physical disabilities.

The positive relationship between sense of coherence and psychological well-being in this study provides some direction for the concept of well-being in the McGill Model of Nursing. A nursing approach that contributes to the comprehensibility, manageability, and meaningfulness of a client's experiences and increases the client's potential for coping with life experiences may help to reduce negative affect and foster positive affect for a balance in favor of psychological well-being.

A positive statistically significant relationship was also found between self-directed continuing learning and psychological well-being. However, no statistically significant relationship was found between self-directed continuing learning and overall happiness. When added into a stepwise multiple regression equation that already

contained sense of coherence, self-directed continuing learning did not add significantly to the ability to predict the psycholgical well-being of older adults in this study.

In a major study on the correlates of psychological well-being, Bradburn (1969) suggested "that the larger part of the variance in positive affect that we have been attributing to social participation comes from the experience of novel or varied activities rather than from sociability per se" (p. 135). The positive correlation between self-directed continuing learning and psychological well-being in this study may reflect the openness to novel experiences and the enjoyment of learning that are characteristic of self-directed continuing learners. Again, this finding lends some support that older adults in a longterm care setting do seek new experiences and that these experiences are related to their well-being.

Self-directed continuing learning was also inversely correlated with negative affect. This suggests that older adults with a strong self-directed continuing learning orientation may be less likely to experience negative feelings such as boredom, restlessness, loneliness, and depression.

Implications for Gerontological Nursing Practice

The findings in this study support the premise that sense of coherence and self-directed continuing learning are dispositions that persist in the later years of life. The

scores suggest that older adults who reside in long-term care residences are, or have the potential to be, active learners and decision-makers in their life experiences. This is congruent with the McGill Model of Nursing in which the nurse assists individuals and families to use their own learning potential in order to discover healthful ways of coping with their experiences and achieve personal development through them.

The strong sense of coherence and strong self-directed continuing learning orientation demonstrated in this study imply that the older adults in this sample tend to engage in constructive coping and learning behaviors. Nevertheless, the range of scores indicates that older adults in a longterm care setting vary in their ability to mobilize the internal and external resources available to them. These differences require the nurse to learn about older adults' individual ways of coping and learning. This assessment then guides the nurse in selecting appropriate facilitative nursing actions, such as to supplement a weak sense of coherence and assist a strong one. In this way, the findings point toward a style of nursing that is both collaborative with older adults and creative in adapting the long-term care environment to maximize and supplement their own dispositions towards coping and learning.

As indicated earlier, self-directed continuing learning involves a tendency to view one's experiences as learning

opportunities. Self-directed continuing learners use different learning methods depending on the situation and according to personal ability and preference. The general learning behaviors, particularly initiative and persistence, are more important in self-directed continuing learning than the specific learning method used in a given situation.

Thus, the positive correlation between sense of coherence and self-directed continuing learning suggests that different older adults may use different learning methods in coping with tension-producing situations. Differences in the learning methods that are used by different individuals in similar situations or by the same individual in different situations may depend on whether the outcome would strengthen or threaten the comprehensibility, manageability, and meaningfulness of the event for the individual. For example, detailed information may help some individuals to cope better with life events while it may heighten anxiety in others. Again, the relationship between sense of coherence and self-directed continuing learning supports the importance of learning the personal meaning of an event for an individual and the learning methods that are most helpful for that individual in that situation at that time.

Directions for Gerontological Nursing Research

In keeping with research by Langer and Rodin (1976; Rodin & Langer, 1977) on control-enhancing interventions in

long-term care settings, a direction for nursing research is to examine the interpersonal and environmental factors that contribute positively to the sense of coherence and selfdirected continuing learning orientation of older adults in long-term care settings. For example, although sense of coherence is viewed as a relatively stable disposition, it is possible that it may be altered by a dramatic event followed by a pattern of new experiences (Antonovsky, 1987). Bronfenbrenner (1979) referred to such events as developmental transition points, and he hypothesized that the developmental potential of these events is increased when they are experienced with the support of a third party. The lowest mean score on the Orientation to Life Questionnaire occurred on Question #10 indicating there had been many unpredictable changes in the respondents' lives in the past ten years. Thus, research might examine how dramatic events in the lives of older adults, the experiences that follow them, and the role played by gerontological nurses act to reinforce or strengthen older adults' sense of coherence.

Whereas this study measured the respondents' sense of coherence at only one point in time, the data do not show whether its' strength and configuration had changed in comparison to earlier years or in relation to events such as widowhood and relocation. For example, comprehensibility may be reinforced in the later years by experiences that are

"developmentally harmonious with previous experience" (Antonovsky, 1986, pg. 215). On the other hand, comprehensibility in older adults may be diminished if they perceive a loss of meaningful and valued roles for them in society. A research question would be whether sense of coherence is influenced by older adults' perception of their role and value when they move to a long-term care setting. In such a case, the relatively lower subscores for comprehensibility in this sample might indicate a tendency towards a less stable configuration if comprehensibility was found to be declining over time.

Longitudinal research and, to a lesser extent, crosssectional research with different age groups would help to indicate whether there is a tendency for the strength and configuration of sense of coherence to change in older adults. If so, a focus for further research would be to identify nursing interventions that facilitate positive changes and reduce negative changes.

The McGill Model of Nursing should be tested further in the field of long-term care where there is a need for models of health and nursing that are relevant to the needs of individuals and their families. Sense of coherence and self-directed continuing learning offer conceptual and empirical variables to assist in this research. For example, Mohide, Pringle, Streiner, Gilbert, Muir, and Michelle (1990) conducted a randomized trial in which family
caregivers of individuals with moderate to severe dementia received in-home respite services, support group meetings, and individualized consultation, education, and support. While the findings showed no improvement in the caregivers' levels of anxiety and depression, the experimental group did report a clinically important improvement in the guality of their lives, in the caregiving role, and in their satisfaction with nursing care. With respect to sense of coherence, the interventions in the study by Mohide et al. may be viewed as Generalized Resistance Resources that support effective coping by increasing the comprehensibility (information about the disease process and client's behavior), manageability (respite services), and meaningfulness (emotional support and decision-making options) of the caregivers' experience. Regarding selfdirected continuing learning, the interventions were designed to maximize the caregivers' own abilities as active learners to improve the quality of their caregiving experience. Similar kinds of research could be generated by applying the conceptual framework of the McGill Model of Nursing to the examination of challenging situations in long-term care.

Furthermore, Antonovsky (1987) indicated that research has not been conducted to determine whether groups, such as families, possess a collective sense of coherence. This is relevant to long-term care situations in which the roles and responsibilities of family members are often affected for an extended time. Whereas the McGill Model of Nursing views the client as both individual and family, it would provide a conceptual model for this kind of study, such as with families who are assuming prolonged care viving responsibilities.

In discussion of her research on stamina in later life, Colerick (1985) provided an extensive interpretation of high stamina that resembles the positive relationship between sense of coherence and self-directed continuing learning in this study. She concluded that the "elderly with high stamina for managing change have learned through the years that change is inevitable, challenging, and manageable....In old age, these individuals look beyond age-related limitations for new ways to use energy - increasing understanding, extending skills, discovering more abilities" (p. 1004). Stamina is "formed over the life course as individuals learn (more or less well) to cope with change" (p. 1005).

Colerick linked learning and stamina in a manner similar to Reed's (1983) integration of learning and wellbeing in life span development. Her description of stamina as a characteristic that is developed through years of active learning and reflection in the course of one's life experiences is also similar to the interaction of learning and health in the McGill Model of Nursing. Thus, the

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positive relationships between sense of coherence, selfdirected continuing learning, and psychological well-being in this study contribute to the accumulation of research findings that support the theoretical relationships between learning, coping, development, health and well-being as postulated by the McGill Model of Nursing and other authors. This study suggests that the McGill Model of Nursing provides a conceptual framework for conducting further research on the relationships between these variables in the area of life span development.

Conclusion

In the McGill Model of Nursing, health and learning are conceptualized as processes. In quantitative research, this presents a challenge to identify variables that can measure health and learning in this way. Sense of coherence and self-directed continuing learning are personality dispositions that involve patterns over time in how an individual copes with, learns from, and builds upon successive experiences. In this study, the operational definitions of sense of coherence and self-directed continuing learning were the variables used to examine health and learning in the McGill Model of Nursing in a sample of older adults in a long-term care setting.

The positive relationship between sense of coherence and self-directed continuing learning in this study lends support to the relationship between health and learning in

the McGill Model of Nursing. This finding supports the continuing investigation of this relationship by similar and other research methods including qualitative research. The relationship should be tested in older adults across different life situations, socioeconomic conditions, and age groups. Further research is also required to develop methods of studying these concepts in nursing practice.

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This study also aimed to obtain information about the meaning of well-being in relation to health in the McGill Model of Nursing. The model involves a philosophical belief in the client's potential to experience health and wellbeing regardless of age, illness, disability, or life events. The positive correlation between sense of coherence and psychological well-being in the older adults in this study lends support to a conceptual relationship between health and well-being in the McGill Model of Nursing. It suggests that positive feelings can be gained and negative feelings can be reduced by learning ways to cope effectively with life experiences and to find meaning, purpose, and personal development through them. It contributes to the relevance of the model in guiding gerontological nursing practice in long-term care situations where health and wellbeing are considered possible in the presence of chronic illness and challenging life experiences.

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APPENDIX A

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ORIENTATION TO LIFE QUESTIONNAIRE

This questionnaire is a series of questions about various aspects of our lives. Each question has seven possible answers, represented by these numbers. I will read each question out loud. At the same time, I will show you a copy of the question and the choice of answers. For each question, please tell me the number that best fits your answer. If the words under number 1 are right for you, then tell me number 1. If the words under number 7 are right for you, then tell me number 7. If you feel differently, that is, if neither the words under 1 nor the words under 7 are right for you, then tell me the number in between that best expresses your feeling. (Please give only one answer to each question.)

Remember this is not a test, and there are no right or wrong answers. Choose the number that best fits how you feel. Let's try a sample first.

er ek 1. When you talk to people, do you have the feeling that they don't understand you?

	l never havc this feeling	2	3	4	5	6	7 always have this feeting
2.	In the past, when ing that it:	you had to do	something whic	h depended upo	n cooperation w	ith others, did	you have the feel
	l surely wouldn't get done	2	3	4	5	6	7 surcly would gct donc
3.	Think of the peop well do you know	le with whom most of them?	you come into c	contact daily, as	ide from the one	s to whom you	ı feel closest. Hov
	1 you feel that they're strangers	2	3	4	5	6	7 you know then vcry well
4.	Do you have the fe	eling that you	don't really care	e about what go	es on around you	u?	
	l very seldom or never	2	3.	4	5	6	7 very often
5.	Has it happened in well ^o	n the past tha	t you were sun	prised by the be	havior of people	e whom you t	hought you knew
	l never happened	2	3	.1	5	6	7 always happened

6 Has it happened that people whom you counted on disappointed you?

l never happened	2	3	-4	5	6	7 always happened
7. Lite is:						
full of interest	2	3	4	5	6	7 completely routine
8. Until now your life	has had:					
l no clear goals or purpose at all	2	3	4	5	6	7 very clear goals and purpose
9. Do you have the fee	ling that you	're being treated	unfairly?			
l very often	2	3	4	5	6	7 vcry seldom or never
P (g			\$ %			A .

10. In the past ten years your life has been:

1	2	3	4	5	6	7
full of changes						completely
without your knowing what will						consistent and clear
happen next						

11. Most of the things you do in the future will probably be:

1	2	3	4	រ៍	6	-
completely				.,		/
fascinating						deadly
						boring

12. Do you have the feeling that you are in an unfamiliar situation and don't know what to do?

l very often	2	3	4	5	6	7 very seldom or never
13. What best describes	how you see	life:				
l one can always find a solution to painful things in life	2	3	4	5	6	7 there is no solution to painful things in life

1.1.	When	you	think	about	your	life,	y ou	very	often	1
------	------	-----	-------	-------	------	-------	------	------	-------	---

	l feel how good it is to be alive	2	3	-1	5	6	7 ask yourself why you exist at all
15.	When you face a dif	ficult proble	em, the choice of	a solution is:			
	1 always confusing and hard to find	2	3	4	5	6	7 always completely clear
16.	Doing the things you	ı do every da	ıy is:				
	l a source of deep pleasure and satisfaction	2	3	4	5	6	7 a source of pain and boredom
17.	Your life in the futur	e will proba	blv be:				
	1 full of changes without your knowing what will happen next	2	3	4	5	6	7 completely con- sistent and clear
	r A			¢ 5			6 3

18. When something unpleasant happened in the past your tendency was:

	ן "to eat yourself" עף" about it	2	3	4	5	6	7 to say "ok, that's that, I have to live with it." and go on
19, E	Do you have very m	ixed-up feeli	ings and ideas?				
	1 very often	2	3	4	5	6	7 very seldom or nevei
20. W	'hen you do someth	ning that give	s you a good feel	ing.			
i	l t's certain that you'll go on feeling good	2	3	4 4	5	6	7 it's certain that something will happen to spoil the feeling
21. De	oes it happen that y	ou have feel	ings inside vou w	ould rather not	feel2		
	l very often	2	3	4	5	6	7 very seldom or never

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22. You anticipate that your personal life in the future will be

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1	2	3	4	5	6	7
totally without meaning or pur-						full of meaning and purpose
pose						•••

23. Do you think that there will always be people whom you'll be able to count on in the future?

I	2	3	4	5	G	~
you're certain			-	5	0	/
there will be						you doubt
diete will be						there will be

24. Does it happen that you have the feeling that you don't know exactly what's about to happen?

L	2	3	4	5	C	~
very often			•	5	U	/
·						very seldom
		•				or never

25. Many people-even those with a strong character-sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way in the past?

1	2	3	4	5	C	-
never			•	5	U	1
						verv often

ê-\$

26. When something happened, have you generally found that:

1	2	3	4	5	6	7
you overesti-						you saw things
mated or under-						in the right
estimated its						proportion
importance						• •

and the strategy states

27. When you think of difficulties you are likely to face in important aspects of your life, do you have the feeling that:

1	2	3	4	5	c	7
you will always		U	1	5	0	/
succeed in over-						you won't
coming the						succeed in over-
coming the						coming the
difficulties						difficultion
						anneuties

28. How often do you have the feeling that there's little meaning in the things you do in your daily life?

l very often	2	3	4	5	6	7 very seldom or never

29. How often do you have feelings that you're not sure you can keep under control?

very often	2	3	4	5	6	7
						very seldom
-			1 a			or never

APPENDIX B

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ODDI CONTINUING LEARNING INVENTORY

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		DISAGREE				AGREE			
		Strongly	Moderately	Slightly	UNDECIDED	Slightly	Moderately	Strongly	
1.	I successfully complete tasks I undertake.	1	2	3	4	5	6	7	
2.	My work is beneficial to society.	1	2	3	4	5	6	7	
3.	I seek involvement with others in school or work projects.	1	2	3	4	5	6	7	
4.	I make an effort to learn the maaning of new words I encounter.	1	2	3	4	5	6	7	
5.	My values and beliefs help me to meet daily challenges.	1	2	3	4	5	6	7	
6.	I seek the views of others when I am curious about something.	1	2	3	4	5	6	7	
7.	I have a hobby (such as writing, painting, or making things) which provides me with a means of self-expression.	1	2	3	4	5	6	7	
8.	I am able to resist the efforts of others to pressure me into doing something I don't want to do.	1	2	3	4	5	6	7	
9.	I regularly read professional journals.	1	2	3	4	5	6	7	
10.	I select serious literature (such as history, biographies, or the classics) for my reading pleasure.	1	2	3	4	5	6	7	
<u>11.</u>	I volunteer for new assignments.	1	2	3	4	5	6	7	
12.	I'm not comfortable with my performance on an assignment until my supervisor, teacher, or colleague says it's acceptable.	1	2	3	4	5	6	7	
13.	I have been an eager reader since childhood.	1	2	3	4	5	6	7	

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		DIS	DISAGREE			1	AGREE	
		Strongly	Moderately	Slightly	UNDECIDED	Slightly	Moderately	Strongly
14.	After I read a book or see a play or a film, I talk to others to see what they think about it.	1	2	3	4	5	6	7
15.	I resist judging others (such as new managers or teachers) until I've had an opportunity to associate with them.	1	2	3	4	5	6	7
16.	When I do a job well, it's because I have been prepared and have put in personal effort.	1	2	3	4	5	6	7
17.	I find it difficult to judge if I've performed well or poorly on a task such as giving a speech, writing a paper, or answering a test question.	1	2	3	4	5	6	7
18.	Once I start to work on a task, I keep working until it's done to my satisfaction.	1	2	3	4	5	6	7
19.	I read an average of one or more national news magazines each week.	1	2	3	4	5	6	7
20.	When in school, I tend to have difficulty in estimating whether or not the teacher is going to like my work.	1	2	3	4	5	6	7
21.	I find it useful to think about people (or refer to them) according to categories (such as by educa- tion, occupation, race, or ethnic background).	1	2	3	4	5	6	7
22.	I work more effectively if I have freedom to regulate myself.	1	2	3	4	5	6	7
23.	I make an effort to meet new people.	1	2	3	4	5	6	7
24.	Being afraid to take a chance has prevented me from doing something I have warled to do at some time in my life.	1	2	3	4	5	6	7

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APPENDIX C

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ODDI CONTINUING LEARNING INVENTORY

(REVISED)

This is a set of statements about learning. I will read each statement out loud. At the same time, I will show you a copy of the statement and the choice of answers. There are seven possible answers, represented by these numbers and words. Choose the answer that describes how much you agree or disagree that the statement describes how you learn. If you agree that a statement describes your approach to learning, then tell me if you agree strongly, agree moderately, or agree slightly. If you disagree that the statement describes how you learn, then tell me if you disagree strongly, disagree moderately, or disagree slightly. If you can't agree or disagree with the statement thenthe answer will be undecided.

Remember there are no right or wrong answers; choose the answer that is right for you. (Usually the answer that comes to your mind first is the one that is true for you. If you have difficulty deciding, select the response that is least objectionable to you.)

Let's try a sample first.

	<u>l success</u>	fully comple	<u>ete tasks I u</u>	<u>ndertake</u> .		
l disagree strongly	2 disagree Moderately	3 disagree slightly	4 undec i ded	5 agree slightly	6 agree moderately	7 agree strongly
	<u>My</u> activi	ties are ben	eficial to se	ociety.		
1	2	3	4	- 5	ь	7
disagree strongly	disagree moderately	disagree slightly	undec i ded	agree slightly	agree moderately	agree strong)
1	<u>1 Seek In</u>	volvement wi	<u>th others in</u> 4	activities 5	<u>or projects</u> . 6	7
disagree strongly	disagree moderately	disagree slightly	undec i ded	agree slightly	agree moderately	agree strongl
	l make an l encount	<u>effort to l</u> er.	earn the mea	ning of new	words	
1	2	'}	4	5	h	7
disagree strongly	disagree moderateiv	disagree slightly	undec i ded	agree slightly	agree moderately	agree strongt
			,			

Margar.

		d berrers ne				
1	2	3	4	5	6	7
disagree strongly	disagree moderately	disagree slightly	undec i ded	agree slightly	agree moderately	agre strong
	I seek the v	iews of othe	ers when I am	curious ab	out something	
1	<u>I seek the v</u> 2	iews of othe 3	<u>ers when I am</u> 4	curious abo 5	out something 6	7

	<u>I have a hob</u>	by (such as	writing, pair	nting, or ma	aking things)					
which provides me with a means of self-expression.										
1	' 2	З	4	5	6	7				
disagroo	disarco	disagroo		aaroo	aaroo					
strongly	moderately	slightly	undecided	slightly	moderately	strongly				

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	<u>I am able to</u> into doing t	resist the hings I don'	efforts of o t want to do	thers to pro	essure me	
1	2	3	4	5	6	7
disagree strongly	disagree moderately	disagree slightly	undec i ded	agree slightly	agree moderately	agree strongly
	I regularly i	read profess	ional journa.	<u>ls</u> .		
1	2	3	4	5	6	7
disagree strongly	disagree moderately	disagree slightly	undec i ded	agree slightly	agree moderately	agree strongly
	I select se	rious litera	ture (such as	s history, I	piographies,	

1 26	rect	Serr	ous	IILE	<u>era</u> t	ure	Suc	in as	mst
<u>or</u> t	he cl	lassi	cs)	for	my	read	ing	plea	<u>sur</u> e.

1	2	3	4	5	6	7
di s agree	disagree	disagree	undec i ded	agree	agree	agree
strongly	moderately	slightly		slightly	moderately	strongly

CAR!

	<u>l get involv</u>	ed in new ex	(periences.			
l disagree strongly	2 disagree moderately	3 disagree slightly	4 undecided	5 agree slightly	6 agree moderately	7 agree strongl
	l'm not comf	ortable with	i my pertorma	nce on a ta	sk	
	until someon	e says it's	acceptable.			
1	2	3	4	5	6	7
disagree strongly	disagree moderately	disagree slightly	undec i ded	agree slightly	agree moderately	agree strongl
	<u> </u>			·		
	l have been a	an eager rea	der since ch	ildhood		
1	<u>I have been a</u>	an eager rea	der since ch	i I dhood .	4	_

	After I read talk to othe	a book or s is to see wh	ee a play or at they thin	<u>a film, l</u> k about it.		
1	2	3	4	5	6	7
disagree strongly	disagree moderately	disagree slightly	undec i ded	agree slightly	agree moderately	agree strongl
			·····			
	<u>I resist jude</u> until I've ha	jing others ad an opport	(such as new unity to asso	nurses or vociate with	volunteers) them.	
1		3	<u>/</u>	5		7
disagree	di sagree	disagree	undec i ded	adree	agree	auree
strongly	moderately	slightly		slightly	moderately	strongl

	When I do a	job well, it	's because I	have been	prepared	
	and have put	in personal	effort.			
1	2	3	4	5	6	7
disagree strongly	disagree moderately	disagree slightly	undec i ded	agree slightly	agree moderately	agree strongly

North

		1 find it difficult to judge if l've performed well or poorly on a task or project.						
	1	2	3	4	5	6	7	
	disagree strongly	disagree moderately	disagree slightly	undecided	agree slightly	agree moderately	agree strongly	
<u></u>		Once I start until it's do	to work on a one to my sa	a task, I kee tisfaction.	ep working			
	1	2	3	4	5	6	7	
	disagree strongly	disagree moderately	disagree slightly	undec i ded	agree slightly	agree moderately	agree strongly	
		<u>í read an ave</u> each week.	erage of one	or more nati	onal news n	nagazines		
	1	2	3	∠	5	6	7	
	disagree strongly	disagree moderately	disagree slightly	underided	agree slightly	agree moderately	agree strongly	

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* *

	When involve	<mark>d in a proje</mark>	ect, I tend to	<u>o have diff</u>	<u>iculty</u>	
	<u>in estimatin</u>	<u>y whether or</u>	not the per:	son-in-char	<u>ge is</u>	
	going to like	<u>e my work</u> .				
1	2	3	4	5	6	7
disagree strongly	disagree moderately	disagree slightly	undecided	agree slightly	agree moderatelv	agree strongly

<u>I find it</u>	useful	to	<u>think a</u>	about	people	(or	refer	to	them)
according	to cate	gor	ies (s)	ich as	s by edu	icat	ion,		
occupation	n. race,	10	ethnic	: back	(ground)).			

1	2	3	4	5	6	7
disagree	disagree	disagree	undec i ded	agree	agree	agree
strongly	moderately	slightly		slightly	moderately	strongly

	I work more	effectively	if I have fr	eedom to re	gulate myself	
1	2	3	4	5	6	7
disagree strongly	disagree moderately	disagree Slightly	undec i ded	agree slightly	agree moderately	agree strongly
	i make an ef	fort to meet	new people.			
1	2	3	4	5	6	7
disagree strongly	disagree moderately	disagree slightly	undec i ded	agree slightly	agree moderately	agree strongly
	<u>Being afraid</u> doing someth in my life.	to take a c ing I have w	hance has pre anted to do a	evented me at some time	<u>from</u> e	
1	2	3	4	5	6	7
lisagree strongly	disagree moderately	disagree slightly	undec i ded	agree slightly	agree moderately	agree stronglv

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APPENDIX D

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AFFECT BALANCE SCALE

Here is a list that describes some of the ways people feel at different times. During the past few weeks, how often have you felt ...

On top of the world? Often Sometimes Never

Very lonely or remote Often Sometimes Never from other people?

Particularly excited or Often Somecimes Never interested in something?

Depressed or very unhappy? Often Sometimes Never

Pleased about having Often Sometimes Never accomplished something?

Bored? Often Sometimes Never

Proud because someone Often Sometimes Never complimented you on something you had done?

So restless you couldn't Often Sometimes Never sit long in a chair?

That things were going Often Sometimes Never your way?

Upset because someone Often Sometimes Never criticized vou?

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APPENDIX E

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OVERALL HAPPINESS INSTRUMENT

Taking things all together, how would you say things are these days --- would you say that you are very happy, pretty happy, or not too happy ?

Very Нарру	(j
Pretty Happy	ſ	J
Not Too Happy	()

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APPENDIX F

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HEALTH PERCEPTION SCALE

I would like you to answer the next question on this line using this pen. The question is, "How would you rate your health at the present time?" This end of the line is marked <u>Poor</u>; the other end is marked <u>Excellent</u>. You may place a mark anywhere along the line that best fits your answer to the question:

"How would you rate your health at the present time?"

Poor _____ Excellent

APPENDIX G

DEMOGRAPHIC DATA INVENTORY

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I would like to ask you a few questions about yourself

1. Birthdare. (.../.....) mo. dv. yr.

2 Current Marital Status:

Single (Never Married)	۱.	1
Married	I)
Widowed	ŧ	J
Separated	ſ	}
Divorced	ι	ł

3. How many years of schooling have you completed? []

4. What is the highest certificate, diploma, or degree that you have obtained?

5. What was your primary occupation or daily work?

6. Would you say that religion is <u>very important in</u> <u>your life</u>, <u>somewhat important in your life</u>, or of <u>little or no importance in your life</u> ?

Very important in your life ()
Somewhat important in your life ()
Of little or no importance in your life ()

APPENDIX H

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STAFF PERCEPTION SCALE

For each of the residents listed on the attached sheets, please answer the following question by putting a mark through the line at the point that best fits your answer The question is:

In general, to what extent does the person deal with the problems and experiences in his or her life as meaningful challenges or learning opportunities?

Not At All ______ Niways

One end of the line is marked <u>Not At All</u>, the other end is marked <u>Always</u>. You may place your mark anywhere along the line that best matches your answer to the question.

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おとうそうでいっている ちょうじんしょう ちょうちょう ちょうしょう ちょうしょう

Thank you very much for your time and assistance in providing this perspective from your experience with the residents. APPENDIX I

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CONSENT FORM

Consent to Participate in Research Study

Mary Comer is a nurse and a student in the Master of Science Program in Nursing at McGill University. She is conducting a nursing research study on learning, health, and happiness. There are no direct advantages to me in participating in this study. It is hoped that the study will, in the long run, assist nurses to help people to remain healthy and happy in their senior years. Mary Comer has requested my participation in this study and has explained to me what my participation will involve.

- I will answer four questionnaires presented to me by
 M. Comer The interview will take about one hour.
 - 2. All the information I provide will be confidential. My name will not be revealed and will not appear on the questionnaires. The interview will take place in a private location. I give permission for M. Comer to consult my nurse and nursing record if necessary for the purpose of the study.
- 3. My participation is completely voluntary. I am free to stop my involvement at any time with no explanation and no consequences to the services I receive.

- 4. Although I am encouraged to answer all the questions,I may refuse to answer any question.
- 5. I have had the opportunity to discuss any questions about my participation with M. Comer.
- 6. I shall receive a signed copy of this consent form at the time of signing.

On the basis of the above statements, I agree to participate.

Dated the day of, 1989.

Research Report Desired: Yes.... No....

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Annexe F

Formulaire de consentement

Mary Comer est infirmière et elle prépare une maîtrise en sciences infirmières à l'université McGill. Elle a entrepris une étude sur l'apprentissage et la santé. Ma participation à cette étude ne procurera aucun avantage direct. A long terme, cette étude devrait toutefois permettre aux infirmiers et infirmières de mieux aider les personnes âgées à prendre soin de leur santé. Mary Comer m'a demandé de prendre part à cette etude et m'a expliqué en quoi consisterait ma participation.

- 1. Je répondrai aux quatre questionnaires qu'elle me soumettra. Le tout durera environ une heure.
- 2. Tous les renseignements que je fournirai seront tenus confidentiels. Mon nom ne sera pas divulgue ni n'apparaîtra sur les questionnaires. Je répondrai à ceux-ci dans une pièce réservée à cet effet. J'autorise Mlle Comer à consulter mon dossier de soins infirmiers, pour les besoins de l'étude.
- 3. Ma participation à l'étude étant entièrement libre, je peux y mettre fin à tout moment sans avoir à fournir d'explications et sans que cela porte préjudice aux services que je reçois.
- Bien que je sois invité à répondre à toutes les questions, je suis libre de répondre à celles que je veux.
- 5. J'ai discuté de tous les aspects touchant ma participation avec Mlle Comer.
- 6. Un exemplaire de ce formulaire de consentement me sera remis lorsque j'y aurai apposé ma signature.

Au vu de ce qui précède, j'accepte de participer à cette étude.

Date		• • •	••••			•
Nom du participant		•••	• • • •		• • • •	•
Signature du participant	• • • • •	•••	• • • •			•
Signature du chercheur	• • • • •	• • •	• • • •			•
Souhaitez-vous obtenir le rapport de recherche?	oui	• • •		nor	n	•

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