

THE ROLE OF SELF-DIRECTED LEARNING IN OLDER ADULTS' HEALTH CARE

by

JANET S. VALENTE

(Under the Direction of SHARAN B. MERRIAM)

ABSTRACT

The purpose of this study was to understand the role of self-directed learning in older adults' health care. This research employed a descriptive qualitative design that used in-depth and semi-structured interviews for data collection. The sample of 15 purposefully selected older adults, ages 65-89, reflected diversity in race, gender, education, professions and health conditions. All participants lived independently in their own homes or apartments. Six research questions guided this study: (1) What motivates older adults to take control of their learning regarding health care? (2) What health care behaviors are controlled by self-directed learners? (3) What contextual factors are controlled by self-directed learners? (4) What is the process of self-directed learning of one's health care? (5) How does self-directed learning affect one's health care? (6) What barriers do learners experience in the self-direction of their health care?

Data analysis was guided by the constant comparative method revealing the following findings: The factors that motivate older adults are age related issues, other people and the potential benefits associated with controlling health. Self-directed learners control their health by establishing appropriate physical activity and exercise levels, maintaining a positive psychological health, managing specific health conditions, and controlling their living environments. There is a specific process of self-directed learning beginning with a health event,

receiving a diagnosis, acquiring and assessing information, choosing treatment options, monitoring treatment results, and managing adjustments in life style and treatment. Self-directed learners perceive that learning reduces threats to their health, raises body awareness, and increases collaborative management of their health care.

Three conclusions were drawn related to the role of self-directed learning and health: (1) Older adults are motivated to take control of certain aspects of their health care; (2) The self-directed learning process specific to health care involves negotiation and socialization; and (3) Self-directed learning is perceived as positively affecting health care. Practical implications from this study suggest that adult educators develop collaborative working arrangements with health professionals to design interventions and/or programs that promote motivation and empowerment for older adults. Older adults need to be made aware of the potential benefits to their health by using self-directed learning.

INDEX WORDS: Self-directed learning, Older adults, Health care, Process of learning, Qualitative research, Adult education

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JANET S. VALENTE

B.S., The University of Georgia, 1984

M.S., The University of Georgia, 1986

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by

JANET S. VALENTE

Major Professor: Sharan B. Merriam

Committee: Brad C. Courtenay
 Richard C. Kiely
 Nancy P. Kropf

Electronic Version Approved:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
May 2005

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CHAPTER 1

INTRODUCTION

Background of the Problem

The U.S. population is comprised of 35 million adults aged 65 and older. By 2030, the number of older adults will have doubled to 70 million, or one in every five Americans (National Center for Chronic Disease Prevention and Health Promotion, 2002). These older adults are the most frequent users of medical services and their growing numbers are placing increasing demands on medical and social services in the U.S. Almost one-third of today's health care costs in the U.S., or \$300 billion each year is for older adults. Chronic diseases exact a heavy health and economic burden on nearly 40% of the older adult population living within the community due to associated long-term illness, diminished quality of life, and greatly increased health care costs (National Center for Chronic Disease Prevention and Health Promotion, 2002). In addition, older adult's health is often compounded by multiple health conditions, adjustments to later life events such as deaths of spouses, partners, friends, and loved ones, loss of homes, financial challenges of retirement years, and societal changes (Deluca & Enmar, 2001; Neugarten, 1996; Roberson, 2003). These demands and issues, combined with recent changes in the way health care is covered by insurance and delivered by medical and social services agencies, has serious implications for the future direction of health care policies, delivery, costs and availability.

Although the risk of disease and disability increases with advancing age, poor health is not an inevitable consequence of aging. Health promoting self-care behavior, which emphasizes positive lifestyle practices, may improve health for older adults (Acton & Malatham, 2000). To

the extent that health care professionals find ways of harnessing the interest of older adults in their own care, the health of this population may significantly improve at decreased costs to the health care system (DeFriese, 1993; Hibbard, Greenlick, Jimison, Kunkel, & Tusler, 1999).

Recent changes in the medical establishment have underscored the need for adults to be self-directed towards their health care. Managed care provider reimbursement policies have led to moving patients quickly through the health care system and discharging sicker patients earlier from medical facilities. Physicians are pressured to limit time for dialogue resulting in less health education and less interaction with patients during office visits. In addition, prescription drug reimbursement limitations sometimes force older adults to discontinue prescribed medicines.

Due to these changes in the health care system, there is a growing interest in prevention and preventive medicine, with an emphasis on patient responsibility (Berman & Iris, 1998; National Centers for Chronic Disease Prevention & Health Promotion, 2002). Patients are urged to take charge of their own care with regard to exercise, management of chronic diseases, smoking reduction, and reducing or eliminating other harmful behaviors. A recent qualitative study of 50 older adults designed to examine their behavior and attitudes in relation to self health care, found that older adults thought it important to take care of oneself both at home and in the doctor's office by learning about their illness on their own (Berman & Iris, 1998). Some of the older adults firmly believed that they could do something about their health, and that they could control many aspects of the aging process if they took charge. Their activities to gain control included searching for health information and utilizing recommendations from health professionals for a healthy lifestyle. However, other respondents in the study reported that they could not do anything about their health and would rely on others, such as physicians, family members or paid caregivers for advice and care.

Other studies suggest that if what an older adult is learning is perceived to help them gain a “sense of control,” then they are more likely to exercise positive health promotion behaviors (Grembowski, et al., 1993; Rodin, 1986; Waller & Bates, 1992). The term health behaviors are conceptualized as behaviors geared toward health promotion and illness prevention (Padula, 1997). A closer investigation of the role of self-directed learning in older adults’ health care, and the application of that learning may provide insight into how their learning impacts the quality of their lives, health care decisions, and their relationships with their health care providers.

Self-directed Learning

Self-directed learning is based on the premise that the learner assumes the primary responsibility for planning, carrying out, and evaluating learning experiences (Knowles, 1975). Taking primary responsibility means that individuals assume ownership for their own thoughts and actions and take control over how to respond to a given situation. Within the context of learning, it is the ability and/or willingness of individuals to direct their own learning that determines their potential for self-direction (Brockett & Hiemstra, 1991).

Tremblay (1981) refers to personal autonomy in learning as learning undertaken by an individual without benefit of either an institution or any other formal educational agent. Chene (1983) defines the autonomous learner as independent and able to make choices and critical judgments, while Candy (1991) characterizes autonomous learners as those who have a strong sense of personal values and beliefs. These values and beliefs provide the learner with a solid foundation for conceiving goals and plans, making and evaluating choices, accomplishing goals, exercising self-restraint and self-discipline (Candy, 1991).

Candy uses the term autodidactic to refer to the learner’s autonomy and self-management when self-directing learning. The autodidactic processes operate around intentions, which take

shape without any prior consideration; the learner is constantly readjusting objectives depending on personal tastes, wishes and circumstances (Candy, 1991; Danis & Tremblay, 1985).

Additionally, the self-taught adult functions as both the learner and teacher, and learning projects are organized according to the resources available to them. In practice, the autodidactic adult learner spontaneously formulates a group of rules and principles to govern learning. They often try out their competence by considering the tangible results they obtain and by trusting to an inner feeling that he or she has succeeded (Danis & Tremblay, 1985). Thus, the adult learner's sense of control over a learning event, coupled with a successful learning experience, provides a strong potential foundation for continued self-directed learning activities.

The process orientation of self-directed learning centers on activities of planning, implementing, and evaluating learning. In the early linear models of Tough (1971) and Knowles (1975), learners moved through a series of steps to reach their learning goals in a self-directed manner with many of the elements similar to the traditional teaching process. Tough (1971) found that adults were involved in about eight different self-directed learning projects a year. He defined a learning project as a highly deliberate effort to gain and retain certain knowledge and skill, or to change in some other way through a series of related episodes of seven hours duration or more. In his study, 66 participants were interviewed about learning projects they completed during one year. The most significant finding was that the majority (68%) of the learning projects were primarily planned by the individual learners themselves. In a follow-up study, Tough's (1982) research on intentional changes revealed that the self-directed person assumes about 70% of the responsibility for all the tasks involved in choosing the change, planning the strategy, and implementing the strategy.

Self-directed learning is a process in which the learner has control over both the means and goals for learning (Mocker & Spear, 1982). A study conducted by Spear and Mocker (1984) investigated planning patterns by interviewing 78 adults who had less than a high school education. The study's purpose was to determine the extent self-directed learners consciously pre-plan their learning activities. The findings documented that pre-planning usually did not exist for this group of self-directed learners. Instead, learning was governed by the available resources within the environment such as observing others, educational materials, and educational events.

In an investigation focusing on older adult learning projects, Hiemstra (1975) interviewed 256 older persons with a mean age of 68.1, to determine their involvement in learning projects. He found that 83.5% reported conducting one or more learning projects each year. Fifty-five percent of these activities were self-planned. This study established that older adults are active learners and that the majority of learning activity is reflected through the self-planned learning projects. A more recent survey of 865 older adults revealed that they are spending 27.86 hours per month in self-directed learning projects (Lamdin & Fugate, 1997). Twenty-seven percent of the adults were involved in formal topics, 52% in practical topics, and 21% in intra-self topics. Varieties of subjects were recounted including spirituality, volunteer work, travel and health-related issues.

Tough's (1971) and Knowles's (1975) linear view of the self-directed learning process stresses the phases of the learning process itself. These models put emphasis on the individual's initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies and evaluating learning outcomes.

Unlike the linear models, the interactive models of self-directed learning require an emphasis on two or more factors, such as opportunities people find in their own environments, organizing circumstances, personality characteristics of learners, cognitive processes, and the context of learning (Brockett & Hiemstra, 1991; Cavaliere, 1992; Danis, 1992; Garrison, 1997; Spear, 1988). These factors work collectively to form an episode of self-directed learning. These models help to define the elements, which determine how learners approach their self-directed learning projects. Spear's model proposes three elements: the individual's own learning environment, past or new knowledge, and things happening by chance helping to organize learning activities. Cavalier describes the stages of learning and cognitive processes that a self-directed learner may use. Brockett and Hiemstra's model, The Personal Responsibility Orientation (PRO), investigates two dimensions of learning: instructional methods and learner personality characteristics. In the PRO model, individual learners are central to the idea of self-direction coupled with a consideration of the context in which the learning activity occurs.

Furthermore, Danis' and Tremblay's model is grounded in the notions of self-regulated learning and the learning cycle process and not the internal cognitive aspects. The key components of this model focus on the strategies, phases, and contextual factors that learners encounter as they acquire and reflect upon their learning. Finally, Garrison's (1997) multidimensional and interactive model of self-directed learning is grounded in a constructivist perspective. This model has three dimensions: self-management, self-monitoring, and motivational elements. It provides yet another explanation of self-directed learning by viewing the process from cognitive and motivational dimensions. The interactive models offer additional insight into key elements that influence self-directed learning by focusing on the personality characteristics and cognitive abilities of the learner. The models also increase understanding of

the contextual factors that facilitate, inhibit or modify the acquisition or application of new knowledge.

In addition to self-directed learning models, there are also self-directed learning instruments. The primary instrument used to investigate the characteristics of the self-directed older adult learner is the Self-Directed Learning Readiness Scale (SDLRS). The SDLRS is designed to determine whether individuals possess skills and attitudes frequently associated with self-directedness in learning (Guglielmino, 1977). Using the SDLRS, Brockett (1982) found a link between self-direction and perceived life satisfaction among a sample of 64 older adults, aged 60+ living in a public housing building. In another self-directed learning study of 103 older adults living in a retirement village, East (1987) found that self-directedness was related to life satisfaction, and that acceptance of responsibility for one's own learning and love of learning were highly related to that satisfaction. Taken together these studies provide support to the link between life satisfaction and self-directedness among older adults. Recent development of a new scale to measure self-directedness, the Personal Responsibility Orientation Self-directed Learning Scale (PRO-SDLS) may provide yet additional insight into the self-directed learning process (Stockdale & Brockett, 2003).

Looking beyond the research findings related to the individual characteristics and processes of self-direction, self-directed learning has also been viewed from a cognitive perspective. Brookfield (1986) considers the notion of self-directed learning as a cognitive process grounded in reflection. He suggests that self-directed learners are inner-directed, individualistic, analytical, socially independent, and possess a strong sense of self-identity. In an earlier study focusing on self-directed learning and reflection, Brookfield (1981) used semi-structured interviews with 25 self-directed adults asking questions emphasizing the individual's

expertise. The themes that emerged revealed that the adult learners tended to view their involvement as ongoing with no end. They did not feel constrained to limiting their study to conventional boundaries; rather, they loved to explore new things. They assumed primary responsibility for planning and carrying out learning activities but did not work in isolation.

It has been demonstrated by earlier studies that the learner who practices self-direction takes the responsibility to learn, reflects on the action by accessing their options and secures the necessary resources. Personal characteristics of the learner, such as their attitudes, values, beliefs, and abilities determine whether self-directed learning will take place in a given learning situation (Marks & Lutgendorf, 1999). These personal characteristics combined with reflection practices will influence the choices made by learners in their pursuit of information including planning, implementing, and evaluating the learning process.

Furthermore, adults are fairly competent when they undertake learning that is pertinent to something of interest in their own day-to-day life situations (Tough, 1979). Critical to managing one's care is learning about health maintenance options, making decisions, and choosing behaviors that are based on sound health knowledge and healthful attitudes (Keller & Fleury, 2000). In a recent study of older adults (Roberson, 2003), physical health was found to be the most pervasive topic of discussion. Adjusting physical changes became the impetus or motivation for self-directed learning (Roberson, 2003). More focused planning and reflection on the process are likely to enhance the value and effectiveness of self-directed learning (Guglielmino & Guglielmino, 1991). Although we know the basic processes and personality characteristics of individuals who are self-directed, we know little about how the older adult, faced with health decisions, acquires information and implements their learning toward maintaining control of their health.

Problem Statement

Growing numbers of older adults are placing increasing demands on medical services systems and subsequently, will affect the future direction of health care policy. In response to the increasing numbers, costs, and health care needs of older adults, the medical establishment has changed patient-care policies. For example, managed care provider reimbursement policies have created incentives to move patients quickly through the health care system and have pressured physicians to limit office visit time for dialogue and health education. In response to these changes, health educators have been promoting an active role for the patient in their own health care (Berman & Iris, 1998; Keller & Fleury, 2000; National Centers for Chronic Disease Prevention & Health Promotion, 2002).

The importance of understanding factors contributing to health maintenance is especially relevant for older adults, as it is this segment of the population who are most at risk. Those older adults who have taken control of their health care are self-directing their own learning. However, little is known about how older adults are using self-directed learning to gain access to health information and how this information is affecting their health care.

Purpose of the Study

The purpose of this study was to understand the role of self-directed learning in older adults' health care. The research questions that guide this study are as follows:

1. What motivates older adults to take control of their learning regarding health care?
2. What health care behaviors are controlled by self-directed learners?
3. What contextual factors are controlled by self-directed learners?
4. What is the process of self-directed learning of one's health care?
5. How does self-directed learning affect one's health care?

6. What barriers do learners experience in the self-direction of their health care?

Significance of the Study

By looking at the process of self-directed learning among older adults in relation to their health care, this study provides a number of theoretical and practical contributions. First, the study contributes to the self-directed learning literature. Theoretically, the study contributes to the limited amount of adult education literature, which focuses on the older adult self-directed learning process. Out of the voluminous amount of literature on self-directed learning, only a handful of studies deal with older adults. Secondly, the study contributes to the health care and older adult literatures. The context of health is especially ripe for investigation due to changes in the medical care system and the new emphasis on health prevention policies, which encourage older adults to become more involved and self-directed. Specifically, this study provides new insight into the process used by older adults as they manage their care through self-direction and the impact this process has on their health care.

This study offers practical significance by providing insight into the process that older self-directed learners use when learning about their health care. This information is relevant to gerontologists, adult educators, and health care workers in designing training programs and materials. Gerontologists will find clues that lead to the factors that motivate self-directed older adults. This in turn is helpful in assessing and designing appropriate learning environments and educational materials. Adult educators and health care workers use this information to better structure their activities to enhance and promote self-direction with older adult learners.

Finally, a deeper understanding of the self-directed learning process is essential in the changing world of medical care. This study provides introspection into a new dimension of health care, one in which the informed and involved self-directed older adult patient takes a more

aggressive, proactive posture with respect to their health. This information plays a critical role, allowing for the utilization of self-directed health care options that promote a personalized and cost effective approach that current health care policy makers are demanding. As we move into an era of increasing health care needs and limited resources to support health care, the opportunity for self-directed and self-managed care becomes essential to maintenance of one's health.

Definition of Terms

The following terms are defined for purposes of clarity in this study:

Chronic Condition – A chronic condition is a health-related state lasting one to three months or longer which limits a person's activities and may require ongoing medical care.

Health Behaviors - Activities that people do geared toward staying healthy and preventing illness.

Older Adults - Individuals who are 65 years of age and older.

Self-directed Learning - The process built on the notion that the learner assumes the primary responsibility for planning, carrying out, and evaluating learning experiences.

Self-care - A concept of health care wherein individuals can manage many of their own health problems when given sufficient instruction and appropriate medications (U.S. Department of Health and Human Services, 1986).

CHAPTER 2

REVIEW OF THE LITERATURE

The purpose of this study was to understand the role of self-directed learning in older adults' health care. The central questions guiding this study are: (1) What motivates older adults to take control of their learning regarding health care? (2) What health care behaviors are controlled by self-directed learners? (3) What contextual factors are controlled by self-directed learners? (4) What is the process of self-directed learning of one's health care? (5) How does self-directed learning affect one's health care? (6) What barriers do learners experience in the self-direction of their health care?

According to Rossman and Rallis (2003), "use of the literature establishes what the study is about by reviewing both theoretical and empirical research in an attempt to define the boundaries of the study" (p. 123). The four major sections of this study's literature review include the U.S. health care system, self-care, self-directed learning, and self-directed learning related to older adults. The literature related to the health care system will set the stage for this study by identifying the key issues within the system that contribute to the older adult taking control of their health care. A review of self-care as a health care option for older adults provides a philosophical foundation from which to build a relationship between health, education, self-directed learning and older adults. The review of self-directed learning literature will ground the study in the field of adult education.

Several documents and reports related to health care policy and older adults were accessed in support of the first section on the U.S. Health Care System. These documents were

secured online through a variety of sites: Center for Disease Control and Prevention (CDC), Public Policy Institute of the American Association of Retired Persons (AARP), the Gerontological Society of America, and the National Center for Health Statistics and the National Research Council. The literature contributing to the current knowledge of self-care comes primarily from gerontology, health psychology, sociology, social work, health promotion, and wellness education. Self-directed learning literature was gathered primarily from the field of Adult Education. Online searches via GALILEO at the University of Georgia were conducted. ERIC, Dissertation Abstracts, and EBSCO were the primary databases searched. Various descriptors and combinations of descriptors were used, including: aged, alternative medicine health care, health status, older adults, preventative care, self-care, self-management, quality of life, and self-directed learning.

The U.S. Health Care System

The U.S. health care system is undergoing rapid changes. Competition has emerged as a powerful force in the health sector. A key part of this competitive approach is to activate consumers to make health care choices (Hibbard & Jewett, 1996) within the framework of managed care. In addition, reimbursement policies of managed care providers have created incentives to move patients quickly through the health care system by discharging patients from medical facilities, at times, before they are able to care for themselves and their health care needs. Managed care also pressures physicians to limit the amount for dialogue and interaction with patients during office visits. Older adults who desire more control of their health must access additional health related information to increase their self-advocacy knowledge and skills to better participant in decision-making related to their care.

Health care for older adults is different from that provided other age groups. There are “greater resource demands, intertwining of professional health services with social services, ethical issues, higher prevalence of physical and mental disabilities and less scientific evidence for use in determining effective preventive and medical interventions” (National Research Council, 2001, p. 203). These factors create potential challenges for the adult learner in accessing valid information and making informed treatment option choices. Coupled with the changes in the medical care system, is the reality of an increased older adult population needing care.

Health Care and Aging Populations

One of the most dramatic changes occurring in the U.S. that is directly affecting the health care system is the aging of the population. Increasing numbers of older people present enormous opportunities and challenges to all components of our society, especially the health care system. Today, the life expectancy for males is 74.1 years and for females 79.5 (Vierck & Hodges, 2003). Currently, 12.4 percent of the U.S. population is over age 65 (Bureau of the Census, 2001). This proportion of the population is expected to increase by more than 20 percent by the year 2030 (Lamdin & Fugate, 1997). A number of factors, such as the eradication of childhood diseases, advances in medical care, and a decline in fertility rates following the postwar baby boom, have converged to create the statistical aging of the population (Manheimer, Snodgrass, & Moskow-McKenzie, 1995). Moreover, because today people seldom die prematurely, they need more medical care to help cope with the chronic diseases of senescence (Cassel & Neugarten, 1996).

Health expectancy is more an important issue for older adults than life expectancy. Adults who reach the age of 65 are likely to live into their 80's. Of these remaining seventeen years of life after 65, twelve of those years are expected to be healthy years (National Center for

Health Statistics, 1990). Health expectancy, or “number of healthy years depends to a great extent on the older adult making decisions about maintaining their health through physical activity, nutritional intake, social support networks, accessing good medical care, and health education” (Haber, 1994, p. 12).

The numbers of Americans with one or more chronic conditions is expected to increase from 125 million in 2000 to 157 million by 2020 (Gillespie & Mollica, 2003). Among adults age 65 and older, 62% have two or more chronic conditions that consume 78% of all health care spending in the U.S. (Gillespie & Mollica, 2003). These growing numbers of older adults will affect the future of the country’s economic and social conditions, especially an increased need for health care education.

The U.S. spends a far higher percentage of its gross national product (GNP) on health care than does any other country. Ironically, maintaining or promoting health itself has not been a high priority for health care dollars. At present, only 3% of the nation’s health care expenditures support health promotion and disease prevention activities (Haber, 1994; Panico, 2003). Although there has been undeniable financial neglect by the federal government, there has been an increased attention on health promotion and disease prevention since the publication of *Healthy People: The Surgeon General’s Report* (U.S. Department of Health & Human Services, 1980). This landmark document advocated the idea that major gains in health and independence can be attributed to personal life-style changes (Haber, 1994). In 1990, the U.S. Public Health Service initiated *Healthy People 2000* in an effort to reduce preventable death and disability of Americans. These *Healthy People* initiatives establish a set of goals and objectives for the entire population and are used to monitor the progress of improving the nations’ health within each decade.

Healthy People 2000 was the first official federal plan that focused on health promotion and disease prevention orientations rather than a disease orientation. This plan recognized the complexity of the socioeconomic, lifestyle, and other non-medical influences that impact our ability to attain and maintain health (Haber, 1994). Recognizing that the U.S. population was aging and the increasing medical needs of this population, more than 25% of the 300 national objectives focused on or were related to the health of older adults. *The Healthy People 2000* initiative funded a major public education campaign that was facilitated in part by the American Association of Retired Persons (AARP). Educational materials and many articles on health promotion and disease prevention were distributed and a surge of articles emerged in professional journals, newsletters, and popular magazines. This first major national effort focusing on senior health from a holistic approach brought the issues of health education, injury prevention, health maintenance, and self-responsibility to the forefront of the medical enterprise.

Prior to *Healthy People 2000*, the medical community and insurance companies did not give emphasis to the impacts of preventative health activities for older adults. Instead, their primary focus was on treatment of disease rather than the promotion of health. Most importantly, *Healthy People 2000* exposed the older adult to new approaches to health care that promoted self-responsibility for maintenance of one's health. Based on this prevention model and the positive outcomes from the program, the U.S. Department of Health developed another health plan with goal accomplishments targeted for 2010. Currently, the *Healthy People 2010* plan continues to place emphasis on preventative health goals for older adults.

Education is a major determinant of health (Rudd, Moeykens, & Colton 2000; UNESCO Institute for Education, 1999). Managed health care, which emphasizes outpatient procedures, shorter hospital stays, and complex health consumer decisions, increases the patient

responsibility for understanding medical instructions, following procedures, and interpreting health-related information and forms (Fisher, 1999). Characteristics of a health-literate person include health related critical thinking and problem solving, responsible citizenship, self-directed learning, self-advocacy and communication skills (U.S. Department of Health & Human Services, 2000).

However, “the medical definition of aging is primarily pathology-based, focusing on people who are ill or in decline in the latter part of life. Until recently, this medical model was the whole focus of basic biomedical and clinical research and health services delivery for the elderly” (Lamdin & Fugate, 1997, p. 16). “To look at aging solely as decay is to deny a fundamental property of life, namely the capacity of self-repair (Bortz, 1991, p. 7). Quality of life issues become more important as one becomes older. Bortz (1991) suggests that “physiological aging, while ultimately inevitable, can be slowed, or even for a time halted, by participation in positive psychosocial environments” (p. 7).

Many health professionals subscribe to the notion that health is more than the absence of illness. According to Haber 1994,

Good health includes a feeling of empowerment, loving relationships, a zest for living, a strong support network, and a sense of meaning in life or a certain level of independence. These psychosocial and functional dimensions of health are integral components of good health. The definition of health, among older adults, should not be linked with disease or its absence, as the medical model suggests, but with independence, the ability to accomplish one’s goals and the existence of satisfying relationships. (p. 9)

Persons consider themselves in ill health primarily when an illness or impairment interferes with their activities of daily living. Daily living is defined as the tasks related to personal care and to

maintenance of the home environment (Cassel & Neugarten, 1996). Finding ways to deal with and adjust to changes in health require an older adult to look at a variety of options to control and/or manage their health. The use of self-care may bridge the gap between the health care system and older adults (Metter & Kemper, 1993).

Self-Care

Self-care in health refers to a broad range of behaviors undertaken by individuals with the intention of maintaining or promoting health and functional independence (DeFrieze, Konrad, Woomert, Norburn, & Bernard, 1994; Ory & DeFrieze, 1998). The World Health Organization (1983) further defines self-care as “activities that individuals, families and communities undertake with the intention of enhancing health, preventing disease, limiting illness, and restoring health” (p. 2). These activities are derived from knowledge and skills from a pool of both professionals and lay experience (Dill & Brown, 1995). The critical component of self-care practices is that they are lay-initiated and reflect a self-determined decision-making process (Royer, 1995; Segall & Goldstein, 1989).

According to Ory and DeFrieze (1998), self-care practices used by older adults fall into three general self-care categories. The first category is described as steps taken by individuals to compensate or adjust for functional limitations affecting routine activities of daily living. The second category of self-care practice suggests that self-care activities are actions taken to either prevent disease or promote general health status through health promotion or other life style modification efforts. The third category of self-care practice is for the diagnosis or treatment of minor symptoms of ill health or self-management of a chronic health conditions.

The process of using any or all of the self-care strategies in order to manage health is a dynamic process. The older adult must access and respond to the illness symptoms they

experience in an effort to manage their changes in health. The way in which they respond to the symptoms is influenced by personal and cultural orientations, and the social interactions that develop around illness (Berman & Iris, 1998; Dill, Brown, Ciambone, & Rakowski, 1995). Response to an illness is frequently conceptualized as an individual behavior, yet self-care is embedded in family, community, and institutional frameworks (Backett & Davison, 1995; Royer, 1995; World Health Organization, 1983). Thus, the social contexts in which self-care practices occur often include informal support networks, environmental factors, and situational context that help to facilitate the likelihood of self-care (Ory & DeFries, 1998; Segall & Goldstein, 1989). Taking a closer look at the patterns, dynamics and processes of self-care behaviors practiced by older adults requires an understanding of a key component of illness behavior, symptom interpretation.

Symptom Interpretation

Recognition and evaluation of symptoms is a fundamental aspect of self-care (Dean, 1986). The “interpretations of the symptoms are multidimensional, including attributions of cause and assessments of pain and discomfort, disruption of desired activities, and perceived seriousness” (Stoller, 1998, p. 25). According to Kleinman (1988), the initial response to a new symptom is often to normalize the symptom by attributing it to some cause other than disease. Stoller (1993a) structured an interview and health diary study of 667 older people living in four New York counties. The respondents overwhelming (89%) reported a cause outside a disease framework for at least one of their symptoms, and over 16% attributed all of their symptoms to exclusively non-medical causes. The most frequently non-medical interpretation was weather or season of year, cited by 60% as a cause for at least one symptom. However, older people also

attribute their symptoms to the aging process itself (Leventhal, Leventhal & Schaefer, 1992; Stoller, 1993a).

The available research on self-care has “focused more attention on the interpretation of symptoms than on lay theories of disease--the beliefs and perceptions that underlie self-care practices” (Stoller, 1998, p. 28). Only a minority of these studies utilize samples of elderly people (Strain, 1996), although differences in knowledge, attitudes, and beliefs about diseases reflect the lifetime experiences of individuals in a given age cohort (Haug, Wykle, & Namizi, 1989). As a result, we know very little about how elderly people’s lay theories of illness and disease-specific understandings influence self-care practices (Stoller, 1998). We therefore rely on the available literature that focuses on symptom interpretation.

Studies that focus on symptom interpretation also provide a foundation for gaining insight into the complexity of self-care decisions. Research reveals that the nature of the symptoms experienced by an older adult influences their interpretations of an illness. Symptoms that are severe and have a rapid onset are more likely to be interpreted as signs of illness (Leventhal, Leventhal & Schaefer, 1992; Prohaska, Keller, Leventhal & Leventhal, 1987). In contrast, symptoms that are intermittent, nonspecific, relatively mild, and of slow onset are more likely to be normalized outside a disease framework (Leventhal et al., 1992; Prohaska et al., 1987). Symptoms that are painful, that persist beyond an expected period of time, that defy explanations, and disrupt normal routines are more likely than other symptoms to raise considerations of possible seriousness (Dean, 1986). And, according to Stoller (1998),

Multiple chronic conditions can also sensitize people to the potential import of new symptoms. Older people do not confront symptoms in isolation. Rather, symptoms are interpreted within a context of health and illness experienced over a lifetime. People

experiencing multiple health problems are likely to interpret each new symptom as an assault on their already precarious condition. (p. 29)

Elderly people who believe their health is good have more confidence in their own resilience and are less likely to interpret any particular symptoms as potentially threatening (Haug et al., 1989). Conversely, when symptoms occur within a context of poor health, older people interpret the specific symptoms more negatively (Stoller, 1993a). In a study of elderly adults with arthritis and heart/circulatory problems, Strain (1996) found that poorer self-rated health was associated with anticipation of further deterioration. These studies suggest that older people who are experiencing health-related problems are more likely to interpret additional symptoms as further evidence of their declining health.

Other factors influencing symptom interpretation relate to characteristics of older adults themselves. According to Dean (1986), perceptions of serious rather than benign symptoms are associated with living alone, having low income, being widowed or divorced, experiencing stressful problems, low satisfaction with social support, low internal locus of control, inability to find ways to relax, and belief in the efficacy of medical care. Evaluation of symptoms is also a function of situational factors:

Different roles and different social settings vary in the degree to which older adults accommodate manifestations of illness. For the older person, the primary concern is containing signs and symptoms of disease in such a way that role compromise is minimized. Individuals must not only cope with multiple health-related problems, but must manage them across multiple situations. Interpretation of any particular problem, therefore, varies with the demands and tolerance of the situation. (p. 276)

Stoller (1993a) also found that both prior and current health experiences predicted interpretation of symptoms. This finding may suggest that people with more life activities they deem important are more likely to be frustrated by the presence of symptoms that limit their ability to pursue these activities. A complementary explanation suggests that people who experience few symptoms and who assess their health positively are more likely to normalize and minimize the potential import of new and unfamiliar symptoms (Stoller, 1993a). Symptoms of an illness, the interpretation of the symptoms, and health status help determine the type of self-care strategies that older adults will conduct. Among the more common self-care options is lay consultation.

Lay Consultation Patterns

Many people experiencing an illness discuss their condition with a lay consultant (DeFries & Woomert, 1983; Verbrugge, 1987). This discussion often occurs prior to or after consulting with a health care professional. However, some older adults may elect to use the advice of a lay consultant exclusively. Symptom-related discussions are part of the self-care information gathering that often accompanies coping (Leventhal et al., 1992). The older adult most frequently consults with family members (Glasser, Prohaska, & Roska, 1992). Spouses are the primary lay consultants among old people who are married, and men are more likely than women to rely exclusively on their spouses for advice about symptoms (Stoller, 1993b). Married women draw advice from other women, including both relatives and friends (Chappell, 1989; Stoller, 1993b). However, this gender difference disappears with a serious health condition (Chappell, 1989). When married people consult someone other than their spouse, they are more likely to consult women than men (Stoller, 1993b). Widowed older adults, especially men, are

less likely than married older adults to discuss their symptoms with lay consultants (Stoller, 1993b).

Friends and neighbors also serve as lay consultants. Older adults often seek out friends within their peer group for advice because these individuals may also be experiencing or have experienced similar symptoms. This allows the older adult to share and compare information about their conditions (Strain, 1990). Gender differences are seen in the consultations that occur with friends and neighbors. Women tend to have more health related conversations with friends than men do. These findings are consistent with most research on social relationships. Men are less likely than women to discuss intimate and emotional issues, including health issues with others (Stoller, 1998). Other research suggests that when the network of people is larger there is a broader range of sources and diversity of information. However, when the network of people consulted is smaller and more closely knit, there is a stronger impact on the individual's self-care decisions (Strain, 1990).

Lay consultations have multiple consequences for the older adult's self-care process. According to Furstenberg and Davis (1984), the process of telling and retelling the story of one's illness can assist in information processing. Discussions with peers can provide reference points from which older people can assess their own health (Strain, 1990). Other research suggests that lay consultants can teach and reinforce patterns of self-care, validate or contradict people's interpretations of their symptoms, encourage or discourage professional consultation (Stoller, 1998). Suggestions of lay consultants can also provide reassurance or provide a sounding board for listening to complaints and other concerns. These benefits help to affirm the person's importance and support self-esteem of the older adult faced with symptoms (Dean, 1986; Furstenberg & Davis, 1984). Given the opportunity to express symptoms with others, the older

adult is able to gain access to information about a variety of different options one might use to treat their symptoms.

Lay Treatment Strategies

According to Stoller (1998) the majority of research on self-care has emphasized use of medications, both over-the-counter and those prescribed by physicians, during prior consultations. Despite this emphasis on medications, Dean (1992) argues that self-treatment also involves other responses, including appliances (e.g. thermometers, enemas, heating pads), homemade preparations (e.g., herb teas, baths, salves), and various forms of home concoctions. Dean recommends that self-treatment be defined to include changes in activity, exercise level, avoidance behaviors and changes in diet. Others suggest that self-care also includes social non-medical responses to symptoms such as spending time with family and friends (Chappell, 1989; Freer, 1980).

When looking more closely at self-treatment, researchers have identified a number of factors about the specific systems that influence how older adults utilize self-care strategies. These factors include the properties of symptoms themselves, the seriousness of the illness, perceptions of health, and gender of the older adult. Those individuals whose symptoms caused much pain and discomfort or interfered a great deal with desired activities usually treated their symptoms with medications (Stoller, Forster, & Portugal, 1993). The more a symptom is perceived as being serious, the more likely a person would be to consult a physician and not manage their symptoms on their own (Leventhal & Prohaska, 1986; Stoller & Forster, 1994).

The perception an older adult has about their health at the onset of a symptom may also influence self-treatment decisions. Leventhal and Prohaska (1986) report that people who attribute symptoms to aging are more likely to say they would cope by using self-care treatments

rather than seeking medical attention. Other researchers suggest that whether older adults ignore or treat symptoms appears to have less to do with their familiarity and causal attribution than whether the symptoms cause them pain or discomfort, interfere with desired activities, or are an indicative of a serious condition (Stoller, Forster, & Portugal, 1993).

Self-care in old age is more often palliative than curative (Dean, 1992) because of the increased prevalence of chronic conditions in late life. Chronic conditions produce symptoms continuously or episodically over time (Ford, 1986). The basic task involved in managing chronic illness is containment, which extends beyond alleviating symptoms to the level of coordination and managing medical care (Anderson & Horvath, 2002; Gillespie & Mollica, 2003). This means that older adults must be educated (Anderson & Horvath, 2002) in utilizing self-care and self-management strategies in order to continue carrying on daily activities as normally as possible. Older persons who have lived with a chronic disease often become very knowledgeable about the condition, including the medications and procedures that work best for them in enhancing mobility and comfort (Haug, 1986). This knowledge is synthesized from past experiences, the media, discussion with acquaintances, and previous consultation with lay and health professionals (Segall & Goldstein, 1989), thus allowing the person to utilize self-care techniques to manage their health.

Self-care, Self-care Beliefs, and Quality of Life Issues

Mastering self-care strategies for chronic disease and other illnesses, and learning to function despite disability, can reinforce old adults feeling of mastery and competence (Leventhal & Prohaska, 1986). By developing self-care abilities, the older adult is able to reduce dependence on the formal health care provider while providing a sense of self-sufficiency (DeFries & Konrad, 1993) and life satisfaction (Haug, (1986). Although there has been debate

in the literature about the capacity of older persons using self-care to respond appropriately to symptoms, experts have concluded that available studies suggest that self-care utilization and education is a safe and effective way to reduce health care utilization (Stoller, 1998).

Self-care beliefs. Health promoting self-care behavior appears to improve the health and quality of life. Acton's and Malathum's (2000) study of 84 older adults living within the community investigated the relationships among basic need satisfaction, health promoting self-care behavior and selected demographic variables. Using Maslow's basic needs hierarchy, findings suggested that adults who felt they had reached a level of self-actualization were most likely to participate in health promoting self-care behavior. Further, findings revealed a correlation between physical need satisfaction and the prediction of engagement in health promoting self-care behaviors in adults. In summary, the findings suggested that as the hierarchy of human needs was met, especially the higher ones, more attention was given to social goals such as health promoting self-care behavior and healthier lifestyles.

The values elderly individuals hold regarding health matters and their perceptions of control over their health affect their health outcomes (Keller & Fleury, 2000). McDonald-Miszczak, Wister and Gutman (2001) found that the type and duration of an illness, and specific beliefs about the illness predict self-care behavior in people with arthritis. A sample of 794 older adults with a mean age of 69.3, who had been diagnosed with arthritis, heart problems, or hypertension, were surveyed by telephone. The survey asked the respondents about both objective and subjective aspects of their illness and their general well being. The subjective factors were defined as both use of health care services and indicators of health status. Health care use was measured by: (a) number of visits to one's physician, (b) nights in the hospital, and (c) prescribed medications. Number of illnesses, duration of the illness and reported disability

was used as measure of health status. Subjective health factors were several belief-laden variables such as perceived seriousness of the illness and perceived benefits of their actions. The effects of age, gender, and education level were also taken into consideration in this study.

The findings suggested that self-efficacy and general well being are better predictors of self-care for individuals with heart problems and hypertension groups. Individuals with arthritis who report higher numbers of physician visits also engage in a greater number of self-care behaviors. The older adult's perceived seriousness of their condition and poorer self-rated health status were also associated with participation in self-care behaviors. There was also evidence that older adults use multidimensional approaches when making self-care decisions including contact with formal health care system, perception of one's illness and treatment, and perception of one's self.

Perceived health competence and personality factors differently predict health behaviors in older adults. Marks and Lutgendorf (1999) examined the extent to which facets of personality, perceived health competence and health status predicted health behaviors. Ninety-seven older adults, aged 64 and older, responded to questionnaires designed to assess health status, personality, and perceived health. The perceived health competency and Likert-type scaled inventories, health status checklist and personal lifestyle questionnaires were used to collect data. The constructs used in the study included: conscientiousness, neuroticism, extraversion, agreeableness, and open mindedness. Perceived health competence was found to be the best predictor for older adults to participate in health behaviors. Conscientiousness and neuroticism have limited influence on use of specific health behaviors in older adults. These data also suggest that for exercise behaviors, impaired health status may override the influences of conscientiousness and neuroticism.

Older people draw from different personal social or cultural resources in forming their beliefs about self-care (Berman & Iris, 1998). Berman and Iris conducted a 2½-year study interviewing 256 adults, ages 55-91, living in Chicago. Participants represented several different ethnic groups: Hispanic, African American, Korean, and Caucasian. The interview questions elicited information about respondent beliefs regarding health and self-care behaviors. The primary goals of this study were to generate a comprehensive description of how people perceive growing older and how this affects their health beliefs, philosophies of aging and the potential for using self-care. The findings revealed insight into the dynamic nature of the processes used by older adults as they attempt to make meaning of their lives as they age. These meanings were derived from multiple cultural points of view, the perceptions of the severity or duration of current and past illness symptoms, and any disability that may have resulted.

Three overall approaches or ways to take care of oneself emerged from these rich narratives: thinking and doing for oneself, letting others take care of one, and not paying much attention to oneself (Berman & Iris, 1998). The doing and thinking for oneself involves taking charge of one's health care and well being. Participants who exhibited this approach to self-care mentioned a number of motivations, including controlling pain and discomfort, improving energy levels, staying active, and staving off the onset of old age or frailty in hopes of maintaining independence. The respondents who took this as their primary approach firmly believed that they could do something about their health and could control many aspects of the aging process. Other participants discussed their inability to do anything about their own health and talked more extensively about how others take care of them. They relied on others, such as the physician, family member, or paid caregiver for advice or actual care. Such individuals did not initiate questions or talk to their doctors about their health. A third approach to caring for

themselves, reported by respondents, was by doing very little, ignoring symptoms, and accepting the health changes as part of the aging process. Interestingly, among these participants regardless of their actual health status, the study's respondents did not feel they had any significant health problems (Berman & Iris, 1998).

The social context of care emerged as an important indicator as to whether individuals saw themselves engaged in self-care. References were made to the setting in which care occurred, including interactions with health care professionals, friends and family members indicating that the research participants did not limit their care to only one strategy. Instead, they explained caring for themselves by referencing both past and current health experiences. In summary, the findings from this study suggest that

The social setting within which self-care occurs influences the approaches taken by older adults. Self-care beliefs are formed within multiple cultural contexts, including beliefs and practices of ethnic, alternative or biomedical worldviews. Older people draw from different personal, social or cultural resources in forming their beliefs about self-care. Moreover, most importantly, the meaning of health, personal philosophies of aging and living, as derived from multiple cultural points of view, is the most salient domain for talk about self-care. (Berman & Iris, 1998, p. 235)

Demographic Indicators of Self-care Behavior

Indicators of socioeconomic status, particularly education and income, are among the strongest correlates to both health and life satisfaction (Meeks & Murrell, 2001). Education appears to “confer a lifelong advantage for healthy aging” (Meeks & Murrell, 2001, p. 92). Literature suggests that the more education older adults have, the more likely they are to practice self-care behaviors (Acton & Malathum, 2000; Segall & Goldstein, 1989; Weerdt, Visser, &

Kok, van der Veen, 1990), rank themselves as healthy (Simonsick, 1995), and have better health and life satisfaction (Meeks & Murrel, 2001). A recent study conducted by Meeks and Murrel tested a hypothetical model representing the relationships among education, negative affect, and health and life satisfaction. Education represented a lifelong resource while negative affect was viewed as a personality trait in this study. A sample of 1,177 older adults, with a mean age of 67.4, participated in the study. Data was collected using the Health Status Questionnaire, Life Satisfaction Index, and Affect Balance Scale. The findings predicted that education did have direct effects on negative affect, trait health, and trait life satisfaction with “education appearing to be an enduring resource for the successful aging of older adults” (Meeks & Murrel, 2001, p. 112). Furthermore, it was suggested through these findings that the higher educational attainment, the better health and greater life satisfaction in late life. Because of higher educational attainment, there is greater potential for achieving an increased social status within the community and a higher income. Researchers have documented that there is also an increased use of self-care strategies by older adults with higher social status (Dean, 1989; Weerdt et al., 1990) and higher income levels (Ahijevych & Bernhard, 1994).

The perceptions adults have about their health has also been found to correlate with educational level. Older adults with at least a high school education consistently rate their health as better than those who did not complete high school (Simonsick, 1995). Berkman, et al. (1993) report that among older adults, 91% of low functioning older adults had less than 12 years of education while the high functioning adults (78%) had 12 or more years of education. These findings suggest that there is a strong association with education, perception of health and functioning as older adults.

Summary

Self-care provides scaffolding for investigating the process of managing one's health care. The discussion begins by defining self-care to be a broad range of behaviors that individuals use to maintain and promote their health and functioning. The underlying factors are explored that influence self-care beliefs such as personal values, personal and cultural orientations and social contexts. Detailed investigation of the key process elements are examined, including symptom interpretation, lay consultation patterns, and lay treatment strategies. Other critical elements which effect self-care, such as self-care beliefs, values, self-efficacy, perceived health competency and personality factors, are also discussed. Finally, a discussion of social context and demographic indicators provide additional insights into the potential for older adults to practice self-care behaviors.

Self-directed Learning

Learning is a continuous process throughout life. What influences older adult learners to seek new information is based on changes within their environment and their willingness to learn. Self-directed learning is defined as learning in which “the learner chooses to assume the primary responsibility for planning, carrying out, and evaluating the learning experiences” (Caffarella, 1993, p. 28). Changes associated with health conditions may initiate and accelerate learning and may promote self-directed learning for older adult learners. The following section provides a review of selected literature on self-directed learning in order to gain an understanding of the process and the relevance for this study. The section begins by exploring the pioneering work on self-direction, followed by a review of the models of self-direction. Finally, a discussion of the empirical literature on older adult self-directed learning is presented.

Foundational Studies

Interest in adult learning, self-directed learning, and learning projects in North America can be traced back to Houle's (1961) typology of goal activity and learning orientation among adult learners and to Johnstone's and Rivera's (1965) seminal work on adult education participation. Houle's, *The Inquiring Mind: A Study of the Adult who Continues to Learn* (1961) provides insight into the basis for adult self-direction in learning. This publication reports findings from a qualitative study that interviewed adults to determine why they participated in learning activities. The findings revealed that adults had three different orientations that motivated them to learn. One orientation for adult learning was due to personal learning goals. These individuals used education as a means of accomplishing clear-cut objectives. Activity-oriented adult learners took part in educational activities because of an attraction to the circumstance of learning rather than content. Learning-oriented adult learners participated in learning activities seeking knowledge for its own sake (Houle, 1961).

Houle's writing reflected new dimensions of the individual learner that had not been clearly defined in earlier literature, that of the self-directed learner. In several of his publications, we find reference to this notion. Houle (1972) stated, "Individuals are involved in their own educational planning and implementation" (p. 36), and "adult education is the process by which men and women (alone, in groups, or in institutional settings) seek to improve themselves by increasing their skill, knowledge, or sensitivity" (p. 32).

The Design of Education (1972) presents a system of educational design that had relevance to learners at any age of life. Houle's book endorsed the idea that education is fundamentally the same wherever and whenever it occurs and that the essentials of the educative process remain the same for all ages of life. He explained that "if pedagogy and andragogy are

distinguishable, it is not because they are essentially different from one another but because they represent the working out of the same fundamental processes at different stages of life” (p. 222).

In *Patterns of Learning: New Perspectives on Life-span Education*, Houle (1984) explores the idea that individuals engage in learning at different stages of life and that different things motivate adults to learn. He introduces the notion that adults are likely to be engaged in several different kinds of learning at the same time. He sought to find a pattern of learning activities as interwoven with life experiences. According to Houle: “patterns of learning in the lives of individuals are emerging as still pictures showing a cluster of activities at a moment in time” (p. 173).

Houle’s research interests also included study of those who participated least in adult education. He proposed that for each learning venture, adults have some immediate reason for seeking learning and that this purpose arises from a sense of desire or from a sense of deprivation. Houle (1984) classified learner participation into six different categories: (1) the oblivious person, (2) the uninvolved person, (3) the resistant person, (4) the focused participant, (5) the eclectic participant, and (6) the comprehensive learner. He further subdivided the categories of resistant person and focused participant suggesting that adult educators can become successful in assisting learning within the broader span of lifelong education.

Learning Projects

The notion of self-directed learning is associated not only with the early research and writing of Houle (1961), but also to the work of Tough (1967; 1979) and Knowles (1975). Cyril Houle and Allen Tough were the first researchers to produce a clear image of the self-directed learner. Tough is credited with having “sparked the revolution” for the research of self-directed inquiry (Candy, 1991, p. 25). Tough’s interest in the area of self-directed learning was influenced

by Houle's work and by the Johnstone and Rivera study of adult education activity in the United States. This study estimated that nine million adults learn on their own (Johnstone & Rivera, 1965).

Tough published the first edition of *The Adults Learning Project* in 1971. This publication managed to inspire successive generations of research and publications on the various aspects of self-directed learning in adulthood (Mocker & Spear, 1982). The book investigated the frequency and nature of self-planned learning activities among a sample of sixty-six adults. The major finding from Tough's study was that over two-thirds (68 percent) of all learning activities were planned, implemented and evaluated primarily by the learners themselves.

Tough was the first to operationalize the concept of adult self-directed learning activities so that it could be studied systematically. The basic building block of his study was the "learning project" which he defined as a major, "highly deliberative effort to gain certain knowledge or skill (or to change in some other way)" (Tough, 1979, p. 1). This definition implies intentionality, and excludes serendipitous, incidental or adventurous learning (Candy, 1991). Tough specified that a learning project would need to involve a series of related "learning episodes" adding up to at least seven hours. Tough's data documented that the typical learner conducts five distinct learning projects in one year with an average of 100 hours per learning effort (Tough, 1979). Seventy percent of the learning projects were planned by the learners, only seven percent planned by peers or amateurs, and the remainder planned by professionals. He also found through his work on learning projects that learners prefer to assume considerable responsibility for planning and directing their learning activities if given the choice (Tough,

1979). Tough's work documented that no domain of human existence or inquiry is exempt from the self-educational efforts, from the amateur to the best-informed practitioners and scholars.

Candy's (1991) definition of self-direction further articulates the description of adult learners by breaking self-direction down into personal autonomy and self-management. Personal autonomy, which literally means self-rule, refers to a learner's personal characteristics for making decisions to learn. Self-management is "the willingness and capacity to conduct one's own education" (Candy, 1991, p. 23). As a process, Candy refers to self-directed learning as autodidactic. He believed the autodidactic learning process is not confined to any particular social, educational, occupational, or ethnic category, but is widespread and almost universal among adults (Candy, 1991).

Malcolm Knowles's formulation of the concept of andragogy was the first major attempt in the West to construct a comprehensive theory of adult education (Jarvis, 2001). According to Knowles (1970), as a person matures, their learning characteristics change and provide a foundation for self-directed adult learning. The maturing adult's self-concept moves from being a dependent personality toward one of being a self-directing human being. The accumulation of adult learning experiences becomes an increasing resource reservoir for additional learning. Readiness to learn becomes oriented increasingly to the developmental tasks of social roles. An adult's time perspective changes from one of postponed application of knowledge to immediacy of application. There is a shift from a learning orientation of subject-centeredness to problem-centeredness among adult learners. These assumptions have direct relevance to the factors that motivate the learner toward self-direction.

Knowles's assumptions also suggest that there are dramatic changes that occur to self-concept when individuals define themselves as an adult. They see themselves as a producer and

doer with new sources of self-fulfillment through work performance, family relationship and as a citizen (Knowles, 1970). In essence, his/her self-concept becomes that of a self-directing personality making his/her own decisions, facing their consequences to manage his/her own life. The changes that occur in adulthood are exacerbated by the kinds of things one learns while experiencing life. Given these changes, adults have more to contribute to the learning environment and have a heightened sense of ability to self-direct their personal learning experiences.

Knowles (1975, 1980, 1986) describes in his andragogical model of instruction the learner-centered or learner-directed model. Knowles's model is similar to other instructional models in that it diagnoses learning needs, formulates objectives, designs the agenda, and evaluates the results. The key difference is that the learner is viewed as a mutual partner and acts as the primary designer. What this means is that we see individuals designing their learning based on their needs and objectives. The learner then evaluates the results and moves on to another learning task. Although Knowles's work has been criticized, his writing resulted in many educators and researchers becoming much more aware of the humanistic approaches to adult teaching and learning (Jarvis 2001).

Building on the pioneering work of Houle (1961), Tough (1978, 1979), and Knowles (1970) the early research on self-directed learning was descriptive in nature (Brockett, 1985; Caffarella & O'Donnell, 1987, 1988). The early work of Houle, Tough and Knowles focused on verifying that adults deliberately learn on their own and how they accomplish this task. Following the descriptive studies, research emphasized providing more in-depth conceptual models of self-directed learning (Brockett & Hiemstra, 1991; Candy, 1991; Garrison, 1997; Long 1991; Spear, 1988). Researchers (Brockett & Hiemstra, 1991; Brookfield, 1986; Collins,

1988; Mezirow, 1985) also debated the goals of self-directed learning and other studies explored the personal characteristics and attributes of the self-directed learner (Candy, 1991; Chene, 1983; Oddi, 1986). Additionally, several researchers attempted to bring clarity and precision to the term self-directed learning and to the many other terms used to describe the phenomenon (Confessore & Confessore, 1992; Gerstner, 1992; Hiemstra, 1996; Kenney, 1996; Long, 1989, 1990).

When reviewing the recent self-directed literature several themes appear. Using those recommended by Merriam and Caffarella (1999), the following review is divided into three broad themes or categories including: (1) goals of self-directed learning, (2) self-directedness as a process or form of study, and (3) self-directedness as a personal attribute of the learner.

Goals of Self-directed Learning

The three major goals of self-directed learning are to: (1) enhance the ability of adult learners to be self-directed in their learning, (2) foster transformational learning as the central component to self-directed learning, and (3) promote emancipatory learning and social action as an integral part of self-directed learning (Merriam & Caffarella, 1999). Knowles' (1980) and Tough's (1979) work has been directly related to the first statement, enhancing the capacity of adult learners to be self-directed. Further, this ability to be self-directed in one's learning is conceived as both a set of personal attributes and specific skills (Brockett & Hiemstra, 1991; Caffarella & O'Donnell, 1988).

The first goal is grounded primarily in the assumptions of humanistic philosophy, which emphasizes personal growth as the goal of adult learning (Merriam & Caffarella, 1999).

Accepting responsibility and being proactive takes into account two other tenants of humanistic

philosophy: personal autonomy and free will to make individual choices (Merriam & Caffarella, 1999).

Goal two, fostering transformational learning as a central component to self-directed learning, is found primarily in the work of Mezirow (1985) and Brookfield, (1985, 1986). Mezirow challenges the self-directed learner by suggesting that if a learner does not know his/her needs, how can that learner be self-directed? Furthermore, Mezirow (1985) states that to participate as a self-directed learner requires full knowledge about alternatives, as well as freedom from self-deception and coercion. In essence, adults need to reflect critically and have an “understanding of the historical, cultural, and biographical reasons for one’s needs, wants and interests...such as self-knowledge is the pre-requisite for autonomy in self-directed learning” (Mezirow, 1985, p. 27).

Brookfield (1985) echoes Mezirow in that he feels self-directed learning is concerned much more with an internal change of consciousness in the learner rather than with the external management of instructional events. Specifically, the most complete form of self-directed learning occurs when process and reflection are married in the adult’s pursuit of meaning (Brookfield, 1985). Furthermore, Brookfield suggests that

When the techniques of self-directed learning are allied with the adult’s quest for critical reflection and the creation of personal meaning than the most complete form of self-directed learning is exemplified. This most fully adult form of self-directed learning is one in which critical reflection on the contextual and contingent aspects of reality, the exploration of alternative perspectives and meaning systems, and the alternation of personal and social circumstance are all present. (p. 15)

Writers advancing goal three have been some of the strongest critics of the first goal of self-directed learning: enhancing the ability of individual learners to be more self-directed in their learning (Merriam & Caffarella, 1999). Furthermore, according to Merriam and Caffarella, (1999) the heart of their criticism is that the first goal, personal growth, is too narrow, with the focus of that goal being primarily on instrumental learning and assisting individual learners. Conversely, authors who support goals of emancipatory learning and social action want collective action as an outcome using critical theory and interpretive and participatory research approaches to foster democratic and open dialogue about self-directed learning (Collins, 1996). Brookfield (1993) argues first that having learners exercise control over all educational decisions needs to be a consistent element of self-directed learning and that learners' need more easily accessible and adequate resources to exercise control over their learning.

Self-directed Learning as a Process

Self-directed learning as a process of learning, in which people take the primary initiative for planning, carrying out, and evaluating their own learning experiences, has received a great deal of attention in the literature (Merriam & Caffarella, 1999). Researchers have developed three types of models to describe the process. The models include linear, interactive, and instructional. The next section of this paper will describe these most prominent research models.

Linear models. In the early linear models, Tough (1971) and Knowles's (1975) learners moved through a series of steps to reach their learning goals in a self-directed manner. Linear models include many of the elements found in the traditional teaching process. As noted earlier in the discussion, Tough (1979) defined a learning project as "a highly deliberate effort to gain and retain certain knowledge and skill, or to change in some other way" (p. 1). He found that learners used thirteen key decision points about choosing what, where, and how to learn. These

points clearly articulate the progress of the adult learner anticipating a learning activity. The initial steps involve deciding what detailed knowledge and skill will be learned, and deciding the specific activities, methods, resources, or equipment needed for learning. Once these initial decisions have been made, the learner decides where to learn, sets a deadline or intermediate targets and when, what and how to begin a learning episode. As learners begin the learning process, they carefully analyze the process to detect any factors such as adapting a room that may be required for effective learning; they also make other necessary adjustments and obtain the resources needed to learn. Finally, the practical aspects of learning such as securing the financial resources, finding the time, and taking steps to increase the motivation for certain learning episodes conclude the process of a learning project (Tough, 1971). Similar to Tough's learning projects model, Knowles's (1975) description of the self-directed learning process consists of six major steps: (1) climate setting, (2) diagnosing learning needs, (3) formulating learning goals, (4) identifying human and material resources for learning, (5) choosing and implementing appropriate learning strategies, and (6) evaluating learning outcomes.

Interactive models. Interactive models contend that self-directed learning requires an emphasis on two or more factors, such as opportunities people find in their own environments, the personality characteristics of learners, cognitive processes, and the context of learning which collectively interact to form an episode of self-directed learning. Five different models discussed in the literature that illustrate the interactive approach to self-directed learning will be discussed below.

The model presented by Spear (1988) proposes three major elements: The person's own learning environment, past or new knowledge, and things happening by chance. He found that the process of self-directed learning has seven principal components that are grouped under the

headings of knowledge, action, and environment. Knowledge refers to the residual and acquired information that learner's bring to the project. Action refers to directed, exploratory, and fortuitous action. The environment examines both the consistent (human and material elements) and fortuitous (chance encounters) found within the learning environments.

Spear's research suggests that self-directed learning generally does not occur in a linear fashion. Instead, information is gathered through one set of activities, is stored in clusters, and then used when it fits in with other ideas and resources on the same topic. According to this model, successful self-directed projects are defined by the ability of a person to engage in a number of relevant clusters of learning activities and then making decisions as to their importance and assembling these clusters into a coherent whole (Spear, 1988). Similar conclusions have been found in the work of Berger (1990), Candy (1991), Danis & Tremblay (1987, 1988), and Tremblay & Thiel (1991).

The interactive model by Cavaliere (1992) provides more in depth observations of self-directed learning. In this model, five learning stages are identified: (1) inquiring, (2) modeling, (3) experimenting and practicing, (4) theorizing and perfecting, and (5) actualizing. Of these steps, four of them require repetitive cognitive processes such as goal setting, focusing, preserving and reformulation. Cavaliere's sophisticated model is especially useful in that it describes both the stages of the learning process and the cognitive processes used throughout a major learning endeavor (Merriam & Caffarella, 1999).

The Personal Responsibility Orientation (PRO) model provides a framework for self-direction in learning (Brockett & Hiemstra, 1991). PRO looks at the two dimensions of learning - instructional method and personality characteristics of the individual learner. In the instructional process, the learner assumes primary responsibility for planning, implementing and evaluating

the learning experiences. The second learning dimension of personality characteristics centers on a learner's desire or preference for assuming responsibility and ownership of their learning (Brockett & Hiemstra, 1991). Accordingly, the PRO model not only agrees that individual learners are central to the idea of self-direction, but also takes into consideration the context in which the learning activity transpires.

The work of Danis (1992) contributed a framework that can be used by researchers to study the major components of self-directed learning. The model is grounded in the notion of self-regulated learning and the learning cycle process. The internal cognitive aspects are not central to this framework. Similar to the PRO model, learner context is included. The key components of the framework include: (1) strategies, (2) phases, (3) leaning content, (4) the learner, and (5) the context.

Garrison's (1997) multidimensional and interactive model of self-directed learning is grounded in a collaborative constructivist perspective. The model dimensions include: self-management (contextual control), self-monitoring (cognitive responsibility), and motivational (entering) to reflect a meaningful and worthwhile approach to self-directed learning (Garrison, 1997). The first dimension, self-management, acknowledges the social milieu in which learners are interacting, in which the learner is taking control and shaping the contextual conditions to reach their goals and objectives. The dimensions of self-monitoring and motivation represent the cognitive dimensions of self-directed learning. Self-monitoring enables the learner ability to monitor both cognitive and meta-cognitive processes and helps to facilitate decision-making. The motivation dimension looks at what influences people to participate in the initial self-directed learning activity and what continues to motivate them to keep them on task.

Instructional models. Instructors in formal settings primarily use instructional models of self-directed learning as a means to integrate self-directed methods of learning into programs and activities. The use of these models incorporates the notion of learning control and independence within the formal setting. The work of Grow (1991), Hammond, and Collins (1991) provide notable examples of instructional self-directed models.

Grow's (1991) Staged Self-directed Learning (SSDL) model provides an outline for teachers to help them facilitate self-directed learning approaches with their students. The model describes four stages or levels of the learner. Stage one learner is of low self-direction and needs an authority figure to assist them. Stage two learners have a low level of self-direction, they are motivated and confident but lack skills on the subject to be learned. Stage three learners are classed as intermediate in self-direction, have both skills and knowledge and are ready to learn and explore a specific subject with some assistance from a guide. Stage four learners possess high self-direction, plan, execute, and evaluate their own learning with or without help of an expert. Grow utilizes each of these stages to outline possible roles for the teacher or facilitator, depending on the learner's stage. He explores problems that may arise from mismatches between the role and style of the teacher, and the learning stage of the student. Grow acknowledges that integrating self-directed learning as a way to organize learning experiences is situational in nature.

The only model that explicitly addresses the goal of promoting emancipatory learning and social action as the tenet of self-directed learning is that of Hammond and Collins (1991). This seven-component framework is grounded in critical pedagogy, popular education and participatory research. In their model, learners take the initiative for: (1) building a cooperative learning climate, (2) analyzing and critically reflecting on themselves and the social, economic

and political contexts in which they are situated, (3) generating competency profiles for themselves, (4) diagnosing their learning needs within the framework of both the personal and social context, (5) formulating socially and personally relevant learning goals that result in learning agreements, (6) implementing and managing their learning, and (7) reflecting on and evaluating their learning.

What makes this model different from Knowles's and other process models is the purposeful inclusion of the critical perspective through the examination of the social, political and environmental contexts that affect their learning, and the stress on developing both personal and social learning goals (Merriam & Caffarella, 1999). Hammond and Collins see as their ultimate goal empowering learners to use their learning to improve the conditions under which they and those around them live and work (Hammond & Collins, 1991).

Self-Direction as a Personal Attribute of Learners

The field of adult education has long embraced ideas of autonomy, independence, and personal development of adult learners (Brockett & Hiemstra, 1991; Candy, 1991; Chene, 1983; Knowles, 1980). Recent research has asserted that the idea of autonomous or self-directed learning is firmly entrenched in contemporary thinking about adult education leading to a great deal of scholarly interest in the subject (Tennant & Pogson, 1995). Evidence of this thinking is implied using such terms as lifelong learning, self-directed learning, self-planned learning, independent study, distance education, learning projects, andragogy and self-directed learning readiness.

Historically, researchers have tried to link a number of different variables with being self-directed in one's learning. They include readiness, educational level, personality factors, learning style, field independence and field dependence, creativity, life satisfaction, health promotion and

wellness, and autonomy. However, the findings and observations from these studies have been confusing and contradictory (Merriam & Cafferalla, 1999). Some of the investigations on characteristics and personality factors of individuals practicing self-direction have allowed researchers to develop instruments that attempt to define the self-directed learner.

Guglielmino (1977) has provided the most used operational definition of self-directed learning with her development of the Self-Directed Learning Readiness Scale (SDLRS). The scale is based on the complex combination of attitudes, values, and abilities that create the likelihood that an individual is capable of self-directed learning. Readiness to learn is based on the learner's initiative, independence, and persistence in learning, acceptance of responsibility for one's own learning, self-discipline, enjoyment of learning, a tendency to be goal oriented, and a tendency to view problems as challenges rather than obstacles. SDLRS has been used primarily for quantitative studies and has been used for examination of self-directed learning projects, life satisfaction, creativity and employment readiness. Other researchers contend that there are some reliability and validity issues with SDLRS in that it does not reflect low literacy and higher learning levels of adults. However, Brockett and Hiemstra (1991) believe that despite several limitations, the SDLRS has important contributions to the present understanding of the self-directed learning phenomenon by generating considerable research, controversy and dialogue, but at the same time recommend that the scale be used with discretion as with any other standardized instrument.

Development of another instrument, the Oddi Continuing Learning Inventory (OCLI) uses a 24-item Likert scale. This instrument grew out of concern for the need to distinguish between personality characteristics of self-directed learners and the notion of self-directed learning as a "process of self-instruction" (Oddi, 1986, p. 230).

Most recently, Stockdale and Brockett (2003) conducted a study to empirically validate ways of measuring self-directedness within the framework of the process and learner characteristics components of the Personal Responsibility Orientation (PRO) model. The design looked specifically at the dimensions found in the model that relate to personal responsibility, learning and teaching process and learner characteristics, personal belief/attitude orientations using a sample of 200 college students. This study validated that the PRO-SDLS instrument is a reliable and valid instrument by revealing similar results for the relationships between PRO-SDLS and the SDLRS. Additionally, the subcomponent scores correlated significantly with SDLRS scores providing new evidence to support the validity of the PRO-SDLS instrument and its potential for use in research and practice.

Summary

Self-directed learning, the educational process that is facilitated by the learner, provides potential opportunities for individuals attempting to manage their health care. A review of the foundational literature on self-directed learning provides insight into the personal and motivational dimensions of the learner. Tough's (1971) work documents that adult learners do plan, implement and evaluate their learning activities by themselves. Candy (1991) further articulates the personal characteristics of the self-directed learner as that of an autodidactic learner. Knowles (1970) proposes that as the adult learner matures their independent personality moves them toward being a self-directing human being. These pioneering studies were primarily descriptive in nature.

Research over the last thirty years emphasizes building of conceptual models based on the goals, processes, and attributes of the learners who are engaged in self-directed learning. Linear models define the steps or processes taken by individuals who are self-directing their

learning. Interactive models provide additional insight into the personality characteristics of learners and cognitive processes that work collectively within their environments. Instructional models incorporate the notion of learning control and independence within the formal learning setting. Personal growth, transformational learning, and change of consciousness in the learner provide additional rationales for adults to become involved in self-directed learning.

Finally, discussions of self-direction as a personal attribute of learners, reveals that there are several different variables involved in one's learning. Among these learning factors are: readiness, educational levels, personality factors, learning style, dependence issues, creativity, life satisfaction, health promotion and wellness, and autonomy. The development and research using the Self-directed Learning Readiness Scale, the Oddi Continuing Learning Inventory, and the Personal Responsibility Orientation-Self-directed Learning Scale are acknowledged for helping to increase our understanding of self-directed learners.

Self-directed Learning and Older Adults

The ultimate goal of educational interventions for the elderly is to produce the highest level of individual independence possible (Bolton, 1990). Bolton's research argues that one of the critical ingredients of designing effective educational strategies for older adults includes learner-focused methods that place both the control of and responsibility for learning in the hands of the student (Bolton, 1990). Further, according to Knox (1977), a person with a strong belief that education is a means to both coping with age-related decline and accommodating the developmental opportunities of later life has a high sense of educational efficacy. Knox suggests that intentional approaches to learning are critical factors in continuing development as one ages. These studies provide a beginning rationale for the importance of investigating the role of self-directed learning and older adults.

Learning and Health

Health, both mental and physical, is a primary motivator for participation in learning in later life, expressed particularly in terms of maintaining fitness through stimulation and exercise (Waller, 2001). Evidence is also emerging from the Institute of Employment Studies (2000) that learning is linked to specific, measurable health outcomes. Exciting as this prospect is, “it may be that the success of educational programs is still small in its effect on well being compared to the individual and day-to-day learning we all do, making sense of life experiences and meeting the challenges of change” (Walker, 2001, p. 75).

Learning Projects

The sparse literature on older adult learning places emphasis primarily on the kinds of formal learning experiences in which those past 55 years of age are engaged (Lamdin & Fugate, 1997). Other studies focus on the numbers participating in college credit and non-credit courses, community programs, Elderhostels, Learning in Retirement Institutes and so forth (Manheimer, Snodgrass, & Moskow-Mckenzie, 1995; Walker, 1999), but little data exists for the kinds of learning older adults are accomplishing on their own (Lamdin & Fugate, 1997).

Independent learning projects are self-initiated and self-designed, and constitute a direct response to the learner’s own interests, needs, and life style choices (Lamdin & Fugate, 1997). The self-directed learning project usually begins with a question, a problem, or a need to know something. Learning projects are frequently triggered by an event or change in the person’s environment (Lamdin & Fugate, 1997). For example, a change in one’s health status may result in seeking independent information about health management.

The most recent findings are found in Lamdin & Fugate’s (1997) study of older adults’ involvement in self-planned learning projects. She collected her data through a written

Elderlearning survey of 865 respondents and conducted a sample of in-depth interviews. Lamdin & Fugate used the model provided by Penland (1977) to classify the learning project into three subject matter or topic groups: formal, practical, and intra-self. The Elderlearning survey revealed that 27% were involved in formal topics, 52% in practical topics, and 21% in intra-self topics. Fifteen percent of the sample was involved in independently studying computer technology. The most prevalent subjects (19.6 %) of self-directed learning were associated with arts and crafts, such as music, painting, theater, and quilting. Other activities centered on spirituality, volunteer work, travel and health-related topics.

One of the more significant findings from the study was related to the amount and time in which older adults engage in self-directed learning. The amount of time far exceeded researchers' expectations (Lamdin & Fugate, 1997). Respondents in the study spent an average of 27.86 hours per month in informal or self-directed learning and 17.75 hours per month in formal classrooms or organized settings. These findings are consistent with the earlier work of Tough (1971) and Hiemstra (1985) in terms of the prevalence of self-directed learning.

Hiemstra (1976) examined the learning activity of 214 adults aged 55 or older by utilizing Tough's learning projects methodology. The findings revealed that nearly 325 hours were spent on learning projects and 3.3 learning projects were conducted annually. The majority of the learning projects were self-directed. The higher the educational level, the more self-directed learning projects carried out by participants. This study also provided details about the reason for engaging in learning activities that included personal health, occupational or vocational, social civic and self-fulfillment projects such as leisure, arts, and crafts. The information sources used by the self-directed learner included instructors, experts, books,

pamphlets, newspapers, programmed materials, television, radio, recordings, displays, exhibits, friend relative and neighbors.

A study conducted by Sears (1989) investigated the number of self-directed learning projects older adults undertake in a year, motivational factors, anticipated benefits, and obstacles to self-directed learning. Interviews were conducted with 125 older adults. It was discovered that the participants had engaged in 239 learning projects. Ninety-five percent reported to have conducted at least one learning project during the year. The majority of the learning projects were self-planned for self-enjoyment and self-fulfillment. The most frequent obstacles reported were those related to time, cost, and household responsibilities, and making decisions on what they wanted to learn. Additionally, some reported poor health and difficulty remembering new material or information as the biggest challenges to self-directed learning. This study also found support for use of written materials such as books, pamphlets, and newspapers as primary sources of information for the older adult. Evidence from the findings also suggested that older adults value self-directed learning as a major source of self-fulfillment, and are motivated to develop new knowledge and skills through self-directed learning.

Lively (2001) conducted a case study designed to describe the perceptions of the learning patterns of older adult learners who are members of the Academy of Senior Professionals (ASP) religious organization. ASP is an autonomous, self-directed organization of senior adult learners. The study investigated adult learning principles, self-directed learning, learning how to learn, and critical reflection. Thirty adult ASP members, ages 62 to 89, participated in the study. The findings revealed that these older adult learners are engaged in many self-directed learning projects directly influenced by the context of their church. All participants actively engaged in learning projects related to philosophy and religion. Sixty-five percent participated in writing

projects. Technology was also found to influence learning projects for those who have access to a computer. However, the findings also documented that older adults continue to rely heavily on print medium as a primary learning resource. Participants also utilized a variety of other learning methods including hands-on experiences and human resources. Unique to this study was the finding that there were no real differences in learning patterns between genders. The interview data also suggests that lifelong learning contributed to successful aging for this group of older adults.

Life Satisfaction

Brockett's (1982) work looked at self-directed learning readiness and life satisfaction among 64 adults aged 60 and over living in two residential settings. Findings indicated that there was a significant positive correlation between life satisfaction and self-directed learning readiness. The data suggested that the link between self-directedness and life satisfaction might be associated with previous formal education, self-concept, and perceived health.

Brockett (1985, 1987) conducted two studies looking at the relationship between self-directed learning, readiness to learn, and life satisfaction using the Self-directed Learning Readiness Scale. Findings revealed that there was a relationship between perceived life satisfaction and the extent to which one sees oneself as possessing skills and attitudes of self-directed learning. If the older adult was highly satisfied with his or her life, there was an increased involvement in self-directed learning. Education played a role in increasing self-directed learning readiness. However, self-directed readiness was not related to age; it was related to a positive self-concept and self-perception. The 1987 study supported earlier findings that suggested increased educational level contributed to life satisfaction. According to Brockett, these studies suggest that being older neither limits nor enhances one's readiness for self-directed

learning. These studies also suggest that older persons who are in charge and control of their lives are in a better position to meet their personal needs than those who view themselves as dependent.

East's (1987) work further supported Brocket's findings that there is a link between self-directed learning readiness and life satisfaction. His study was based on 103 older adults living in a retirement community. Findings revealed that the self-directed learning readiness factors - acceptance of responsibility for one's own learning and love of learning, were mostly responsible for the effect on life satisfaction.

Fisher conducted three different studies using the same sample of participants. Fisher's 1983, study (cited in Confessore & Long, 1992) identified distinguishing characteristics of active older adults who participate in educational activities and measured factors that motivated participation. Seven-hundred-eighty-six older adults completed a researcher-designed questionnaire. Respondents reported that they participated in learning activities at local churches, senior centers, and local colleges because they enjoyed being with other people, liked learning challenges and found the subject matter useful. The obstacles reported were lack of transportation and time, scheduling of classes, and high costs. It was concluded from this study that participants differed significantly from non-participants, and that level of education played a role in whether participants would engage in self-directed learning experiences.

Fisher's 1986 and 1988 investigations (cited in Confessore & Long, 1992) were both designed to develop a profile of learners and to determine the influences of education on life satisfaction, self-directed learning and participation. The 786 active older adults who participated in the 1983 study completed three assessment instruments; Srole Anomia Scale, Life Satisfaction Index A, and the Self-directed Learning Participation Index. The findings revealed that

participants differed significantly from non-participants in level of education attainment, the propensity to engage in self-directed learning activities, awareness of learning needs, and awareness of availability of educational sites.

Curry's (1983) investigated self-directed learning readiness characteristics of 300 older adults in two settings: 176 persons who volunteer at Elderhostels and 124 persons who volunteer community-learning centers. Curry used the SDLR factors of self-concept, openness to learning, initiative and independence in learning, acceptance of responsibility for own learning, love of learning, and creativity. This study compared the scores of older adults with scores to 800 younger adults ages 20-40. The findings revealed that older adults excelled on self-directed learning readiness scores when compared to the younger adults.

Roberson (2003) explored the process of self-directed learning in rural older rural adults dealing with late life adjustments. Ten in-depth interviews were conducted with adults ages 75-87. The data revealed that late life adjustments were the primary incentive for self-directed learning, including health related issues. The study also found that self-directed learning is an integral process in the lives of older adults and that the rural environment is a positive context for learning.

Chapter Summary

The increased demands on the U.S. health care system will require older adults to form new strategies to manage their health care needs. The trends within the health care system are beginning to shift from the disease treatment model to a preventative philosophy of patient care. These trends are particularly relevant for older adults since they typically utilize the health care system on a regular basis to cope with age-related chronic diseases. Thus, the importance of self-

directed learning approaches to manage personal care becomes a critical issue for these older adults.

The self-care literature provides additional insight into the dynamic processes involved in self-directing or self-managing one's health care. Key elements of the process of self-care begin with symptom interpretation, lay consultation patterns, and lay treatment strategies. The perception older adults have about their health also plays a role in the type of self-care treatment they choose.

Additional insight within the self-care literature relates to older adult self-management of their health. Quality of life issues, self-efficacy, and perceived health were predictors of self-care behavior. Social context and cultural resources also help to form beliefs and promote engagement in self-care. The self-care literature suggests that demographic indicators such as education and income levels correlated with health, life satisfaction, and increased use of self-care by older adults.

A review of the self-directed learning literature indicates that older adults are involved in self-directed learning projects related to their health. Older adults are motivated and influenced to become self-directed by several factors. Empirical studies have suggested that there is a significant relationship between self-directed learning and life satisfaction. Older adults with higher levels of education are more likely to be involved in self-directed learning. The context in which older adults live also directly influences their use of self-directed learning approaches. These findings are similar to those found within the self-care literature. This study will also contribute to our understanding of health-literate older adults who are using self-directed learning to promote health-related thinking and problem solving through self-advocacy. Self-directed learning offers great potential benefits for older adults faced with health care decisions.

CHAPTER 3

METHODS

Maintaining older adults' health is becoming a critical issue in the U.S. As the older population continues to grow and the resources available to address personal health are becoming limited, older adults are being forced to gain control of their health through self-directed learning. It is predicted that older adults who are engaged in self-directed learning are better able to manage their health care. However, little is known about the learning processes older adults use to affect their health care. Based on the changes in the health care system and the need for older adults to become more self-directed, this study investigated the process that self-directed older adults are using to manage their health care. The following questions guided the investigation:

1. What motivates older adults to take control of their learning regarding health care?
2. What health care behaviors are controlled by self-directed learners?
3. What contextual factors are controlled by self-directed learners?
4. What is the process of self-directed learning of one's health care?
5. How does self-directed learning affect one's health care?
6. What barriers do learners experience in the self-direction of their health care?

In this chapter, I describe how the study was conducted in order to accomplish the purpose. I explain the design of the study, sample selection, data collection, data analysis, validity and reliability issues, researcher's biases and assumptions. I also provide details about the pilot study.

Design of the Study

The epistemological frames for the study are rooted in constructionist philosophy with the intention of understanding the learning process that ultimately affects personal health. According to Crotty (1998), in the constructionist view, truth or meaning comes into existence through our engagement with our world of reality. “It is the view that all knowledge and all meaningful reality is contingent upon human practice, being constructed through interaction between human beings and their worlds, and developed and transmitted within their social context” (Crotty, 2003, p. 42).

Few other issues in life require such diligent meaning making than those affecting personal health. Meaning may be derived from social interactions and is handled through an interpretive process (Blumer, 1969; Sandstrom, Martin & Fine, 2001). Individuals faced with illness seek information from health care professionals, support groups, friends, written materials, the Internet and other sources to make meaning of their health. Careful interpretation of what they learn is used to make health and treatment decisions. This study provides new understanding of how older adults interpret their experiences, construct their worlds, and make meaning of their experiences as they self-direct their learning.

Informed by the theoretical perspective of constructionism and the interpretive process, the design of this study is a basic qualitative study. Qualitative research, because of its philosophical assumptions, provides an ideal method for this study. The first assumption is based on the view that reality is constructed by individuals interacting within their social worlds rather than that a singular reality exists apart from people, one that is objective, static, and universal (Merriam, 1998). Qualitative research is interested in understanding the meanings people have constructed from their worlds (Denzin & Lincoln, 1998; Lincoln & Guba, 2000; Patton, 2002).

In contrast to quantitative research, which takes apart a phenomenon to examine component parts, qualitative research can reveal how all the parts work together to form a whole (Merriam, 1998).

The purpose of my study was to understand the nature, process, and impact of self-directed learning on older adult's health care. I wanted to know what motivates older adults to take control of their health care. Once they are motivated, how do older adults facilitate the self-directed learning process and what impact does this learning have on their health care? These questions are based on the assumption that reality is multiple, subjective, and constructed by people through interacting within their world. I wanted to understand how older adults make meaning in their lives using self-directed learning.

The second characteristic of qualitative research is that the researcher is the primary instrument for data collection and analysis. Data is mediated through the interaction between the researcher and those being researched in a qualitative study rather than through an inanimate inventory, questionnaire or computer in quantitative research (Creswell, 1998; Merriam, 1998). Since the goal of qualitative research is to understand the process, the human instrument, "which is able to be immediately responsive and adaptive, would seem to be the ideal means of collecting and analyzing data" (Merriam, 2002, p. 5).

Asking older adults to disclose and discuss personal health information may be a sensitive subject for them. Consequently, I believe that this information is best solicited by establishing rapport and by interacting directly with them. By using a humanistic approach when conducting interviews, participants are able to provide personal and detailed information. Thus, the best strategies to collect data for this study were in the field, conducting personal, in-depth interviews and through reading their personal documents.

Qualitative research is an inductive process. In an inductive process, “the researcher gathers data from the field to build concepts, hypotheses, or theories rather than deductively derive postulates or hypothesis to be tested as in positivist research” (Merriam, 2002, p. 5). “The strategy of inductive designs is to allow the important analysis dimensions to emerge from patterns found in the cases under study” (Patton, 2002, p. 56). The qualitative researcher builds toward theory from observations and intuitive understandings from being in the field. Findings are inductively derived from the data in the form of themes, categories, typologies, concepts, tentative hypotheses and substantive theory (Merriam, 2002; Silverman, 2000).

Finally, the product of a qualitative inquiry is richly descriptive. Descriptive words and pictures, rather than numbers, convey what the researcher has learned about a phenomenon (Silverman, 2000). Thus, the descriptions provided from direct quotes, interviews, documents, and field notes support the findings of the study (Merriam, 2002). These quotes and excerpts contribute to the descriptive nature of the study. As mentioned earlier, older adults can best be portrayed through their own voices and narratives rather than through numbers. The findings from this study are from direct quotations from my interviewees as well as quotations that support findings and interpretation of my research.

Sample Selection

A criterion based, purposeful sampling approach was employed to identify participants for the study. Purposeful sampling allows for the selection of information- rich cases for study that yielded insights and in-depth understanding of participant learning experiences (Patton, 2002). “To begin purposeful sampling, the researcher must determine the selection criteria essential in choosing the people to be studied” (Merriam, 1998, p.12). Further, these criteria directly reflect the purpose of the study and guide in the identification of information-rich cases.

The criteria used to select 15 participants for the study included: (1) be age 65 and older, (2) have had a health condition or illness for a minimum of 6 months, and (3) can offer some evidence that they are involved in self-directed learning to manage their care. The participants selected represent diversity of age, gender, race, education, and socio-economic status.

The rationale for each criterion was based on my personal interests, the literature and the findings of a pilot study with adults who are managing their health care. The minimum age of 65 was chosen as a criterion because 65 is commonly used for studies of older adults (Anderson & Horvath, 2002; Gillespie & Mollica, 2003; Merck Institute of Aging & Health, 2003). Further, age 65 is defined by the U.S. Department of Health and Human Services, Administration on Aging as the older population who becomes eligible for Medicare (U.S. Administration on Aging, 2004). Aged 65 is also commonly the benchmark age of retirement. Individuals aged 65 have an increased awareness of health issues because of the changes in their bodies due to the aging process (Robertson, 2003) and associated chronic conditions (Gillespie & Mollica, 2003). Additionally, literature supports the notion that older adults are actively engaged in learning about health issues (Hiemstra, 1985; Lamdin & Fugate, 1997; Roberson, 2003).

Health promoting, self-directed, self-care behavior, which emphasizes positive lifestyle practices, may improve health for older adults (Acton & Malatham, 2000). The rationale for setting a minimum of 6 months of having had a health condition or illness allows the older adult time to have established a history of self-direction that is not based on panic after the initial diagnosis. Additionally, the rationale for establishing criteria three was to help facilitate identification of information-rich participants. During the initial telephone conversation, I asked participants to provide at least two examples of things they have done to manage their health

care. By selecting a diversity of participant age, gender, race, and socio-economic status, I was able to investigate groups that have not previously had a voice in adult education research.

In order to identify potential participants for the study, I contacted program directors from Piedmont Hospital's 60 Plus Program, support group health educators, and the senior center. Based on the study's criteria, the program directors identified potential participants and asked them if they would like to participate in my study. The program directors provided me with the telephone numbers of the potential older adults who agreed to talk to me about their health. I contacted each individual by phone, described the study, validated their eligibility and scheduled an interview appointment for the individuals who met the study's criteria. Once the initial participants were interviewed, a snowball or chain sample approach was used to identify additional participants.

Data Collection

Data was collected using two methods: interviews and documents. Using multiple data collection methods helps to diminish bias by increasing the wealth of information available to the researcher (Hutchinson, 1990).

Interviews

Conducting personal in-depth interviews with the participants allows the researcher to become the primary instrument for data collection and analysis (Merriam & Simpson, 2000). The researcher, as primary instrument, is able to consider the total context of the phenomenon, rather than a particular segment; and can immediately process data as it is being collected (Kavle, 1996). Further, the researcher is able to lead in the refinement procedures, clarifying and summarizing material, checking with respondents for accuracy of interpretation, and exploring

atypical responses. “Interviewing is necessary when we cannot observe behavior, feelings, or how people interpret the world around them” (Merriam, 1998, p. 72).

Interviews can be structured in three different ways ranging from highly structured to unstructured or informal. In the highly structured interview, the wording and order of the questions are predetermined (Merriam, 1998). The highly structured interview is an oral form of a survey. “The major use of this highly structured format in qualitative research is to gather common socio-demographic data from respondents” (Merriam, 1998, p. 74). The semi-structured interview has a set of questions and a sequence of themes to be covered, but at the same time, “there is openness to changes of sequence and forms of questions in order to follow up the answers given and the stories told by the subjects” (Kavle, 1996, p. 124). The unstructured or informal type of interviews use open-ended questions, are highly flexible, exploratory and are more like a conversation (Merriam, 1998). Unstructured or informal interviews are serendipitous, casual conversations with no predetermined set of questions and are essentially exploratory (Patton, 2002). “Totally unstructured interviewing is rarely used as a sole means of data collection in qualitative research” (Merriam, 1998, p. 75). For the most part, interviewing in qualitative investigations commonly rely on the more open-ended, less structured, and dialogic interviews (Rossman & Rallis, 2003).

This study used the semi-structured interview format. Questions related to demographic information such as age, ethnic group, educational level, and illness were asked of all respondents. Semi-structured and open-ended interviews were conducted with 15 participants at which time the data became saturated. More general open ended questions were used to probe for people’s experiences, perceptions, opinions, feelings, and knowledge (Patton, 2002). The research purpose guided the development of interview questions. The interview guide, listing key

questions, guided the researcher during the interview. The interview guide is found in Appendix A. Interviews were audio taped and transcribed by the researcher.

Documents

The second data collection method was use of documents. Documents allow for increased understanding of the participants' language and words about how they view their worlds (Silverman, 2000). The documents in my study are comprised of a variety of different materials that the participant used to manage their health. They included notebooks containing lists of monitoring readings and questions for office visits, charts, health articles, brochures, newsletters, books, and magazines.

Additionally, one participant shared verbally highlights from several poems she had written to cope with health related changes. The data that was drawn from these documents provided additional insight into understanding how older adults are using documents and confirmed what was learned from the interviews.

Pilot Interviews

“The key to getting good data from interviewing is to ask good questions; asking good questions takes practice” (Merriam, 1998, p. 75). Pilot interviews allowed the researcher to try out questions to determine if they are confusing and need rewording, to determine which questions yield useless data, and to provide insight into additional questions that may need to be asked (Merriam, 1998). Prior to conducting the study, I conducted pilot interviews with two adults using the proposed study criteria. Personal experience and engagement in fieldwork allowed me to have direct contact with people, their situations, and phenomenon under study (Patton, 2002). This experience allowed for testing of the interview questions and tape recording equipment. Conducting pilot interviews also gave me an opportunity to practice establishing and

building rapport with participants while honing my interview skills. During the interview, I increased my awareness of how I asked and responded to questions. Careful attention was given to making sure questions were open ended, clear, and singular. Interview questions and facilitation procedures were modified to accommodate what was learned from the pilot findings.

Data Analysis

Data analysis is the process of making sense or meaning out of the data (Merriam, 1998). In qualitative research, data collection and analysis is a simultaneous activity. Analysis begins with the first interview and first document read. The “emerging insights, hunches, or tentative hypotheses direct the next phase of data collection, which leads to the refinement or reformulation of questions” (Merriam, 1998, p. 151). “Rigor in a qualitative study is derived from the researcher’s presence and the nature of the interaction between the researcher and participants, the triangulation of data, the interpretation of perceptions and rich, thick description” (Merriam, 1998, p. 152).

In this study, a preliminary analysis of the data was performed after each interview. The process involved reading each transcript and coding the data that appeared to address the research questions. This inductive analysis was conducted looking for patterns, themes and categories that emerged from the interview data (Patton, 1990). Data was coded according to Strauss’ and Corbin’s (1998), constant comparative method.

The constant comparative method is a systematic procedure for analyzing data that involves constantly comparing incidents in the data to develop conceptual themes or categories (Merriam, 1998; Patton, 2002; Strauss & Corbin, 1998). Using this method, I began with an incident from an interview, field note or document, and compared it with another incident in the same set of data or another set of data looking for patterns (Hutchenson, 1990). Through these

comparisons, themes that address the research questions were developed. In other words, incidents were grouped that had something in common, and each group was labeled and became a theme (Hutchenson, 1990; Merriam, 1998). For instance, initial data analysis revealed that all older adults were motivated to control their health. After reading all the interviews, I compared all the motivational reasons, i.e. awareness of mortality, health, heredity, and determined the common theme that captured these motivations was “age related issues.”

Furthermore, as I became intimately acquainted with the data, the use of comparative analysis forced me to expand or “tease out” the emerging themes by searching for its structure, temporality, cause, context, dimensions, consequences, and its relationship to other themes (Hutchenson (1990), p. 135). These themes reflected recurrent regularities and patterns indicated by the data. The “themes became comprehensive classes, each of which were further subdivided by further comparisons” (Merriam, 1998, p. 180). This process of theme construction continued throughout the entire data analysis until all data had been tentatively assigned to central themes. The resulting relationships between themes helped to interpret the data by providing insight into the process of self-directed learning these older adults used to manage their health care.

Validity and Reliability

Internal validity refers to how congruent the research findings are with reality (Hammersley & Atkinson, 1995). According to Merriam (2002),

Qualitative inquiry assumes that there are multiple, changing realities and that individuals have their own unique constructions of reality. The understanding of reality in qualitative research is really the researcher’s interpretation of participant’s interpretations or understandings of the phenomenon of interest. The qualitative researcher is concerned with understanding the perspectives of those involved, uncovering the complexity of

human behavior in context and presenting a holistic interpretation of what is happening. Because qualitative researchers are the primary instruments for data collection and analysis, interpretations of reality are accessed directly through observations and interviews. (p. 25)

To ensure internal validity of this study I used methods triangulation to confirm the emerging findings (Seale, 1999). This strategy included using multiple sources of data that consisted of interviews and documents. A second strategy used to ensure validity consisted of member checks with six of the participants (Rossman & Rallis, 2003). These six participants were contacted by telephone to discuss the tentative findings resulting from analysis of the entire group of interviews. They were asked to comment on the findings to determine if they were plausible and representative of their comments (Wolcott, 1999). All agreed with the findings that were presented to them. During our conversations, several participants made additional comments about how positive and motivating an experience it had been talking about their health. Others mentioned that since our interview they had found some new information about their health by using the Internet, or by reading a health related article. This continued learning provided evidence of how older adults learn on their own, confirming and strengthening the findings of this study.

A third strategy, peer examinations were also used to facilitate internal validity (Patton, 2002). The major professor and committee members served as peer reviewers of the findings. Further, the researcher was submerged or engaged in the data collection phase over a long period to ensure in-depth understanding of the phenomenon and the data until the emerging findings became saturated.

Reliability refers to the extent to which research findings can be replicated. “Reliability is problematic in the social sciences simply because human behavior is never static, nor is what many experience necessarily more reliable than what one person experiences” (Merriam, 2002, p. 27). Replication of a qualitative study will not yield the same results, but this does not discredit the results of any particular study (Rossman & Rallis, 2003). Merriam (2002) suggests the following:

There can be numerous interpretations of the same data. The most important question for the qualitative researcher is whether the results are consistent with the data collected. Reliability in qualitative research is also conceptualized as dependability or consistency. This means that reliability lies in others’ concurring that given the data collected, the results make sense and they are consistent and dependable. (p. 27)

Since reliability most often has to do with the instrumentation of the study, and since the researcher is the primary instrument of data collection and analysis, the researcher can become a more reliable instrument through training and practice (Merriam, 2002; Rossman & Rallis, 2003). Additionally, the reliability of documents and personal accounts can be accessed through various techniques of analysis and triangulation (Merriam, 2002; Seale, 1999). I used triangulation, peer examination, investigator’s position and audit trail strategies to ensure consistency, dependability and reliability in my study.

“An audit trail in a qualitative study describes in detail how data was collected, how categories were derived, and how decisions were made throughout the inquiry” (Merriam, 2002, p. 27). The audit trail is dependent upon the researcher keeping a research journal or recording memos throughout the conduct of the study (Silverman, 2000). What went into this journal are reflections, questions, and decisions on the problems, issues, ideas that were encountered in the

data collection. A running record of my interaction with the data as I engaged in analysis and interpretation was kept. Finally, I used investigator's position by informing readers about my orientation to the research including my assumptions and biases.

Qualitative research is by nature designed to understand and to make meaning people have constructed, in depth, rather than "to find out what is generally true of the many" (Merriam, 2002, p. 28). Therefore, external validity in qualitative research refers to how the study is useful or transferable to other situations (Merriam, 2002). Several alternative concepts of external validity are employed in qualitative study (Creswell, 1998). Qualitative researchers are concerned with situation-specific conditions of a particular context and thus generate working hypotheses, not conclusions (Merriam, 1998). Concrete universals in qualitative research refer to the application of what was learned by comparing a particular case to similar situations subsequently encountered. Similar to concrete universals, naturalistic generalization draws on the researcher's tacit knowledge, intuition, personal experience and patterns that explain events in the world around them. Thus, thorough knowledge of the particular allows the researcher to see similarities within contexts. Finally, the concept of reader or user generalizability puts the responsibility of generalization on readers, not the researcher. Readers determine the generalizability of a study when they compare their situation with the research context. Therefore, researchers need to provide enough detailed description of the study's context to enable readers to compare the fit with their situations (Lincoln & Guba, 2000; Merriam, 1998).

In order to enhance the external validity in this study, I provide rich description about the findings so that readers can make comparison with their own situations. I also used purposeful sampling methods choosing diverse participants. Choosing diverse participants increased the potential for greater situational application for those who read the study.

Researcher Bias and Assumptions

This study was conducted because of my passion for older adults, and interests in designing and facilitating educational programs that focus on health and injury prevention issues. I believe that older adults who manage their health have a better quality of life than those who do not. I am aware that health education can play a critical role in an older adult's life. Therefore, it is of special interest to me to investigate the process self-directed older adults use to control and manage their health.

I brought with me a basic understating of the key issues related to conducting a qualitative study such as a tolerance for ambiguity, intuitiveness, and being a good communicator (Merriam, 1998). I also brought into the study a keen sensitivity to the emotion that is sometimes associated with illness. I have observed, empathized and counseled both friends and relatives after they were diagnosed with cancer, diabetes, chronic pain, and other illnesses. I have witnessed the personal change, both physically and emotionally, that occurs in these people because of the illness. Some have become empowered by the health challenges presented to them and became self-directed in learning about their illness, and taking charge of their health by making dramatic lifestyle changes. However, others became depressed, and allowed health care providers to manage the disease. These observations present a dilemma to me as an educator and researcher. Why do individuals with similar educational backgrounds choose to become dependent while others become empowered to learn more and take charge of their health care? Since I have a strong belief that one can maintain control and improve the quality of life through education, it is difficult for me to understand why people do not take charge of their health. Perhaps because I have never experienced a life changing illness it is difficult for me, as an outsider, to understand the emotional and physical reactions of people

faced with health changes. These facts will no doubt influence my understanding of what motivates older adults to be self-directed. However, I remained open-minded to understanding interviewees' perceptions as they described them.

CHAPTER 4

FINDINGS

This chapter presents the findings of this investigation designed to understand the role of self-directed learning in older adults' health care. The research questions that guided this study are:

1. What motivates older adults to take control of their health care learning?
2. What health care behaviors are controlled by self-directed learners?
3. What contextual factors are controlled by self-directed learners?
4. What is the process of self-directed learning?
5. How do learners use self-directed learning to affect their health care?
6. What barriers do learners experience in the self-direction of their health care?

Fifteen older adults participated in this study. This study's sample reflects diversity in gender, race, education, employment and health conditions. This chapter is divided into two parts: Part 1 presents the profiles of the participants and Part 2 reviews the findings.

Part 1: Participant Profiles

This section presents the profiles of the fifteen participants interviewed. Each profile begins with the date and setting of the interview, and the relationship between the interviewee and the researcher. Basic demographic information is then presented including age, race, gender, and education. Details about the participant's living environment, health condition, and health management are also included in this section.

The fifteen participants were interviewed between January 30 and August 25, 2004. The interviews averaged from 45 minutes to one hour. All interviews were conducted in person: eleven in participants homes or apartments, three in the lobby of their apartment complexes, and one in a senior center library.

The participants range in age from sixty-five to eighty-nine. Eight are female and seven are male. Seven of the females are white and one is African American. Three of the males are white and four are African American. Of the eight females, four live in Georgia and four live in Texas. The males all live in Georgia.

The educational levels of the participants ranged widely from grade four to a doctorate degree. A high school diploma was the highest level of education for three of the women. Three women have bachelor's degrees, and two hold master's degrees. Three of the men have not completed high school. One male did not graduate from high school, but later acquired his G.E.D. One male had acquired his bachelor's degree, one his master's and one had a doctorate.

The majority of the participants had retired from their former professions. Only two women remained employed in their privately owned business endeavors. A variety of professions were represented including teacher, real estate broker, minister, military professional, nurse, accountant, mechanic, maintenance person, taxi driver, business owner, and homemaker.

As for major health issues, five of the participants have high blood pressure. Three report having heart problems. Three had experienced a major stroke, resulting in two of the three using wheelchairs directly due to stroke. Balance issues and walking posed a major health issue for two participants. Diabetes, arthritis, osteoporosis, multiple myeloma, and polymyalgia rheumatica were also among the major health issues found within this group of older adults.

Table 1 summarizes the participants' demographic information. Each individual's written profile reveals more in-depth information.

Table 1

Participant Profile

Name	Age	Race	Gender	Education	Profession	Major Health Conditions
Bernadine	81	White	Female	B.S.	Nurse	Heart problems
Betty	73	White	Female	M.S.	Nurse	Balance/shaking
Boyd	65	African American	Male	Grade 6	Taxi Driver	Stroke/Walking
George	76	African American	Male	Grade 4	Maintenance	Heart problems/diabetic
Jackie	69	White	Female	B.S.	Own Business	Polymyalgia Theumatica
Jean	72	African American	Female	M.S.	Social Worker	Stroke/Walking
Jim	70	White	Male	M.S.	Minister	Arthritis/Heart
Joe	66	White	Male	G.E.D.	Supervisor	High blood pressure
John	78	African American	Male	B.S.	Military	Multiple Myeloma
Lois	80	White	Female	B.S.	Accountant	Osteoporosis
Margaret	89	White	Female	H.S.	Accountant	High blood pressure
Nell	76	White	Female	H.S.	Real estate	High blood pressure
Pat	80	White	Female	H.S.	Homemaker	High blood pressure
Randy	65	White	Male	Ed.D.	Professor	High blood pressure
Will	65	African American	Male	Grade 11	Mechanic	Stroke/Balance

Bernadine

On June 7, 2004, Bernadine invited me into her spacious breakfast room for our interview. Another participant had referred her to me. Bernadine, is an 81-year-old, white female who lives independently in a large country home located in Texas. She holds a bachelors degree in nursing. Prior to her retirement, she was a nurse in her husband's office. Her major health issue, a heart condition causes her to become very weak. In addition to utilizing her medical providers, she manages her health care by drawing upon her nursing expertise and through using health and treatment information gathered by regular Internet searches. Bernadine also participates in an on-line health study conducted by Harvard University.

Betty

Betty and I met at her apartment on May 11, 2004, for the interview. She recently moved from her private home to an independent living apartment that is associated with a long-term care retirement community. I have known her for a number of years, since I worked with her to develop and facilitate two injury prevention programs during the 1990's.

Betty is a 73-year-old, white female, who holds a master's degree in nursing, serving as a public health nurse until retirement. Since she has no family to look after her, she moved into a living environment that facilitates her independence, socialization, and safety. She participates in the many functions offered by the retirement community such as workshops, daily meals, exercise classes, bus trips, movie nights, and other social events. Lunch and dinner are a highlight of her day because she has made several friends within the apartment community who enjoy talking and laughing with each other. Recently, when she became ill because of a reaction to a new medication, she was able to get the assistance she needed through the nursing staff associated with the retirement community. She copes with health issues related to her balance and tremors in her upper body. She is proactively managing her health in collaboration with her health care providers and her personal nursing experience.

Boyd

Boyd and I met in the lobby of his apartment complex on July 13, 2004. He was referred to the study by Piedmont Hospital's 60 Plus Program. Boyd is a 65-year-old, African American male who is currently in a wheelchair due to a recent stroke. He quit school at grade six, worked in sanitation, maintenance, and prior to his stroke, as a taxi driver. He lives independently in his own apartment that is located in a large complex in Atlanta. He is a determined individual who is working toward being able to walk again. He praises and trusts the home health nurse for her

care, advice, and encouragement. He is thankful that he was able to have the assistance of the home health nurse because she helped him through the toughest times of depression following his stroke. He does not talk to other people about his health because he does not trust them. He has learned how to manage his health in collaboration with his medical team of doctors and nurses. However, he gives most of the credit for the improvements in health because of the association with his home health nurse. Boyd exhibits a tremendous amount of personal confidence and trusts that through the help of God he will move beyond his health challenges.

George

On August 25, 2004, George and I meet in the lobby of his apartment building to conduct our interview. He was referred to the study by the program director at the Athens Senior Center. George is a 76-year-old, African American, male with limited exposure to formal education. At grade 4, he quit school to help his father work the family farm located in northeast Georgia.

He lives independently in his own apartment and cooks for himself. He is especially proud of his accomplishments in changing his diet because of his recent diagnosis. George recently had a heart attack and stroke because of his diabetes. He has learned from his health care providers the importance of managing his health. He now monitors his blood sugar daily, makes appropriate food choices, and has begun to exercise.

Jackie

I was invited into Jackie's kitchen for our interview on May 8, 2004. I identified Jackie as a potential participant when we became engaged in a conversation about her health management strategies. Jackie, is a 69-year-old, white female who lives in her own home with her husband and mother. Currently, she is the caregiver for both her spouse and mother. She holds a

bachelor's degree in education, has worked at the University of Georgia, and now owns and manages an exclusive women's store.

Jackie has recovered from her illness, polymyalgia threumatica, but is now concerned about recurring weakness and exhaustion. She shared with me that she was proactive about seeking health information when initially diagnosed and throughout management of her recovery. Currently, as caregiver for both her mother and husband, she admits that she does not pay enough attention to her health, is sleep deprived, and is noticing changes in her personal health. She has contacted both her doctor and daughter to talk about changes that are occurring in her health.

Jean

Jean lives in a high-rise apartment in Atlanta where we met on February 5, 2004. Jean was referred to the study by a nurse from Piedmont Hospital's 60 Plus Program. Since she cannot get out of bed on her own, she invited me into her bedroom for our interview.

She is a 73-year-old, African American female who lives independently in her Atlanta, high-rise apartment complex. She relies on home health aids and nurses to transfer her from her bed to her wheelchair. Jean holds a master's degree in education and social work. Prior to her retirement, she managed a Head Start Program. Jean is engaged in managing her health in collaboration with her care team. She stated, "I interview my home health aides about what I expect from them. If we do not connect then I ask them to leave." She utilizes her computer to learn more about her health and uses her telephone to consult with her doctor and to arrange the services she needs.

Jim

I arrived at Jim's home located in rural Georgia to conduct the interview on July 15, 2004. He and his wife own a 100-year-old farmhouse. Prior to this meeting, I met him only a few times in my office when he came to pick up his wife who worked as my secretary for a number of years.

Jim is a 70-year-old, white male who describes himself as the "bionic man," or a miracle of modern medicine, since he has had a number of surgeries on his back, and is recovering from heart surgery. He holds a master's degree in divinity. He retired from the ministry last year but admits that he still conducts church services occasionally. He learns about and manages his health in collaboration with his doctors and nurses. He is in contact with his nurse on a regular basis to access changes in his health. Jim is an avid reader of health related publications where he researches new treatment options that may have potential for use in management of his health.

Joe

On May 4, 2004, Joe invited me into his living room for the interview. A friend referred him to the study. Joe is a 66-year-old, white, male who lives with his second wife in their new home located in a rural Georgia. As an adult, Joe completed his G.E.D. and worked as a manufacturing plant supervisor until retirement last year. He copes with regulating his high blood pressure through a daily monitoring routine. He attributes his increased personal awareness of health management issues to his experience in providing care for his first wife and son as they progressed through non-curable illnesses. Joe learns about his health by reading a variety of publications, watching television, and consulting with both his physician and his pharmacist.

John

John and I met at his home on July 20, 2004, on the sun porch overlooking a beautiful garden. I have known him for a number of years because we both served on the board of directors for the Georgia Gerontology Association.

John, a 78-year-old, African American male lives with his second wife in their own home located in a subdivision near Atlanta. He retired from military, having lived in several different countries during his career. His exposure to different cultures makes him appreciate the availability of health information and services in the U.S. John participates in a study sponsored by Harvard University that periodically queries him about his illness, appropriate medications, and life style. He is an avid reader of health related newsletters and is motivated to learn more about management of his health by the exposure to information. He has a remarkable sense of humor and positive outlook about life and living in spite of the seriousness of his illness, multiple myeloma.

Lois

Lois came to her friend's house on June 8, 2004 for our interview. I did not know her prior to our meeting. Another participant referred her to the study. Lois is an 80-year-old, white female who is remarkably positive about the future of her health in spite of her challenging health condition. Lois earned a bachelor's degree and worked as an accountant until retirement. She lives in her own home with her husband, who she describes as her soul mate and greatest supporter for managing her health.

Lois uses a cane when walking to stabilize her body since osteoporosis has caused her spine to bend forward tilting her head downward. Among the numerous things she does to manage her health is investigating new potential cures for her condition. She currently is taking

an experimental medication designed to re-build bone density. Lois keeps a record of her health by using a notebook to list the changes, questions and new insights and/or discoveries about her condition. She uses these notes and findings to work in collaboration with her health care providers.

Margaret

On June 7, 2004, Margaret welcomed me into her apartment for our interview. I did not know her prior to our meeting. Another participant of the study referred her to me. Margaret, is an 89-year-old, white female who lives independently in a one-bedroom apartment, which is located in a small Texas town. She graduated from high school and worked as an accountant for a hardware store until retirement. After retirement, she managed the Meals on Wheels Program at the senior center. Currently, she enjoys tutoring young children at the elementary school.

Margaret controls her high blood pressure with medication and using self-directed health promoting approaches that are incorporated into her daily life. She walks for 30 minutes each day, performs chair exercises, and uses her hands in a variety of ways to maintain flexibility. She maintains that walking, exercising, kneading bread, and quilting have prevented her from getting arthritis. She also claims that by working with people, especially young children, her mind will stay active and alert.

Nell

Nell invited me into her Atlanta apartment on February 6, 2004 for our interview. A nurse from the Piedmont Hospital 60 Plus program referred her to the study. Nell is a 76-year-old, white, female who has a gift for poetry. She holds a high school diploma, worked in banking, sold World Book and Avon, and currently sells real estate.

She lives independently in her apartment but also spends time at her daughter's home on a regular basis. Nell's health challenges are diabetes, hypertension and renal failure. She takes a proactive approach to managing her health by monitoring her blood sugar, diet, and blood pressure. She is an avid reader, often spending time at the library researching health information.

Pat

I was invited into Pat's dining room for our interview on June 6, 2004. She was referred to the study by one of her relatives who knew that she was active in managing her health issues. Pat is an 80-year-old, white female who lives independently in a large home located in Texas. After high school graduation, she married a military man, and helped her husband through both undergraduate and medical school. She proudly claims that she also received an unofficial degree in English, because her husband hated the subject and consequently she helped her husband write and edit his papers for class.

Pat manages her high blood pressure through taking medications and watching her diet. Due to her hospital connections and being a member of the medical auxiliary, she is active in a variety of projects and works with a number of women in her community. She learns about her health by networking with this group, friends, doctors, and her pharmacist.

Randy

On January 30, 2004, Randy and I were sitting on his sun porch for our interview. I identified him as a potential participant by observing him walking regularly in my neighborhood located in rural Georgia. Randy is a 65-year-old, white, male who lives with his wife in their custom designed retirement home. He holds a Doctorate of Education and worked as a school administrator prior to his retirement.

Randy manages his high blood pressure and weight by doing a variety of activities including walking three miles a day. He engages in learning about his health through reading, searching the Internet, and consulting with his doctor and pharmacist.

Will

Will and I met for our interview on August 25, 2004, in Athens. He greeted me in the lobby of his apartment building and welcomed me into a conference room for privacy. The Director of the aging program at the Council on Aging referred him to me for my study. It was difficult for Will to understand and respond to my questions at first since he was recovering from a recent stroke. However, recognizing the difficulty, I slowed my questioning down and reassured him that we did not have to hurry through the interview. By providing this encouragement, we were able to communicate effectively.

Will is an African American, 65-year-old male who lives independently in an apartment located in Athens. He did not finish high school, only completing grade eleven because he had secured a good paying job and he did not like school. He walks with a cane. He is recovering from a heart attack and stroke that has left him weak and unsteady. He enjoys going to the senior center to participate in their programs including an exercise program that has helped him regain strength and allows him to socialize with other people. Will is involved in managing his health daily by paying attention to his body and making sure that he exercises regularly, eating nutritious meals, and taking his medications appropriately.

Part 2: Findings

This section details the findings of the investigation in order to understand how older adults' self-directed learning is affecting their health care. Table 2 outlines the six key findings related to the study's six research questions. We will begin by discussing the factors that

Table 2

Findings

 I. Factors That Motivate Older Adults to Take Control of Their Health by Using Self-directed Learning

- A. Age Related Issues
- B. Other People
- C. Potential Benefits

II. Health care Behaviors Controlled by the Self-directed Learner

- A. Establishing Appropriate Physical Activity and Exercise Levels
- B. Maintaining Positive Psychological Health
- C. Managing the Specific Health Condition

III. Contextual Factors Controlled by Self-directed Learners

- A. Living Environment
- B. Public/Social Environment

IV. Learning Cycle of Self-directed Health Care

- A. Health Event
- B. Health Care Professionals
- C. Acquires and Assesses Information
- D. Chooses Treatment Option
- E. Monitors and Reflects on Treatment Results
- F. Manages Adjustments in Lifestyle and/or Treatments

VI. Perceptions of the Effect of Self-directed Learning on Older Adults' Health Care

- A. Reduces Threats to Health
- B. Raises Body Awareness and Sensitivity
- C. Increases Collaborative Management of Health Care

V. Barriers Learners Experience in Self-direction of their Health Care

- A. Physical Limitations
 - B. Environmental Limitations
 - C. Policy Regulations
 - D. Personal Management Issues
-

motivate older adults to take control of their health care by using self-directed learning. The four themes that appear in the data indicate that the participants' motivations arise out of knowledge about age related issues, interactions with other people, and the potential benefits of taking control.

Age Related Issues

Older adults recognize the connection between aging and health. Participants in this study understand the importance of managing their health care since they were all involved in coping with a variety of health issues. Age related issues of health, heredity, and awareness of mortality motivated adults in this study to take control of their health by using self-directed learning.

Health

Several health issues such as high blood pressure, diabetes, arthritis, visual changes, weight gain, hypertension, high cholesterol, stroke, cancer, heart problems, osteoporosis, balance issues, and rehabilitation from illnesses are commonly associated with the aging process.

Awareness of these issues and their being a motivating force for taking control and self-directing their learning is revealed through the responses of the older adults who participated in the study. Nell refers to her weight in relation to her health condition: "My arthritis is so much better since I lost the 20 pounds." She also talked about her blood pressure, as it was "very high" and her cholesterol as "very, very high" that motivates her to check her status, "I monitor myself on a daily basis." Joe also monitors his blood pressure daily, keeps a record of the findings and averages them on a weekly basis. Jean, who has lupus and is currently recovering from a stroke, recognizes the importance of managing her health care:

I really do think that if you understand what is going on and you do the right things, you do not have to worry about them. OK, so I'm not getting the number of hours [of care]

my social worker and nurse would like for me to have because government policy has changed. So, I will recommend that I get three hours in the morning and three in the evening, that way I can get out of the bed.

Randy suggests, “good health is exercise driven.” With increasing age, he has “learned to be more attentive to his health.” He recognizes that, “there are consequences to behaviors of not eating right, or eating too much, and not exercising or getting the right kind of exercise.” Randy is motivated to self-direct his learning of preventative health measures: “After they found protein in my blood about 20 years ago, I began to have annual physicals, prostrate examines. Your body tells you that things are changing if you listen to it.” He states that managing your health care is a part of “knowing yourself” and responding appropriately based on what you learn. Likewise, Joe recognizes that when his pressure gets high: “I feel bad and have learned to pay attention to my body.”

For Joe, Margaret, Nell, Pat, and Randy, managing their high blood pressure is a major health issue. All five individuals recognize and mention that it is vitally important to take medications appropriately and to maintain an active lifestyle. Joe said, “The more active I am the better.” He has achieved greater success in self-directing the management of his blood pressure because of this fact. Margaret also believes that “I remain healthy because of my walking and exercising.” Although Pat confirms that getting appropriate exercise is critical to the management of her high blood pressure, she also recognizes her physical limitations: “Too much walking causes my knees to start hurting” so instead she swims and does chair exercises.

The findings from participants who have health problems that are considered more serious in nature, reveal an increased personal awareness and sensitivity to their health which prompts them to use self-directed learning activities to assist them in managing their health. Will

explained that his recent heart attack “changed my lifestyle. I had to get control of my worries because it was causing me to become stressed” which could increase the likelihood for additional problems, related to management of his health and his recovery. Jim, who deals with multiple health issues, also stated, “I have become more sensitive to changes in my body after having a heart problem. My heart tells me something is going on, I’ve listened to it.” He also claims, “My personal learning has increased self-awareness of changes in my body and prevented me from having a major heart attack and a stroke.”

Lois claims that as she self-directs her learning to manage her osteoporosis, she reads medical information related to her health and talks to her physician. She said, “I asked him if I could try a new treatment.” Currently, she is taking an experimental medication because she learned about it on her own and made the suggestion to her physician. She explains: “I am hoping that it is hardening my bones and I just feel that it will help.” Furthermore, John recognizes that “the malady that I have tends to direct what I do” and therefore, he uses self-directed learning to help facilitate the management of his health care based on his condition.

Heredity

Self-directed learners are also motivated to use learning to take control of their health because of their personal heredity. Nell recognizes that because of her family history and genetic background, she would encounter similar health problems. Nell explains:

It was not a surprise to me because my father had it, and three of my siblings in later life. I have lived longer than most of my immediate family...there were four of us. My father died at 62 from a heart attack and high blood pressure, my sister died at 58 and my brother at 61 all because of high blood pressure problems.

Both Randy and Joe are also familiar with family genetics contributing to their potentials of having high blood pressure. Randy said, “Knowing that my father died from high blood pressure has motivated me to learn more about it and try to live a lifestyle that would help to prevent or control the condition.” Pat was aware that high blood pressure could be a problem for her because of family history, but it was not until the diagnosis came from her physician that she began to self-direct her learning to assist in managing the condition. Similar to these participants, Betty, Jim, Lois, and Will recognize the relationship between their genetics and their health issues. Betty worries about becoming diabetic because of her mother’s experience with the disease. Jim says, “I inherited arthritis and heart condition from my mother’s side of the family.” Lois watched her mother fall and break her hip due to osteoporosis and Will said, “Stroke and heart problems run in my family.” Therefore, because of increased potential health risks related to heredity, the older adult is motivated and engaged in self-directed learning in an attempt to gain control and manage their health.

Awareness of Mortality

Each of the participants reflected upon an increased awareness of their own mortality because of health issues. This awareness motivates these older adults to be involved in self-directed learning about their health. Nell mentions that “watching this diabetes and the blood pressure and kidneys worry me sometimes.” She also revealed, “high blood pressure was frightening” to her because she landed in the hospital with a stroke because of this condition. Jean expressed fears about changes in her health: “I can deal with it physically, but please don’t take my memory” and “I don’t want to be just a vegetable.” Randy explained his fears more bluntly: “I was scared to death that I might miss seeing the kids grow up” and that he had a “fear of dying.”

Joe said, “When our bodies are older they are like an old tractor, it’s going to quit one day and the older you get the more things are going to happen.” Betty reflects on awareness of her mortality from another perspective:

Time marches on, and I’ve tried to be kind of philosophical about my life. I hope that with my medical problems there will be some help somewhere along the way. Things are pretty good and I really look at it like that. That is not to say that in the morning it might not be worse.

Awareness of mortality accompanied with awareness of their health produces feelings of fear in several of the participants. Jackie said, “Every time I begin to hurt, it scares me.” Because her illness was so devastating, she could not work or take care of her family and may not have the strength to survive another bout of polymyalgia rheumatica. In a recent flare-up of her leg, Lois said, “I was scared to death. I didn’t know what was wrong, I felt so hopeless.” George also fears that something else will happen with his health and this is what helps to motivate him to take good care of himself.

Bernadine recognizes that she could have died from a recent heart attack but her passion for living supercedes her fear of mortality. She states, “I want to be alive.” John voices a similar motivation for taking care of his health: “I don’t want to die that’s the whole thing, my motivation is sticking around, I’ve got grandkids.” Jim calls himself the bionic man because he has had so many surgeries and continues to decline in his overall health. However, despite his awareness of his mortality, he continues to beat the odds, and is actively engaged in learning about his health. Jim said, “I am not ready to hang it up.” Both George and Will are fighting to recover from their illnesses and express being thankful for being allowed another day on earth. George said, “I like living” and Will said, “Everyday is a blessing to be here.”

In summary, increased understanding of age and health motivate older adults to take control of their health by using self-directed learning. Genetic predisposition to specific illnesses alerts the self-directed learner to their increased potential for the disease. This awareness motivates the learner toward conducting self-directed learning activities that help to maintain good health. Finally, an understanding of the relationship between health and mortality serves to stimulate and accelerate self-directed learning.

Other People

Older adults are motivated to take control of their health care through self-directed learning by contact with others. There are four primary sources: health care providers, family, friends and their belief in a higher power. These groups support the learner by providing medical advice, and emotional support for the older adult as they self-direct their health care. In this section I will reveal evidence that supports the importance of a strong collaborative relationship with health care providers as the impetus for self-directed learning with these older adults. These positive relationships are critical to the older adult who is self-directing their health care. One of the key factors involved in self-directed learning is securing reliable information. If the learner is able to communicate effectively with their doctor, the potential for learning and for better care is increased. In addition, if these relationships are built on openness and mutual respect, the learner becomes self-assured, which promotes more self-directed learning. In essence, health care providers become partners and informational resources in the self-direction of one's health care.

Health Care Providers

Nine of the participants said that their interactions with their health care providers were a motivating factor in self-directing their learning about their health care. Nell explained that she was motivated to make changes by her doctor when she learned that she had diabetes: "If I didn't

get the weight off and get the blood pressure down I was looking at dialysis before too long.”

She feels good about the future of her health because of the interaction with her current doctors:

“The internist and endocrinologist seem to be getting to the bottom of my problems and helping me to get things under control.” Jean was also motivated to self-direct her learning by her doctor:

“After we talked about it, I started doing things that he told me such as taking vitamins.”

However, the doctor’s advice about taking vitamins was not taken until Jean conducted some research on her own to investigate the potential health benefits of taking vitamins

A diagnosis that was presented by his doctor motivated Randy to learn more about his illness: He began to understand the importance of taking control of his health: “That is when I began to self-direct my health by getting annual physicals, prostate examines and all that stuff.” Because of self-directed learning about health, he recognized the symptoms of his high blood pressure. Randy continues to be motivated to learn more about his conditions. “The oncologist I see encouraged me to do some things besides walking. I have been doing a few pushups and leg lifts.” After this conversation with his doctor, he began to read and look for additional opinions about the exercise to determine the intensity levels most appropriate to older adults.

Older adults who trust and feel that they can work in collaboration with their physicians are motivated to continue self-directing their learning about their health care. Pat has a good working relationship with health care providers at the medical center where she goes for her care. She said, “There is a team of several doctors that advise me who are caring and friendly.” By developing this relationship with her physicians, Pat is motivated to bring questions with her to the office visit and is more engaged in the self-direction of her health care. Both Jim and John are currently pleased with their doctors and impressed with the other medical staff at their clinics. Jim says this about his doctor: “He treats me like I was his parent.” Jim visits a nurse

once a quarter for a checkup and consultation. John also reports that his relationship with his doctor helps him to manage his health. John said:

Doctor Dowdy is very thorough but he's never in a hurry with me. We have conversations about all kinds of stuff...and while he's talking he will say, all right, take your damn pants off. He really doesn't say that, you know what I mean.

John talks very positively about his experiences with the medical staff at the infusion clinic. John said, "Kim takes care of me like I was her brother, it makes a difference," thus motivating John to feel comfortable asking questions and learning more about his treatments so that he can continue self-directing his health care.

For Boyd, the home health nurse has been a key contact for motivation and his self-directed learning about health after his stroke. He said, "Teresa taught me how to take care of myself. She teaches me a little bit at a time, she is sensitive to my needs, I talk to her and she listens to me." This motivates Boyd to continue learning and trying new methods related to his recovery. He not only pays close attention to the advice he receives from his health care providers, but also attends educational seminars to gain additional information on his own as he continues his self-directed learning. Similar to Boyd, Margaret thinks that her health care provider is terrific. She said, "He is just the best thing in the world, he listens to me. Because Margaret does not have family to consult with about her health, the nurturing and positive relationship with her physician is critical to her as she self-directs her health care. Often, after receiving information from her doctor, she investigates the recommendations by researching and reading different publications about the treatment to determine its relevance to her health conditions.

However, three participants reported that their doctors motivated them to recognize the need to become self-directed, resulting in their making health provider changes. Two reasons were cited: improper care and lack of respect for the patient. Jean recognized that when proper care was not being provided she had to speak up and request that changes be made in her treatment. She said:

I wasn't getting any better, I really wasn't. I was just [kind of] laying there. So, I finally called my primary doctor and told him I felt like I was being warehoused. I mean I was just laying there.

When Nell was not getting appropriate care and respect from her doctor, she began to self-direct her health care by becoming assertive to regain control of her health care and fired her physician. She said, "He told me to quit taking Prednisone. [Later] he said that he didn't [tell me that] and became angry when I confronted him. He lied, I fired him." Bernadine, a retired nurse, became angry when her physician explained her condition in lay terms: "He says that I have holes in my lungs, and I said OK, what kind of holes? He said pneumonia, that infuriated me, so I left him." These three women began self-directing their health care after recognizing and learning from their own experiences regarding inappropriate care.

Pharmacists are mentioned by four of the participants as playing a significant role in ongoing learning and self-directing of their health care. Randy talks to his pharmacist about all the medications he takes and even looks for advice for alternative therapies. About the interaction with his pharmacist, Randy said, "He follows my medication process and we talk a lot about it." Joe claims that his pharmacist is the "best pharmacist in the world." Pat reflects that during a recent flu episode, she called her pharmacist for advice: "I called Luke the pharmacist to start with and he suggested I take two Aleve every twelve hours for the aches and pain, and I

did.” Lois talks to her pharmacist on a regular basis about current and new medications. She said, “When I get a new medication, I always talk to the pharmacist about it.”

Family

Families appear to play an important role for older adults who are using self-directed learning as a part of managing their health care. Nell talked about her family as, “giving her an outlet,” and “the children keep me motivated.” Her son also plays an active role in helping self-direct her health care. Randy talks extensively to his son, the pharmacist, about his medications, and his daughter about health related things. When Jackie was searching for answers about her health, she relied on her daughter to help her search for medical information and finding experts who might be able to treat her condition. Bernadine’s daughter and brother provide support and motivation for Bernadine’s self-direction. Betty relies on her strong family network that provides personal support and encouragement to her as she self-directs her learning related to her health. She said, “My family’s motto about health is that nothing is insolvable.” This is critically important to Betty since as she gets older, new health problems are beginning to emerge.

John shares that his supportive wife researched the information that has led him to participate in two national studies on aging and health. He said, “Without my wife’s help I would not have thought about participating in the studies.” Lois also recognizes the significance of having a spouse that is supportive and helps with the management of her health. She explained, “We are dependent on each other, we are joined at the hip; I think we are.”

Family influences and values are sustained over a lifetime with some older adults as they self-direct their health care. Will attributes his recovery to his parents especially his father: “My parents taught me the importance of hard work and taking care of myself.” Part of this hard work ethic currently requires that Will learn how to self-direct his own health care. Jean and Bernadine

also mention that their families' values influence their attitudes about their health and self-directed learning. Jean learned about doing the right things in life such as not feeling sorry for oneself, learning, and retaining hope no matter how tough it was to maintain life and health. Jean said, "If you are doing the right things, you don't worry about it. My parents taught me to do the right thing." Similar to Jean, Bernadine claims that because of her grandmother's personality she is better able to cope with her health conditions. Bernadine said, "My grandmother was ornery, stubborn, and determined to fight back when her health began to decline." This memory has influenced how Bernadine self-directs her learning to manage and cope with her own health: "The only way I know how to cope is to not give up but to fight back," which has resulted in continued efforts to find new information on her own and to work in collaboration with her health care providers.

Friends

Friends play a significant role in motivating older adults to use self-directed learning to control their health care. These relationships with friends are particularly evident in the responses of the female participants in the study. Nell calls upon friends for advice about her health: "I have a wonderful RN friend, she fills me in on things." Jean looks to her friends for support and motivation. She said, "I got friends in this building, I got people around here that come and see about me." During her visits with friends, conversations about health are a common occurrence. Friends share information about their experiences with treatments, other health related activities, and their interaction with health care professionals. Pat consults with her friends to make comparisons about their treatment: "Your friends call, we compare notes about our health care." Margaret is more reserved about her sharing health information with friends since she believes that "I don't think that they want to hear my problems." However, she admits

that she has one “really good friend” that she occasionally talks to about her health: “We talk to each other about our problems.” Randy also mentions that he has “two dear friends that share things about our health.”

Three of the participants, Jackie, George, and Will, report that they are a support resource for friends and other people. Jackie explains, “If they had problems they would call me and I would listen and give advice.” George is motivated to maintain his health because of his responsibilities to take care of a friend at the senior center. He says, “I come everyday to see after her.” Will shared with me that having friends at the senior center that look forward to seeing and interacting with him helps to reinforce his goals for health. He chuckles and shares a recent experience at the senior center during an exercise program:

One of the girls at the center continues to help me. She said that if you don’t walk you don’t get any dinner. I know that she doesn’t mean that though, she’s just trying to lighten up the situation and encourage me to keep [moving].

These humorous experiences suggest that friends also help to look at exercise and health in a positive light. Friends and acquaintances help to facilitate self-directed learning, not only by providing these learners with opportunities for information sharing, but also promoting positive psychological support.

Belief in a Higher Power or God

Several of the participants shared that faith in a higher power (God) helps them remain motivated to learn about their health. Depending upon the perceived seriousness of the illness, references to faith and a belief in God are the cornerstones for hope and renewed good health. Nell, who has a number of illnesses, commented: “I have a lot of faith, I’m a Christian.” Jean is hopeful when she talks about the reality of being in her bed for the rest of her life: “My Bible

reminds me that I just don't need to sit around feeling sorry for me." Instead, she maintains a positive outlook and "does the best that she can" to enjoy her life.

Betty believes that her strong faith will help her through life and that it motivates her to continue managing her health through self-directed learning. She said, "I think the spiritual factor comes in, that there is something to [kind of] help us through." Jackie also shared that her "great belief in God" gives her hope and strength to manage her health. Boyd believes that his faith in God is the reason for his existence today and is the motivating factor of his learning, life, and recovery. His mistrust for the medical system also reinforces his faith in God. Boyd said, "People are nosy, you can't trust them... You can trust God." Randy references his faith by saying, "I thank the Lord for remaining free from cancer for 11.5 years."

In summary, the self-directed older adult learners are motivated to take control of their health care by health professionals, family, friends, and their religious beliefs. These participants religious beliefs plays an important role in supporting both the physical and psychological health issues of the learner.

Potential Benefits

Two motivational factors arose regarding the potential benefits of taking control of learning about their health care by using self-directed learning. The participants experienced success with achieving personal health goals and maintaining independent lifestyles.

Achieving Personal Goals

Older adults report that achieving goals encourages and motivates them to continue using self-directed learning. The participants of this study identified setting goals for weight control, regaining strength, exercising, and blood pressure control. Nell had lost 20 pounds and reports: "If I didn't get the weight off and get the blood pressure down I was looking at dialysis before

too long.” Likewise, Randy admitted, “I needed to lose weight and do some exercise.” When Randy started to exercise, he was surprised to find out that “I was huffing and puffing and realized how out of shape I really was.” Betty attributed part of her struggle with weight was a result of growing up in the country. She said, “We ate country [cooking], like fat meat, ah my dad and I loved butter and those kinds of things.” She is now celebrating success regarding getting control of her weight because of what she learned by counting calories and by reading educational materials on making good food choices. She attributes her success to what she has learned about diets and her a new living environment. She said, “I have been real successful since I [moved] over here because I eat a meal in the middle of the day and have stopped eating desserts.”

Those participants who have achieved their weight control goals continue to maintain their weight and health through various methods. Nell watches her diet: “I eat healthfully” and “monitor my glucose about every other day.” Randy also believes that, “there are consequences to behaviors of not eating right and eating too much and not exercising.” Consequently, Randy walks and exercises daily because he believes “good health is exercise driven.” Because of his cancer and high blood pressure, he has learned to be “more attentive to his health” and is proud of his health accomplishments. Randy proudly shared that “I have kept that weight off and now I have lost a little bit more.”

Jean is motivated by the benefit of improved health: “I know that I am getting stronger.” She recognizes that “you may be doing it a little bit slower than you really want to do things” but progress is being made toward her goal of improved health. Her motivated spirit and personal health goals transcend her limitations associated with being bed bound. Jean said, “I want to be faster, I want to get stronger. Ah, be able to grab this thing and pull it up, push it and do this and

that.” Like Jean, Boyd is proud of his personal health achievements after his stroke. He works closely with his home health nurse to set and monitor his health goals. Boyd said, “I’ve seen a major improvement in my health by doing these things.” Will also recognizes that he is getting stronger because of his continued personal emphasis on increasing his exercise activities. Will said, “I have worked very hard to get back to walking.” Another stroke victim, George proudly reports his success with reaching his goals: “I learned that I need to walk by myself, I’ve done it on my own.”

Maintaining Independent Lifestyles

Recognizing that one’s health can affect independence is perhaps one of the most important reasons driving proactive involvement in the self-direction of one’s health care. Accordingly, each of the participants reflected upon this factor in their conversations with me. Participants report that they spend time each day self-directing their health in a variety of ways including monitoring blood pressure, glucose, taking medications, reading and learning, evaluating treatment options, and making choices. These self-directed efforts resonate with the participants at various levels of intensity. Those older adults who are recovering from stroke seem to be most keenly aware of the importance of daily self-directed learning activities that lead to managing their health.

After a recent stroke, George’s efforts to regain strength and maintain independence increased his awareness of his limitations. He shares with me the details about getting out of bed in the morning:

I get up at about 5 a.m. I wait a few minutes before I get up out of the bed sometimes because I am dizzy. I wait and take my time getting up. Then, when I get up and move around I feel better.

George has learned the importance of taking care of himself and self-directing his learning activities so that he can remain independent, staying in his own apartment. He says that he learned to make adjustments in his daily life even though it may be frustrating at times: “I’ve learned to take it easy when [I am] experiencing changes in [my] health. [I] take [my] time.” Part of the self-directed learning activities may involve learning how to complete daily living tasks, as these activities can be extremely challenging for those who have suffered a stroke. Therefore, self-directed learning became a critical element in the recovery process for the older adults in this study.

Will and Boyd are proud of the fact that they live independently after their strokes. Will said, “I really wanted to get out on my own. I do my own cleaning, cooking, wash clothes and iron them myself. Each day I [also] spend time self-directing my health.” Boyd explained that he had tried to live with his daughter and “it did not work. I needed my own place, so I moved to my apartment.” Both men live independently and manage their health with the assistance of their home health care providers.

Jean reflects on her experiences about maintaining independence by sharing her story of how she took charge of her health through self-directed learning after her stroke. She shared, with emotion, her story:

At the rehab place they were feeding me, but they were not teaching me to feed myself and I knew that I needed to go home. I know what I want and I know when I want it. I can think for myself, I manage my own money, and I manage my own care.

She lives in her apartment and relies on home health nurses and services to assist with her daily living activities.

Other participants, who have not had a stroke, report that they also conduct self-directed health activities to support their independence on a daily basis. Nell, monitors her glucose. Nell has learned to do other health related activities that support her independence: “I’ve learned to elevate my feet, they don’t swell as much.” If her feet are not swelling, she has increased mobility to get out to other locations. A recent reaction to medication resulted in a hospital stay for Nell. Consequently, she learns on her own about medications before she takes them: “I go to Publix and they keep a list of everything to make sure nothing clashes.”

Lois, who has osteoporosis, is involved in researching and trying new experimental drugs in an effort to harden her bones. She talks with her medical team about what she learns and asks if there is a possibility that she might be a good candidate for the study being conducted with the new drugs. She shares: “I read about this medicine and thought I am going to try it. I just felt this will help.” Pat recognized that after her husband died she had to get herself together and take care of herself. She said, “No one was here, I had to get around, get out, drive and all that stuff. So you just learn to do what you have to remain independent.”

When Margaret talks about her recovery from a broken leg, resulting in her placement in a nursing home for rehab, she realized how important it was to her to remain independent. She said, “I was determined to get out. I didn’t want to be cooped up.” She began to self-direct her health by doing more exercise while in the center. Remarkably, she was released from the nursing home rehabilitation center early since she was so determined to regain her strength and mobility. Jim also possesses determination to get well and remain independent in spite of his numerous health challenges. He states, “I’m just not ready to hand it up.” Consequently, Jim maintains his independence, and uses self-directed learning to assist with the management of his care by working in collaboration with his health care team.

In summary, these older adults are motivated to take control of health care primarily due to their understanding of aging and health. Communication with health care providers, family, friends, and/or belief in a higher power serves as resources of information and motivation for continued self-directed learning about health. The participants recognize the benefits of their self-directed learning about their health through achieving personal health goals and maintaining independent lifestyles.

Health Care Behaviors Controlled by the Self-directed Learner

This section of the findings details the themes found in this study's data that relate to health care behaviors that are controlled by self-directed learners. Health care behaviors are defined as those routines or attitudes that are established and maintained in an effort to promote good health. These findings include: (a) establishing appropriate physical activity and exercise levels, (b) maintaining a positive or proactive outlook, and (c) managing the specific health condition.

Establishing Appropriate Physical Activity and Exercise Levels

Regular exercise is an essential element for improvement and maintenance of health for these self-directed learners. However, exercise must be designed to meet the needs of the older adult based on their physical strength and ability to perform the activities. Consequently, the participants established levels of activity suited to their health needs with the purpose of increasing the intensity of exercise as they became stronger.

Six of the participants reported that they are walking to maintain strength and mobility at varying levels of intensity and distance. Randy and Margaret walk on a daily basis. Randy walks briskly for 3 miles while Margaret walks slowly for 30 minutes. Margaret explained: "I walk every afternoon from here down to the entrance of the unit and back." She also proudly asserts

that she does not have arthritis because she maintains her flexibility by doing chair exercises and using her hands to knead bread, roll cookies and make quilts. Bernadine enjoys walking on the beach when she visits her home on the gulf coast, but has recently limited the amount of time she walks because of her shortness of breath.

Pat and Nell express that they would like to do more walking but they are limited on the amount due to swelling feet and legs. In spite of balance issues, both Betty and Pat continue to walk about three times per week usually in the mall or a safe location. They have also purchased supportive shoes designed to stabilize their feet when walking. Lois continues to walk on a limited basis in spite of her osteoporosis that has caused her spine to bend making it difficult for her to hold her head in an upward position. She has adapted her exercise routine to compensate for her physical changes by doing things that can be done while sitting in a chair. Lois, in spite of these changes, maintains a positive attitude about her exercise routine: "I am just glad to be up and going."

Boyd, George, and Will continue to adjust their exercise activities as they recover from their strokes. Boyd explains and demonstrates: "I do my exercises in my wheelchair," as he demonstrates how he is beginning to be able to move his legs again. He is convinced that in order to regain his mobility he must strengthen his muscles. He performs leg lifts and arm exercises from his chair twice a day. George is more fortunate than the other stroke participants because he is able to walk, making it easier for him to ride the bus to the senior center. He explains that walking is part of his strategy for recovery: "I walk around and move as much as possible." Will is encouraged by his recovery progress by being able to walk with the assistance of his cane. He explains: "I began exercising from my wheelchair by moving my arms and legs and now I am walking and participating in an exercise class."

Jean, who needs assistance to get out of bed, also talks about the importance of exercise in her life. For her, exercise means regaining the strength that will allow her to become more independent and mobile. She is currently working toward being able to use the Hoya lift to get herself out of the bed. In the initial stages of dealing with her condition, she remained frustrated by having to rely on her health care providers. She now recognizes that, as she regains strength and learns how to maneuver herself, she will reach her goals. She said, “One must set realistic goals, evaluate them, and move forward to see where we are going.”

Joe claims that the more active he is, the better he feels. Joe’s activities include carpentry, building fences and rock walls, tilling and seeding his lawn, cutting trees, and landscaping. He remains very active throughout the day but also recognizes the importance of resting when he gets tired. He said, “Every afternoon I take about an hour to rest and rejuvenate myself.”

Maintaining Positive Outlooks and Psychological Health

Overwhelmingly, the older adults in this study possess positive outlooks about their health. Randy believes that managing health is “making a plan to live” rather than making a plan to die. He explains, “this plan for living should incorporate realistic preventative measures of health management suited to the individual’s needs.”

In spite of numerous health issues, Nell maintains a positive and proactive outlook about self-directing her health. She states, “I’ve always been a positive person, I don’t let my problems get me down, and I am very happy.” She shares details about a recent visit with her internist: “She spent about 45 minutes drawing a diagram about the adrenal glands and their function, it seems that the doctor is getting to the bottom of my problems.”

Jean’s positive outlook is reflected in her comments: “I’m not a big feeling sorry for myself person, you got to keep moving on.” She contends that she was taught early in life that

one must move forward and “you do what you have to do” given your situation. She believes that your attitude, lifestyle, and commitments allow you to live a fulfilling life no matter what health issues may challenge you. She states,

I really do think that if you are content, have joy, you understand what is going on, and you are doing the right things you don't worry about it. I think it has something to do with your attitude, your lifestyle, and your commitments.

Consequently, Jean remains positive and proactively self-directs her health care. She states, “I'm not going to give up, I'm 72 years old but I'll try to be here a little bit longer.”

Randy believes that it is important to focus on the “important things” such as family, friends, and living a good life filled with joy rather than dwelling on your illness. Similarly, Betty suggests that it is best to look at the positive things in life rather than health problems and take time to laugh and associate with positive people. She said, “Laughing is urgently needed, associate with fun loving people, [and] stay active mentally rather than dwelling on your problems.”

Jackie, Bernadine, and Boyd voice an appreciation for hopefulness about improvements in their health. When Jackie was coping with not having a definite diagnosis about her illness she maintained hope: “You just have to keep going, it's mind over matter really.” As Bernadine's condition improves, yet remains a medical mystery, she explained, “I just keep plugging along, I have a good life, I have no complaints.” Determined to walk again, Boyd moves his legs and states: “I'm [going to] walk. You don't say you can't do it; if you say that, you will never do it.”

When John goes for his visit to the infusion center for his cancer treatment his positive outlook is evident: “It's fun for me because I walk in and say, stand up and cheer, John is here.” The reaction that he receives from others in the waiting room provides him with personal

encouragement. He says, “Looking at the smiling faces in the waiting room provides me with joy and allows me to be thankful that I am alive yet another day.”

Margaret maintains her positive outlook on life by helping other people. She smiles as she shares her stories about making cookies for the local McDonald House and tutoring children at a local grade school. She said, “Teaching the little boy to read, contributing to others, are the high points in my life. This is what is important to me.” Betty echoes Margaret by saying, “Stay active mentally and don’t sit down....If there’s something to do, do it.”

Will contends that rather than sitting around waiting for your health to improve you must become positive and proactive in self-directing the management of your health. He said after his stroke, “I just have to get up and go and be content with my life.” Joe, after watching his wife and son suffer from incurable illnesses, maintains that he has a “real positive outlook” about his future because of his experiences with his loved ones. Boyd says that his positive attitude will help him get well. He said, “I’ve got a positive attitude that I will improve, you got to have that attitude.” John maintains a similar positive outlook about himself: “I am a very good looking 78 year-old and I intend to stay that way until I’m at least 98.”

Managing the Specific Health Condition

Managing health conditions is challenging for older adults who are dealing with several health issues. Management of these issues becomes even more complex when several medications are prescribed to treat health conditions. Thus, when discussing the management of health through self-directed learning, the findings reveal that a variety of procedures and activities are incorporated into the daily lives of these older adults. These activities include controlling diet, monitoring conditions, managing medications, and using assistive devices

Eight of the participants report that they have made changes in their diets in response to their health. Nell found that she needed to “eat healthfully,” avoiding sugars and salt to control her diabetes and blood pressure. Randy has lost weight by making changes in his diet and has been able to get his blood pressure under control as well. Joe says, “I eat right” while Betty says, “I have learned to eat in moderation and avoid desserts. Jackie, Bernadine and Lois keep their weight under control by making good food choices. Pat changed her diet and now eats “entirely differently” since she was diagnosed with high blood pressure. Jim explains that he has learned to limit his serving size and reduce his fat intake.

All the participants mention that they monitor their health. The method used to conduct the assessment depends on the health issue that they are assessing. Nell said, “I monitor myself every other day to be sure my blood pressure and glucose levels are OK.” Joe reports that he monitors his blood pressure three times a day recording his findings in a notebook. He said, “I jot down the readings and average it out over the week.” He has been very successful at keeping his blood pressure in check by recording his findings. Randy, Betty and Jim check their blood pressure on a regular basis at their local pharmacies and feel that is sufficient for their needs.

Lois, being a diabetic, must inject herself daily with insulin. Because of anemia, Joe gives himself a B-12 shot every three weeks. Lois also injects herself daily with her medication. Other participants use a variety of medications orally, including over the counter medicines. Betty takes a number of medications both in the morning and evening for her high blood pressure, balance, and tremors. She feels exasperated by the number of medications that she has agreed to take: “I go right along, [kind of] insane, but this is what you have to do to remain independent.” Bernadine is somewhat appalled by the number of medications she takes to treat her problems. She said, “I take a handful in the morning and a handful every night.” She also is concerned that

she may be overmedicated and is beginning to ask her doctor and pharmacist about them. She said, 'I just feel like I am killing myself with medicines, I need to research them.'

Contrary to Bernadine, Jim believes that without medications he would not be alive. Jim said, "I'm surviving with medication." When Jackie was dealing with her illness, she took prednisone in large quantities to relieve her pain. However, as she began to learn more about the effect of this medication on her body, she began to take herself off the medication. She exclaimed: "Enough is enough and I took myself completely off that stuff."

Margaret only takes one pill for high blood pressure and boasts that at 89 years of age, she does not have arthritis. Both George and Will take several medications as they are recovering from their strokes. Since this is a new routine for them, they both mention that they are extremely careful to keep track of their medications and to adhere to the prescription directions.

Jean anticipates regaining her strength, "so I can get in and out of bed on my own." Lois uses a cane when she goes out in public but also has a walker for her home. Boyd and Will currently use wheelchairs to remain mobile. Both claim that the use of a chair is temporary since each person is motivated to walk again. Betty and Pat recognize that their problems with balance will force them to use a cane. Both women own a cane but are reluctant to use them on a regular basis.

In summary, self-directed older adult learners control their health by establishing health behaviors that target and manage their specific health condition based on the individual's level of physical and psychological strength. These activities are enhanced by a positive outlook on life, which helps to facilitate better health and well being.

Contextual Factors Controlled by Self-directed Learners

The contextual factors controlled by older adult self-directed learners include two categories: living environment, public and social environments. The following discussion will provide support for the themes found in the data.

Living Environment

Nine of the participants live in their own single-family homes, six with their spouses and three live alone. Six of the participants live in apartment complexes. All of the participant's living environments are accessible and designed to meet their current needs and future physical needs.

Randy's retirement home used universal design features in the construction to accommodate future physical needs. Jackie's home is equipped to accommodate wheelchair and bathroom accessibility issues. Both Lois and Pat have equipped their homes with safety and accessibility features. Pat mentioned that: "I have a shower large enough to sit down, have a hand held sprayer and a couple of bars installed for security purposes." Lois has also equipped her home with safety devices by installing grab bars, raising toilet seats, and removing rugs from the floor.

John's home is located near a large city that provides ready access to medical services, transportation, and grocery stores. On the other hand, Jim lives in his own home located on a dirt road in a rural area. In spite of the lack of services in Jim's area, he prefers to live in the country because he explains that this location "gives him a sense of peace and personal well being." He is proud of his garden and shared some fresh tomatoes with me as I left the interview.

Although most of the participants want to remain in their own home no matter where they are located, there are concerns expressed related to upkeep and maintenance. For those who live

alone, upkeep is a major concern and may result in a stressful situation for the homeowner.

Bernadine said, "I am concerned about the upkeep, particularly mold that may be causing me breathing problems." Pat also is concerned about maintenance and upkeep. She said, "I know things need to be done, but who can I trust to do them?"

Other participants have chosen to move because of needed home repairs and changes in their health. Betty recently moved into an apartment at a retirement community offering a continuum of care. She feels good about her change and recently, when she needed assistance, the staff was there to help her. She explained: "I used my alarm system, they came and helped me. If I would have been in my own home I may not have survived."

Nell chooses to live in a large apartment complex because of safety, affordability and maintenance issues. Similar to others who live in apartments, she mentions that she could no longer deal with the upkeep and maintenance of her own home. Her apartment is conveniently located near her health care providers, her church, and the library. This location is critical to her because she is close to friends and resources that she needs to manage her health. Margaret opts to live alone in her apartment that is conveniently located near her doctor's office and the shopping center. She mentioned that her relatives offered her a place in their home, but she prefers her own place in town where she can get out and move around at her own pace.

Living independently in her own apartment is most important to Jean. Although she tried to live with her cousin, she felt isolated and was not able to move around in a non-accessible home. She said, "I moved in with my cousin, and then I moved here. I can get in my wheelchair and go visit friends here." Boyd explains his reason for living independently in his apartment by telling me a story about his experiences trying to live with his daughter. He said, "I did spend some time with my daughter living with her, it was not good!" Boyd explains why it is so

important to have his own place as he recovers from his stroke: “There are things you must do for yourself, I have time to think.”

Public and Social Environments

Thirteen of the participants are actively engaged in public and social events with activities that involve friends. Friends provide a variety of functions for the self-directed learner including socialization, psychological support, and educational advice. However, the self-directed learner is particular about the characteristics or personality of the individuals they choose as friends. They see friendships as positive and mutually beneficial as they share information about their health and well being. Women expressed issues of communication with friends more readily than men did. However, with some probing, the men reflected on how friendships played a key role in support of their health.

Both Nell and Betty talk about choosing friends who have positive attitudes about life and health issues versus dwelling on the negatives. Nell said, “I search for positive people in my life and I have lots of friend here.” Betty recommends having friends that use humor on a regular basis. She explains how her relationship with a family attracted her to a another family she considers her best friends: “The Brantley’s, that’s why they have meant so much to me, because there is always something funny going on,...they are a bunch of clowns.” Betty has chosen and made friends with individuals at her apartment who have a sense of humor about life and health.

Friends also compare information about treatments, doctors, and the process of going for the “visit.” Pat reflects on her relationships with her friends: “We compare notes, and maybe they are on this, just like my cholesterol medication...and then we just talk in general about things.” Lois explains how her participation in a women’s group provides support as she manages her health: “I tell all the ladies in my circle about my health issues and they take interest

and help me.” Jackie, who is currently caring for her mother and husband, says that she occasionally talks to friends over lunch, but because of her responsibilities as a caregiver, her time is very limited.

Five of the male participants in the study share information about their relationship with friends. Randy talked about a group of male friends, which he thought “unusual” in that they do share health related information with each other. He said, “We have shared things about our lives, our health and intimate things about our lives.” John explained that he does not share information about his health with many people other than his family. However, when he was an AARP officer, he did tell the director of the board since his health could have impacted his ability to attend a meeting. He reflects on the incident: “I just wanted him to know...should I have had some sort of relapse or failure, and I couldn’t make the assignment, he would know.” Otherwise, he prefers not to share information about his health with friends.

Boyd does not trust friends or other people enough to talk to them about his health. He was somewhat reluctant to share information with me. However, he does trust his home health nurse and doctor. Boyd lives a somewhat isolated life, communicating primarily with his doctors and home health nurse. However, as we talked he mentioned that “many times people do not want to listen to him” because he was hard to understand. The fact that he is difficult to understand and speaks slowly may contribute to his attitude that he is not comfortable talking with other people about his health. However, by the time our interview was complete, he called me a new friend because I took the time to listen to his concerns about his health.

George and Will are involved in activities at the senior center, including health related programs and events. Since they are both very reserved and private individuals, they do not discuss medical issues with others at the center. Because of their participation in these health

programs and events, they learn indirectly from the interaction with other seniors, senior center staff, and professionals.

Self-directed learners choose to participate in a variety of public and social functions including churches, women groups, study clubs, schools, exercise programs, senior center activities, and coffee clubs. A number of the participants, Nell, Randy, Betty, Pat, Margaret, and Will go to churches on a regular basis as they find this experience to be a time for reflection and celebration. Nell reflects on her experiences, "I used to sing in the choir but had to give it up. It got too hard to stand up so I dropped out." Betty enjoys the many friends and the traditions of her church and goes every week. Margaret attends her church and volunteers at the pre-school. She said, "That is fun. I love it, because I volunteer at the school. I read to the children." Will attends church whenever he can get transportation.

Older self-directed adult learners are involved in a number of different clubs and group events. Pat, Bernadine, Margaret, and Lois participate in study clubs and the women circle group. Often the study clubs, will have a speaker who talks about health issues. Pat said, "The medical alliance will send a doctor to come in and speak to us about managing our health." Three participants, Nell, Jean, and Betty, participate in the coffee clubs at their apartment complexes. This experience allows them to interact and socialize with other people living in the complex. However, both Nell and Betty are concerned about the gossip that occurs and try to avoid those people who tend to gossip about others. Associating with gossiping people serves as a barrier to gaining appropriate information and self-directed learning. These older adults position themselves in settings where they can foster positive relationships allowing for sharing and gathering information that may be of benefit to them and their health. George and Will participate in activities at the senior center almost daily. These activities often include health

related events such as exercise, presentations about nutrition, and field trips. As a volunteer for the AARP, John travels to several group meetings throughout the U.S. on behalf of the organization. Both John and Jim belong to health support groups that promote interaction among a number of individuals with similar health issues.

Older adults are participating in schools as learners and instructors. Margaret and Randy volunteer as tutors at the elementary school in their community. Margaret smiles as she reflects on teaching reading to kids: “I have one little boy all by himself, and he is a slow learner, and I try to help him.” Randy helps young students with math. He finds the experience to be rewarding especially when they “gain confidence in themselves and recognize that they can do math.”

Bernadine is proud of herself for enrolling in a computer course at a community college. She is delighted about the experience since it has opened a new avenue to conduct her health research and the ability to communicate with her male friend and family. She expresses herself with excitement: “I took the hardest thing there was...I would come home at night and I would think about, I should have done this, I was so excited about [what I had learned].”

In summary, self-directed learners live in accessible homes that meet their current and future needs. These older adults choose to associate with positive people who provide support to them as they make decisions about their health. Group functions held at the churches, clubs or senior centers contribute to their well being by providing opportunities for social interaction, health education, spiritual inspiration, and volunteerism.

The Learning Process in Self-directed Health Care

Figure 1 shows the learning process in self-directed health care. This process is triggered by a health event. The learner then moves forward, as illustrated by the arrow pointing to the right, to contact their health care professional seeking confirmation and diagnosis of their health

condition. The cycle of self-directed learning begins after diagnosis of the health condition. Now the learner acquires and assesses information, chooses treatment options, monitors and reflects on the result of treatment interventions, and manages adjustments. The arrow between the health care professional and the cycle of learning is two sided, pointing in both directions. This is because during the process of learning, the learner moves forward into the cycle of learning and then typically moves back to collaborate with their health care professional for additional information. This process and cycle of learning occurs continuously as health events emerge. Figure 1 shows the self-directed learning process used by these older adults as they control their health care.

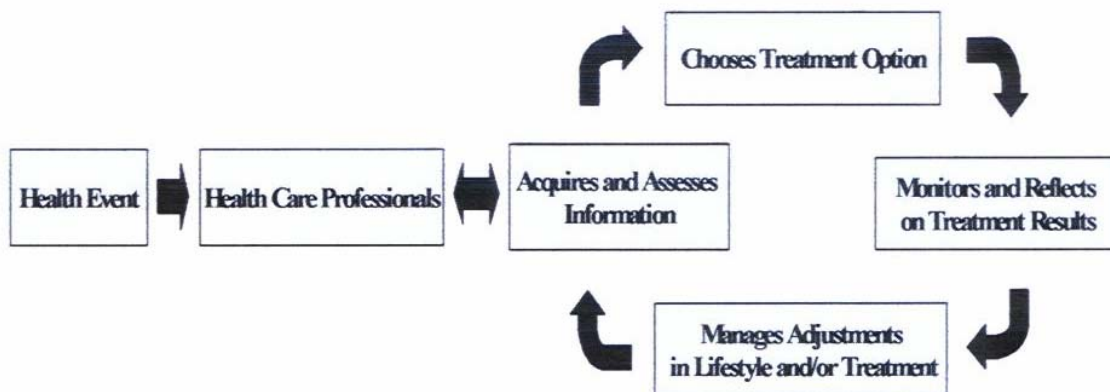


Figure 1. Learning Cycle in Self-directed Health Care (Initial and Ongoing Health Events)

Health Events

The process of self-directed learning originates with a health event. This desire to learn results from the threat that illness has on the learner's desire to remain well. Once a health event is diagnosed, the cycle of self-directed learning begins. The initial threat of illness accelerates and intensifies learning. For example, when Jackie learned that she had a rare condition with little known treatment, she frantically searched for information to find answers in a variety of

places including medical experts on talk shows. Jackie said, “Every time I heard something on TV, I would send off for the pamphlet...My daughter saw somebody in California on a talk show and she called the show and got the information.” Jean mentioned that she initially spent many hours at her computer learning about her condition when diagnosed with lupus. Randy recalls that after his physician said he had cancer, “I vigorously searched for information and treatment options.”

Health Care Professionals

Health care professionals are a critical component in the process of self-directing one’s health. They are responsible for providing the diagnosis and treatment of a health event and can play a key role in helping the learner become aware of treatment options. Therefore, it is important that the learner’s relationship with their health care provider be supportive as they manage their care.

Nine of the participants report that their interactions with their physician(s) are good to excellent because of the learning that occurs during each visit. Joe said, “[My doctor] will listen to me and we decide on changes in my treatment.” John mentions that he has a “special relationship” with his physician that allows for frank and collaborative interaction. Other participants said that because of good communication with their doctors, they were able to understand the importance and benefits of personal health management in an effort to maintaining good health.

The pharmacist also plays a key role in helping the self-directed learner be active in the process of managing their health. Randy monitors his medication process with his pharmacist by discussing the importance of “being aware of how medicines react and how your body reacts to them.” George consults with the pharmacist when he comes to the senior center. George said, “I

brought all my pills in a grocery bag and we looked and talked about every one them.” Pat reports that when she had the flu she called for advice from her pharmacist about what she could take to relieve her pain. She said, “He asked me what other medications I was taking. I told him and he suggested that I use an over-the-counter pain reliever since it would not interfere with the other medications.” Joe calls his pharmacist because she is aware of his medical history. Joe mentions, “I don’t know what I would do without her help. She always takes time to answer questions and explain things [medication interactions] with me so that I can better manage my health.”

Acquires and Assesses Treatment Options

The self-directed learning cycle begins with a quest to acquire knowledge from a variety of sources including brochures, books, newspapers, magazines, research articles, Internet, television, health seminars, friends, and family. To learn more about health issues, the learners may also contact other health professionals such as nurses and pharmacists to gain additional information as they proceed within the learning cycle. As learners acquire information from different sources, they compare the information. While acquiring this information, ongoing evaluation occurs, thus allowing the self-directed learner to become better informed, facilitating decision making about their treatment options. This also allows them to confirm the completeness and correctness of the information they are receiving from their health care providers.

Written publications are the most popular sources of information for the older adult learner. Brochures provide concise details about specific health conditions making them easy to understand. Several of the study’s participants mentioned that reading health brochures helped them learn about their condition and prompted them to ask health care providers additional

questions. Nell and Betty researched brochures related to diabetes when it became a threat to their health. Nell said, “Piedmont hospital puts out a lot of literature and the home health nurse brought me the brochures.” Betty explained that reading brochures helped her learn the information she needed to control her diet. Jean said, “Reading brochures about lupus helped me learn about the symptoms and management of the illness.” Joe recalls that by reading a brochure he learned how to recognize and control his blood pressure.

Self-directed learners read a variety of other publications to increase their understanding of their health. Participants explore health articles in magazines including *Prevention*, *Arthritis Today*, *Women’s Day*, and *Reader’s Digest*. Bernadine, John and Jim read publications from the health studies that they are participating in. Additionally, most of the participants said that they read their local newspapers, particularly articles that relate to health issues on a regular basis.

Randy and Jim spend a considerable amount of time researching about their health issues at their home libraries. Randy mentioned, “I spend several hours a month reading about my health issues, including the newspaper and books.” Jim chooses a variety of publications to look for answers about his health problems. He said, “I keep my ears open, I read everything in search for health information that may help me with my condition.”

John acquires information by reading the local newspaper daily, especially health related articles. John explained that “There is an article in today’s paper...they have 12 suggestions about exercises. If you want to loose weight, don’t worry too much about the diet, just don’t eat as much and exercise more.” Bernadine reviews several publications in search for answers to her heart condition. She said, “I enjoy several publications, *Arthritis Today*, medical magazines, and the *Bottom Line*. Lois investigates food labels when she does her grocery shopping. She said, “I have been controlling [diabetes] with diet by looking at labels before I make food choices.”

Margaret learns about flexibility and exercise by reading books and magazines. She says, “I learned about [doing] chair exercises in a book, and then I tried them.” Joe recently learned about a systematic method to monitor his blood pressure from an article in *Reader’s Digest*.

When Jackie’s medical team could not determine what was wrong with her, she searched medical journals, books, magazines, and newspapers, looking for information about her condition. She claims: “You must know what you are dealing with in order to manage it.” Her search provided her with information about symptoms, treatment options that helped her manage and recover from her illness.

Medical sites on the Internet are visited for information specific to participants’ health conditions, to verify and find new treatment options, and to look for potential ways to manage their illnesses. Jean consults the website, MD.com about lupus to learn about treatment and management options. Randy uses the Internet to verify and confirm the validity of health recommendations provided by his physician and other publications. Bernadine completes the on-line survey designed for heart patients administered through Boston University. She finds that her participation in the study keeps her updated on current research about her condition and offers her information about management of her health. John completes a survey from Harvard University related to cancer every month. He feels that through his involvement in the survey he has developed the discipline needed to manage his cancer. He comments, “I think that because of reading about my cancer, understanding the disease, and participating in the monthly survey I have become more disciplined about my routines.” Both John and Bernadine mention that participation in on-line studies about their medications helps them recognize the importance of medication regimens as they self-direct their health. John said, “It makes a difference and I think that now because of reading it, and understanding it, it makes a real difference.”

Several of the participants reported that they acquire health information by watching television. Margaret said, “I watch the programs that do exercises on television, modify them, and do them.” Will’s understanding of the importance of medication compliance is reinforced by television commercials. Other participants report that television introduces them to new potential treatment options and the risks associated with specific medications.

Senior and community centers provide additional opportunities for the self-directed older adult to learn about their health. Several of the participants report that they participate in these activities because they are able to learn and socialize with other people. These centers provide a variety of learning activities such as workshops on diet, medication awareness, exercise, safety, legal issues, and social activities. In addition to these activities, some older adults attend health seminars sponsored by hospitals within their communities.

These self-directed learners communicate with their health care support networks on a regular basis. These networks include health care providers, support groups, family, and friends. Because of ongoing communication efforts, the learners are not alone in the process of managing their health. Instead, the learner is engaged in collaboration with others who can provide guidance and encouragement with the management of their health.

Several of participants commented that they are in contact with family and friends on a regular basis to discuss their health issues. These conversations, not only provide emotional and/or psychological support, but can also enlighten the self-directed learner about new treatment options. Nell’s son, who is a drug company representative, is in constant contact with her to help with major decisions related to surgery and new experimental drugs. She also has a friend who is a registered nurse who keeps her apprised of new treatment options. Randy talks with his pharmacist son about potential treatments and his wife about health management

strategies associated with nutrition. Randy believes that his wife and family contribute to his good health today.

In summary, self-directed learners acquire information about their health from a variety of sources including brochures, Internet, magazines, books, newspapers, newsletters, and by watching television. They learn by attending health seminars, participating in organized activities, and through socialization with others. While this information is being acquired, the learner is also making assessments of the appropriateness of the treatment options and their health.

Chooses Treatment Options

After one acquires and assesses information about their medical condition the self-directed learner chooses treatment approaches. These choices can be as simple as deciding to take a new medication or as complex as changing one's lifestyle. For the older adults participating in this study, the initial health event provided the impetus for their learning. In this process of searching for treatment options, the learner became aware of the relationship between their health condition and lifestyle practices such as the importance of exercise and diet. Consequently, making treatment decisions evolves into holistic choices centered on preventative activities with the goal of regaining and/or maintaining good health.

Monitors and Reflects on Treatment Results

Monitoring and reflecting on treatment results provides the foundation for the management of one's health. Therefore, it is important to recognize that a discussion of monitoring and reflecting moves naturally into the management issues faced by these learners. Critical to the learning cycle in self-directed health care model, is the notion that the monitoring and reflecting processes are the springboard for making health management decisions.

Consequently, the self-directed learner monitors and reflects on the results of the treatment by paying close attention to how their body reacts to the treatment they have chosen. These activities involve checking vital signs and medication results, and their body's response to physical exercises.

One of the most pervasive activities conducted by self-directed learners is monitoring and reflecting about their health. Nell monitors her blood pressure, glucose and potassium levels on a regular basis. Because of these activities, she is able to appreciate better health. She comments, "When I walk more I am able to decrease the amount of blood pressure medication." John talks about the importance of paying attention to his body when using medications because the body will alert him if the dosage is wrong. John said, "I have established a good physical and medication regiment, it's the discipline with both exercise and medications that make a difference in your health." After taking the prescribed medication and reflecting on the adverse reaction to it, Lois decided to quit taking the pills and control her diabetes with changes in her diet.

Self-directed learners are in touch with both their physical and psychological selves, paying close attention to their changes in health and how they feel on a daily basis. Joe reflects on this issue by saying: "I pay attention to the way I feel and [make further treatment decisions based on my reflections]." Jim also believes that "listening to his body" prevented him from having a heart attack. He explains,

After taking a new medication for a few days, I began to notice both physical and psychological changes in myself. I began to monitor the changes for a week and the symptoms became worse. I decided to contact my doctor to explain the symptoms and we changed the medication immediately.

Betty also mentions that it is vitally important to “recognize the signs” of changes in your body especially when taking new medications. Recently, after noticing some changes in balance, she contacted her physician and discovered that the dosage was too strong. Betty said, “If the medication was continued it would have caused other health problems.” Other participants monitor treatment results by looking at the impact that exercise and changes in their diet have on their health and well being.

Randy documented the effect walking had on his health by having his protein levels tested at different times during the year. He said, “If I don’t walk for two or three days before [the doctor tests] my blood, my protein count is considerably different then when I am walking. These tests validated [for me] the importance of walking in the management of my health.”

Manages Adjustments in Lifestyle and/or Treatments

Bernadine gives an example of managing when she confronts her physician when he recommended a new medication: “My primary physician wanted to put me on a medicine because my cholesterol was high, and I just said no, I am not going to take it. She goes on to explain:

I asked the doctor [about medication], I said, “if I were your mother what would you tell me?” and he said, “Well, I probably would tell you I wouldn’t take it.” I just feel like I am killing myself with medicine. I wished I knew how to manage it better, but I don’t think there is any way that I can do that.

Jean, who is bed-bound, controls her health care from within the context of her home by managing her home health care team. Since she relies on this team to help her remain as independent as possible, it is important that her home health aides are interested in helping her. She explains that she conducts interviews and tells them what she expects from them. If they

cannot agree to her expectations, “they are asked to leave.” Jean also recognizes that in order for her to stay well it is vitally important that she be out of bed for more than a half of each day. She has called her doctor to request “two additional hours of assistance” so she can be more mobile for the entire day.

Managing health sometimes involves knowing when to make changes in health care providers. Bernadine mentions, “I had a [physician] who was just determined I was a hypochondriac and there wasn’t anything wrong with me, so I left him.” Likewise, Nell’s health had deteriorated after her doctor advised her to quit taking a medication: “The physician denied that he said to stop the pills. He was mean, and I got rid of him, I said, you know what, ‘you are fired.’” Both of these women recognized that in order to manage their treatment they must have complete confidence in and support of their health care providers.

Health management requires active engagement in looking at health maintenance as a continuous process rather than one triggered by each health event. The learner must look and evaluate their lifestyle practices in order to make the adjustments demanded by their health conditions. Several of the participants report that they take a variety of medications on a daily basis. Thus, the medication process becomes part of their lifestyle routine, as they manage health issues.

Other participants manage their health by engaging in physical activities such as walking, chair exercises, lifting weights, and swimming. These activities become part of a new lifestyle for many learners because they are aware of the benefits to their health. John mentioned that:

I try to stay in good physical shape all the time. I ride the bicycle for my legs and I never lift more than 65 pounds. It’s just how many repetitions I do to keep in tone and I swim because it is exercising my whole body. [Further,] It’s up to me to be assured that I do

what I'm supposed to do to maintain my existence and I try to [make adjustments as needed to maintain my health].

Randy also recognizes that to manage his health you must be willing to make adjustments in his lifestyle. Randy decided to walk daily to maintain his health: "I started walking to loose weight and discovered that I not only lost weight but also reduced my blood pressure." Consequently, recognizing the benefits of walking, it has become part of Randy's daily activities to promote good health. Six of the female participants have incorporated modified exercise activities into their daily routines to help manage their health but must do so in moderation based on their condition. For example, Lois, Betty, and Bernadine have challenges with balance, so they adjust their exercises to assure for safety.

In summary, the self-directed learning process begins with a health event. After the triggering event and diagnosis, the cycle of learning begins as the learner acquires, assesses information, and chooses a treatment option(s). From this point, the learner monitors and reflects on the results of treatment and develops a strategy for managing adjustments necessary to regain good health. Self-directed older adult learners pay attention and are aware of changes in their health and body while making lifestyle adjustments to promote health in collaboration with their health care providers. They focus on managing their health by using preventative methods such as having annual physicals, regular exercise, and maintaining a positive outlook about their health.

Perceptions of the Effect of Self-directed Learning on Older Adults' Health Care

This section reveals insight into the perceived effect of self-directed learning on older adults' health care. Three perceptions were identified: a) reduces threat to health, b) raises body awareness and sensitivity, and c) increases collaborative management of health care.

Reduces Threats to Health

Self-directed learners spend a significant amount of time reading about and researching their health. All of the study's participants recognize the importance of being actively involved in the management of their health care, and do spend time learning about their health issues. This information helps them to reduce threats to their health by increasing their awareness of the things they must do to maintain their health. Participants pay attention to their weight, eat nutritious meals, monitor specific conditions, try new treatments, and exercise. However, they are also keenly aware of the reactions they have to treatments and/or medications, and will discontinue using them if they are experiencing adverse reactions. These insights about health are learned over time through trial and error as participants manages their health.

Participants Nell, Randy, and Betty, control their diets and have seen improvements in their health because of weight loss. Nell who has diabetes and high cholesterol, said, "I know that diabetes can affect every part of my body." Consequently, Nell is careful about food choices by reading labels and making food selections that are best suited for health. Randy also watches his diet because of high blood pressure, and mentions that he has learned "to eat right by researching and reading a number of publications about diet and health." Betty fights to control her high blood pressure and weight, and conducts self-assessments when she has weight gain to determine the cause. She does this by initially determining the amount of calories she is consuming, consults with a nutritionist and doctor, and makes adjustments in her diet. In summary, many of these individuals reduced threats to their health by learning to maintain a diet designed to improve their health status.

Monitoring their specific conditions allows the self-directed learner to take charge of their health and reduce threats to their health. Nell says, "I monitor my glucose daily and

recognize and celebrate small improvements as I manage my health.” Joe takes pride in keeping a running record of his blood pressure that has allowed him to get his blood pressure under control. Joe said, “I learned about doing this by reading an article in *Reader’s Digest*, and adopted the method as part of my daily routine. It works well for me.”

Self-directed learners research and take their medications carefully. Jean, Bernadine, Betty, Jim, Lois, Nell, and Randy have experienced adverse reactions to medications. Since these experiences, each individual is careful about checking the potential side effects of medications before taking them. Jean said, “I know what not to take.” Bernadine said, “I think that they are trying to kill me with medications” so before taking a new prescription “I read a lot and I do a variety of things to check on them using the Internet.” Betty also is aware of adverse reactions to medications since she recently had an episode that caused her to call for emergency assistance. She shared that she checks with her pharmacist to check all the medications she is taking to prevent additional adverse reactions. Lois hopes that the new experimental drug she is taking will improve the strength of her bones. Jim is experiencing new strength and less arthritis pain because of the new medication he is trying.

All of the participants recognize the importance of exercise in reducing the threat of health problems. Randy said, “I have learned that exercise is the critical element to maintaining good health. Boyd expresses that: “I have seen a major improvement in my health because of doing exercises.” For Will, he said, “I am feeling better now that I can do my exercise again.” Margaret says, “Walking and exercising help me maintain my health, both physically and mentally.”

Raises Body Awareness and Sensitivity

Self-directed learners know about their health conditions because they spend time researching, accessing options, monitoring, and taking care of their health. In this process of learning, the individual becomes more aware of their physical conditions and develops sensitivity to their health care needs. Bernadine said, “I have tried to learn more about what is wrong with me. The doctor says I will know before he does. I think I do know my own body.” Randy also mentions that through his process of dealing with his cancer, he began to pay closer attention to his body. Randy said, “Watching my own body has taught me to be much more sensitive to it.” Jim’s awareness of his body saved his life. Jim said, “I just listen to my body,” referring to his recent warning signs prior to his heart attack. Pat also mentioned that she knows when she has done too much. Pat explains: “My body tells me yeah...and just recently I had a nasty cold and I must have coughed and twisted the least little bit, I couldn’t get out of bed one morning.”

Sensitivity to one’s health is also associated with knowing when to slow down and rest. Joe explains that: “I don’t overdue it. I started noticing things like that and I think that is a good thing. I try to use common sense and remember what my granddaddy said, “Do everything in moderation.” Betty also mentions that when managing her health she thinks, “Doing things in moderation is where it is at.” George, recovering from his stroke, realized that he needed to do several things to maintain his health including stopping smoking, getting exercise in moderation, and taking medications correctly. George said, “I stopped smoking, began exercising, move and walk, but not too much.”

Seeing a visible difference in your body encourages the learner to continue self-direction of one’s health. John talks about seeing the difference in his ankles after taking some medication:

“There is a visible difference, first of all my ankles swell more. It’s up to me to be assured that I do what I’m supposed to do to maintain my existence and I try to do that and I think that for the most part.” John talks about how swimming works on “my whole body and keeps me looking good.”

Increases Collaborative Management of Health Care

Being able to work in collaboration with one’s health care providers enhances the opportunity for good health. The self-directed learner is able to communicate with his or her doctors, takes information to them and is empowered to question and seek clarification about things they do not understand. All fifteen of the participants report that they have good communication with their current health care providers and great communication with their pharmacists.

The participants share medical information that they have learned with their health care providers. Nell, Randy, Jean, Jackie and Bernadine share health related articles with their physicians. After attending a seminar on women’s health issues, Pat questioned her doctor about not having an opportunity to have a bone density test. She requests that he order one for her because of her new awareness of preventing hip fracture due to bone loss. Lois brings her list of questions into the doctor’s office and they discuss them.

In summary, the older adults participating in this study perceive that one can reduce the threats to their health by being actively involved in self-directing learning about their health care. What they learn helps them to take charge and control their specific health issues with a new sense of awareness and sensitivity about their health. They choose to examine a variety of educational resources to determine, evaluate and understand treatment options. This information allows the self-directed older adult learner to become more informed about their health care

issues and helps to facilitate collaborative working relationships with their health care professionals.

Barriers Learners Experience in the Self-direction of Their Health Care

The factors that are barriers to how self-directed learners manage and direct their health are due to physical limitations, environmental limitations, policy regulations and personal management issues.

Physical Limitations

Physical limitations impact the ability of older adults to conduct many of the activities deemed helpful in the management of one's health. The participants of this study identify several physical limitations that have become barriers to them as they self-directed their health including walking, maintaining balance, experiencing weakness and exhaustion. These limitations are exacerbated by changes in eyesight, chronic pain, and digestive problems.

The majority of the participants report that a primary barrier to self-directing the management of their health care is due to limits in their ability to walk. Nell said, "If I am on my feet very much they really swell and make it difficult to walk." John explains: "I don't walk like I used to because it's very uncomfortable for my feet...my ankles and legs swell." I also get cramps in my arms and legs when I walk." Pat said, "If I am out and around much and walking a lot my knees start hurting."

Three participants, Betty, George, and Lois, have difficulty with balance. Betty said, "I am unsteady" due to changes in her equilibrium. George recognizes that he gets dizzy so he must be careful when he walks especially after sitting down for a time. Lois walks only for short distances because she experiences balance problems.

Experiencing exhaustion and/or weakness also limits the self-direction of one's health. Bernadine talks extensively about her challenges with self-directing and managing her health due to her exhaustion and weakness. Bernadine said:

I have always exercised, walking mainly. On the last day I was at the beach, I walked nine miles. Now on Monday, I couldn't walk across the room. I have tried to get my strength back, but after the heart attack, hernia, and irritable bowel syndrome, I am just exhausted. I am weak. I am frustrated.

George is frustrated by the changes that have occurred in his health. He explains: "I don't have [any] energy or nothing." Lois is also finding it hard to cope with weakness caused because of the experimental osteoporosis medication she is trying. Jackie's comments best illustrate the barrier of being exhausted and the effect that it has on self-direction of one's health. Jackie said, "I am tired and I hurt all over. It comes like that at times. I think I need to take better care of myself."

Other issues that prohibit self-direction of health are those related to changes in eyesight, digestive problems, chronic pain and being able to communicate effectively with health care providers. During the normal aging process, changes in eyesight are common. However, visual changes can become worse because of a health condition such as diabetes. Three of the participants, Nell, Bernadine, and Pat, mention that their eyesight has changed and is beginning to cause them problems. Nell said, "I used to read all the time, but my eyes bother me now...so I don't read as much." Bernadine talked about problems with her eyes related to fungus in her retina. Pat is also concerned about her vision and recognizes that she must take safety precautions when driving. She said, "My reflexes are not as fast as they used to be. I don't drive at night because I cannot see well. I have the beginning of cataracts."

Other physical barriers to self-directing one's health are those of chronic pain and digestive problems. Jim and John mention that pain caused by a variety of health issues can become a detriment to self-directing their care. Jim said, "I have severe pain, I get it in my back because of the worsening of the arthritis in my back." He explained when the pain gets extremely bad he takes a medication that makes him sleepy. John gets painful cramps in his arms and legs, and on bad days, he is forced to take medication that knocks him out and he must go to bed. As for Jackie, she experiences pain in her hands due to her arthritis and is not able to write well. She said, "I have arthritis now and I guess you noticed that in my signature, I don't write too well anymore."

Digestive problems may be a barrier to eating a healthy diet for some older adults. For Bernadine and John digestive issues make it difficult to function at times. Bernadine explains that she has irritable bowel syndrome that makes eating salads a problem for her. John said, "My problem is I don't masticate my food well, food is not chewed up enough and it causes me to have acid reflux."

Environmental Limitations

The findings reveal a number of environmental factors that are barriers to self-directing one's health including inclement weather, other people, learning environment, family, and living alone. These barriers can impact the activities being conducted by the older adult to enhance or manage their health. Randy, who walks outside daily, said that inclement weather prevents him from maintaining his fitness routine. Pat prefers warm temperatures when doing her exercise. When the weather becomes cooler, this change in temperature becomes a barrier. Pat said, "I always dreaded going especially in the winter months because you would go, and of course you

would get your hair wet and all this stuff and it was cold.” Nell and John mentioned that pollution caused by traffic keeps them from walking as often as they would like.

When self-directing one’s health the support of other people can be helpful. However, if that other person tends to gossip then it becomes a barrier to good communication. The study’s participants, Nell, Betty, Boyd, and Jean, mentioned that due to individuals in their complexes being gossips, they opt to avoid these people. Nell said, “I dropped out of some activities in my building because of people gossiping about others.” Betty also prefers not to socialize with individuals living within her retirement community who gossip. Betty said, “I do not like gossip and have no time for it because it causes bad feelings, I avoid these people.” Boyd and Jean also say they avoid gossiping groups of people when they socialize in their apartment buildings.

Being able to communicate openly and effectively with physicians is an essential component for older adults who are self-directing their health. Three of the study’s participants mentioned that being able to communicate with their doctors is occasionally challenging. Lois said, “Sometimes they talk so fast you can’t get it all.” Pat comments: “Doctors simply don’t listen to us, when we tell them about our challenges with things.” Bernadine expressed a similar frustration and concern about her previous physician when he thought that she was a hypochondriac: “He would not even listen to me and my concerns and told me that I was wasting his time.”

The participants, Boyd, George, and Will, recovering from stroke, expressed that some of their previous physicians do not take extra time with them during office visits. This lack of communication is a barrier to good patient/physician interaction. Lack of and limited opportunity to communicate with health care providers becomes a critical barrier to their health management and recovery since George and Will have no family to advocate for them. On the other hand,

Boyd views having family support as a barrier to his recovery. Boyd said, “When I go to the doctor my daughter is there, so I cannot talk to him if I want to because she is there. I have no privacy.”

For Jackie, her current role as the family caregiver is interfering with self-directing the management of her health. She looks after her wheelchair bound mother and her husband who is in failing health. Jackie explains: “I work 5 days a week at the store. If I am off, I am here. I have a caregiver during the day and then I take over when I get home...the night shift.” Jackie also takes care of her husband who is becoming increasingly more dependent upon her assistance. She says about her husband, “His body is wearing out.” Consequently, due to her responsibilities that pose a barrier to maintenance of her own health, Jackie acknowledges this fact by saying, “I need to take better care of myself.”

Older adults who live alone are at increased risk of injury. Living alone can also become a barrier in the self-direction of one’s health. The participants, Bernadine, George and Will live alone, cope with a several health issues, and take a number of medications. Each is responsible for keeping track of their medications and conducting daily living activities. These issues result in a great deal of stress for Bernadine who at times cannot get out of bed. She explains: “I just talk to myself and say you must keep pushing, since you have no one here to help. Some days, I just give in and stay in bed.” For George, he expresses his concern about taking his medications correctly. George said, “It is confusing, I can’t keep up with all that, it’s easy to forget.” Will also is concerned about his shakiness and no one to assist him. Will said: “I get frustrated when I am shaky and there is no one to help me.”

Policy Regulations

Medical care continues to change because of new policies and regulations in both governmentally operated programs as well as private health insurance. This has impacted the health care system resulting in shorter hospital stays and doctors spending less time with patients. These realities become barriers for self-directed learners because there may not be sufficient time to build a collaborative working relationship with health care providers. Another problem that occurs, especially with managed care, is that the patient may not see the same physician on consecutive visits.

Although most participants in this study report that they have developed positive working relationships with their doctors, some of the comments suggest that they are observing and experiencing some changes during recent office visits. Joe explained:

Most doctors are so busy and they are in and out. You tell them your problem, they change your medicine or whatever, and they are gone. And, you really don't have time to really sit down and talk to them.

Lois also expressed that she has problems understanding doctors because they "talk so fast." For Jean, the barrier to self-directing her health results from a new policy that has cut the number of hours her home health aide assist her. This means that her aide can work only four hours per day, either the morning or afternoon. This change has a tremendous effect on her since she depends upon assistance with getting in and out of bed. Jean explains: "I can only be in my chair in the morning, my aide must put me back in bed by noon. Now that's no way to live."

Insurance coverage provided by the government has limitations on what it can cover especially related to home health care, physical therapy, and communication therapy that are essential elements of a recovery regiment after a stroke. Since coming back in his apartment,

Will is living on his own with support from home health services. Will said, "I have a white card instead of the other card which covers more services. My card only has limited home health services."

Personal Management Issues

Personal management issues can become significant barriers to self-directing one's health. These issues serve as an excuse or justification for avoiding or maintaining activities in support of health. The findings reveal that there are several factors involved in personal management including time, procrastination, attitudes, fear, depression, lack of a diagnosis, and habits.

Time and procrastination are associated with exercise routines. Randy said, "Scheduling a time to walk on a regular basis is a challenge to me." Jackie also talks about time as a barrier to managing her own health. She said, "I simply do not have time to think about myself." Participants, Jean, Boyd, and Will, refer to issues related to time as a frustration for them because of slowness of improvements in their health after strokes. Boyd said, "I can't do everything she tells me to do yet." Will also mentioned that he gets frustrated by the amount of time it takes for him to do simple daily living tasks, such as dressing. Will summed up his comments about time by saying: "I simply get frustrated and anxious." Jean becomes upset by the time constrains on her health care as a barrier to her full recovery. Consequently, she cannot be out of the bed and mobile for the entire day and that is a detriment to her health both physically and emotionally.

Procrastination is an identified barrier to self-directed care management for participants, Nell and Pat when they discussed their exercise activities. Nell recognizes that she needs to get more exercise. However, she claims that, due to the hot weather, she will put it off for a while. Nell said, "I'm going to get into that in the spring." Pat also acknowledges that she needs

exercise and admits that she is not good about doing it. She simply said, “I have been real slack on walking. “My knees and feet hurt so I don’t do it.”

The personal attitude of the learner can either help or be a barrier in the self-direction of one’s health. The majority of the participants in this study had very good attitudes about their plan to maintain their health. However, as suggested in health behavior literature (Nawsom, Kaplan, Huguet & McFarland (2004), there times when your attitude changes and indicates simply a “lack of will power.” An example is provided in this study by the comments made by Jean, Bernadine, and Pat when they mention being “lazy” or “getting tired of pushing forward.” Pat and I talked extensively about attitudes and we discovered that when managing one’s health, there are too many people around reminding you of what you should do. Even though you know their advice is in your best interest, you develop an attitude about the continual reminders because you feel like a child rather than like an adult. Pat said, “I just got tired of that and I quit.” However, in most instances, these women are pushing forward self-directing their own health.

Three participants, Bernadine, Boyd, and George, express an attitude that sometimes they just want to give up. Bernadine said, “Sometimes I don’t have the push to make myself do it.” Boyd expressed with frustration and a sigh, “I can’t do everything [the nurse] tells me to do.” George says, with frustration in his voice when referring to his medications, “I can’t keep up with all [the information about taking medications]. It’s confusing, easy to forget.”

Avoiding the use of assistive equipment is a barrier to managing one’s health if the individual falls resulting in an injury. Pat and Betty recognize that they are having challenges with balance yet they refuse to utilize a cane. Pat said, “Very shortly I should be using a cane, just for stability.” Betty said, “I have been experiencing changes in equilibrium and my balance and I am unsteady.” Although Betty is a nurse and knows the importance of preventative actions

such as using an assistive device, her pride in appearance supercedes the reality of her situation. Interestingly, in our conversation together, Betty mentioned prevention issues yet she chooses to ignore those issues. She said, “Doing is entirely different than knowing.”

Two participants, Bernadine and Will, express that they occasionally get depressed and worry about their health. Depression and worry are barriers to the self-direction of one’s health because they can become debilitating to the individual. In Bernadine’s case, she is managing multiple health issues, one without diagnosis. She worries about these issues causing her to become unsure of her ability to manage health. She said:

I don’t know what is wrong with me and neither does anyone else. Normally I do handle my own problems, but sometimes they get out of hand. But, I can’t do that now. That is one of my biggest things that makes me more depressed, not being able to treat it. Sometimes I don’t have the push to make myself do it.

Being worried interferes with recovery from stroke. Will was so worried about his health, falling, and interactions with others that he was unable to motivate himself to go out of his apartment. His blood pressure remained elevated due to the stress he was experiencing caused by worrying. Recognizing these problems, Will decided to make an effort to stop worrying and his health improved. Currently, he gets out and participates in exercise activities with other older adults at the senior center on a daily basis.

The majority of the study’s participants express fear as a motivator for continued self-direction of their health. One participant, Jackie, expressed that fear has become a barrier to the self-direction of her personal care. She chooses to ignore her symptoms that are similar to her previous illness. Jackie said, “I hurt all over. It [the hurting] comes like that at times, I get

frightened. I just go to bed early.” Lois also fears being alone to manage her health. Lois explains: “Mac can get around better than I can. We are so dependent on each other.”

All the participants in the study expressed being frustrated at one time or another about their health. Most felt that frustration, if left unchecked, could become a barrier to self-directing their health. However, most choose not to let their frustration dominate their lives and management of their health. Jim, who experiences severe pain in his back said: “It just aggravates the devil out of me because I can’t do what I used to do and it hurts me.” Bernadine and Lois also express being frustrated about the things they cannot do such as exercising and working in their gardens. John is frustrated by his inability to masticate food. He explains: “During a period of a month, I am hungry. I don’t have too much of a desire to eat and it bothers me. I chew and chew...I have this big glob of food in my mouth. Not good, it causes me to have acid reflux.”

Developing and practicing good health habits are essential to self-directing one’s health. All the participants shared with me information about the changes and transitions they have made in their lives to promote positive and healthy lifestyles. Only two participants told me that they had a habit of smoking. One participant has quite smoking while the other person continues to struggle with the addiction.

In summary, physical limitations such as difficulty walking, changes in balance, and weakness and exhaustion coupled with the normal changes associated with aging can become barriers to self-directing one’s health. Environmental issues such as inclement weather, the learning environment, other people, and the living environment creates challenges to self-directing one’s health. Additionally, changes in regulations and new policies in medical care can limit services and challenge management of one’s health. Finally, personal management issues

such as procrastination, frustration, being lazy, depression, worry and fear can become barriers to self-direction of one's health.

Chapter Summary

The purpose of this study is to understand the role of self-directed learning in older adults' health care. Fifteen older adult participants discuss the process and impact of self-directed learning on their health care. Participants discussed issues that motivated them to learn: controlling health care behaviors, contextual factors, learning barriers, and their personal perceptions. An interesting aspect of this study is the identification of a learning cycle through which older adults move as they gain the information necessary to self-direct their health care.

Older adults are motivated to engage in self-directed learning about their health by aging issues, significant people in their lives, and benefits gained by taking control of their health care. These older adults recognize the importance of caring for their health, not just physically but also mentally. By conducting activities to promote better health such as establishing appropriate physical and exercise levels, maintaining positive psychological health, and self-directing specific health issues they gain greater control over their health issues and health care.

Self-directed learners typically take control of contextual factors found in their living, public, and social environments. They adapt their homes, paying particular attention to safety issues. They choose to associate with positive people and engage in public and social events that help to enhance personal well being. Subsequently, these older adult's sense of control of their lives, coupled with successful results from conducting health promotion and prevention activities, increases their motivation to continue self-directing their health care.

The self-directed learning process involves negotiation and socialization as older adults manage their health care. This process is normally triggered by a health event, which acts as an

impetus to move individuals through the cycle of learning. This learning cycle is learner initiated; typically, this occurs immediately after the individual receives a diagnosis. From this point, the learner moves to acquiring and assessing information, choosing treatment(s), monitoring and reflecting on the treatment(s) results, and managing adjustments in their lifestyle and treatment(s). Through this process, these older adults perceive that threats to their health are reduced, body awareness and sensitivity are increased, and opportunities for collaborative health management are enhanced. Learners do experience some challenges associated with self-directing their health care. These barriers typically occurred due to learners' mental and physical limitations, environmental issues, personal attitudes, and health care policies impacting services and service flexibility. Regardless of the barriers encountered, older adults who participated in this study demonstrated that there are both individual and health care system benefits that can be gained through self-directed learning. Given the growing demands on the nation's health care system, educators can play an important role in assuring that adults participate in the health care arena in ways that benefit all parties.

CHAPTER 5

CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

The purpose of this study was to understand the role of self-directed learning in older adults' health care. The research questions guiding this study focused on six areas: (a) What motivates older adults to take control of learning about their health care? (b) What health care behaviors do self-directed learners control? (c) What contextual factors are controlled by self-directed learners? (d) What is the process of self-directed learning of one's health care? (e) How does self-directed learning affect one's health care? (f) What barriers do learners experience in the self-direction of their health care? A qualitative research design was used to explore these areas, and data was analyzed inductively using the constant comparative method from fifteen interviews.

Three conclusions regarding how older adults utilize self-directed learning to impact their health care can be drawn from this study: older adult learners are motivated to take control of certain aspects of their health care, the self-directed learning process specific to health care involves negotiation and socialization, and self-directed behaviors are perceived as positively affecting health care. In this chapter, we will discuss the conclusions drawn from these findings and present implications for practice and recommendations for further research. These conclusions will begin with a brief discussion about changes in the philosophy of the U.S. health care system in order to show the relevance for the importance of self-directed learning within the context of this system. We will then draw upon the literature that supports and promotes self-

directed learning and compare it to the findings from this study. Finally, implications for practice and recommendations for future research are presented.

Conclusions and Discussion

Today, more than ever before, numerous resources are available to help older adults in self-directing their health. Nationally, the U.S. health care system has recognized the potential of self-directed learning through the promotion of preventative health rather than treatment of disease. Initiatives such as the Healthy People 2010 have been instrumental in promoting disease prevention and health promotion activities that encourage older adults to take control of their health. Resources abound, from organizations such as the AARP, CDC, to the Internet offering online publications and listings of available resources that expose older adults to a variety of educational materials that promote self-responsibility and management of one's health. Given the availability of such resources and the new emphasis of health literacy (Fisher, 1999), the self-directed learner is able to learn and work in collaboration with their health care providers, thus increasing the potential for better care and improved health. The participants in my study have taken advantage of the resources available to them, are motivated to take charge, and control their health care because they recognize the health benefits of being involved.

This study has arrived at three conclusions about how older adults use self-directed learning: (1) older adult learners are motivated to take control of certain aspects of their health care, (2) the self-directed learning process specific to health care involves negotiation and socialization, and (3) self-directed behaviors are perceived as positively affecting health care.

Conclusion 1: Older Adult Learners are Motivated to take Control of Certain Aspects of Their Health Care

This research uncovered that older adults are motivated to take control of their learning about health because of an awareness of the relationship between age and health, associations with other people, and recognizing the potential benefits of controlling one's health care. Various authors have also noted these aspects in relationship to motivating learning about management of health. Roberson (2003) found that adjusting to physical health changes because of the aging process motivates self-directed learning. As noted by Berman and Iris (1998), older adults are motivated to learn about their illness in order to control their health and manage many aspects of the aging process. Older adults in my study and in previous research (Candy, 1991; Grembowski et al., 1993; Rodin, 1986; Waller & Bates, 1992) reflected a "sense of control" over their health, thus increasing their perceived potential for improving or coping with changing conditions as a result of the aging process. No matter what type of condition these individuals are coping with, they recognize that they can do something to manage and/or control their current health.

This notion, a sense of control, corresponds with what Candy (1991) refers to as the autonomy of the individual using the auto-didactic process of self-directed learning, one that is a highly dynamic process where the learner is readjusting their objectives depending on their personal tastes, wishes, and circumstances. Mocker and Spear (1982) echo this notion through their definition of the self-directed learning process where the learner has control over both the means and goals for learning. Further, (Spear & Mocker, 1984) suggested that available resources such as observing others, educational materials, and educational events found within the learning environment, govern self-directed learning. In my study, interactions with other

people and educational materials and events play a role in achieving a sense of control over their health issues.

Most notably, these older adults are motivated to take control of their health through their associations with other people. Like self-directed learning, self-care is embedded in family, community, and institutional frameworks allowing learners to consult and secure resources about their health from a variety of sources (Backett & Davison, 1995, Royer, 1995, & World Health Organization, 1983). My study confirmed that self-directed learning about individual health issues does not occur in isolation; there is a reliance on family, community, and health care professionals. Consequently, these interactions with other people, including health care providers, family, friends and their belief in a higher power contribute to the participants' learning and controlling their health care.

According to the literature, people experiencing an illness consult a friend or family member prior to a health professional (DeFriese & Woomert, 1983; Verbrugge, 1987) for information gathering that accompanies coping (Leventhal, et. al, 1992). Nine of the older adults in my study did not substantiate this consulting pattern. Instead, these individuals talked to their health care providers before they consulted with their friends. Perhaps this was because many of the participants were dealing with a number of life changing conditions that required physician directed medication, monitoring, and lifestyle changes. However, after their diagnosis by their health care professional, friends, and family were motivators and supporters.

Friends play a key role in helping older adult's facilitate the self-directed learning process. The counsel of friends helps to confirm and support making appropriate choices (Rawlins, 1995). This study revealed that most of the females talked with friends on a regular basis seeking advice about their health. This finding corresponds with the literature that suggests

females are more likely to have health related conversations with friends than males (Stoller, 1998). Only one of the males in my study mentioned that he had other male friends who talked about their health on a regular basis. Sharing stories of illness for these older adults assisted in information processing (Furstenbery & Davis, 1984) by providing reference points from which they could begin to assess their own health (Strain, 1990). This process also teaches and reinforces patterns of self-care (Stoller, 1998) and further facilitates the self-directed learning process. Additionally, interactions with friends provide reassurance and perhaps even more importantly, provide a sounding board for listening to complaints and concerns. Several of the participants mentioned that they relied on their friends for psychological support and reinforcement of their health related goals. Several of the women who belonged to social clubs utilized these social contacts to “compare notes” about treatment options and then carrying what they had learned to their health care professional for discussion. Evidence has repeatedly demonstrated that older adults’ psychological well being and morale are significantly associated with the quality of interaction with a close friend (Conner, Powers, & Bultena, 1979; Strain & Chappell, 1982).

Furthermore, friends can enhance the self-directed learner’s ability to assess their own condition(s) through sharing and comparing treatment and health care provider information. Specifically, older adults in my study shared with friends the details of their office visit experiences and interactions with their health care providers. Recent literature has suggested that if older adults spend a few minutes picturing or using one’s imagination on how they would conduct a health activity such as blood test, they are 50 percent more likely to do these tests on a regular basis (Liu & Park, 2004). Perhaps sharing of health experiences among friends provides opportunities to model one’s own self-directed health care approaches. Furthermore, this sharing

allows for social connectedness with their peers. Feeling connected with other people has proven to protect and improve emotional health (Cacioppo et al., 2002).

Several participants mentioned that their faith in a higher power or God helped them to remain motivated to learn and control their health. Others talked about how their faith provides the foundation for personal values and health beliefs. One woman said, “My bible reminds me not to sit around feeling sorry for myself.” Individuals with more serious illnesses such as cancer and stroke made more comments about their faith and the power of God than those dealing with less serious illnesses.

The literature documents that spiritual well being is sometimes thought to be related to physical well being (Koenig, 1999; Moberg, 1979). Koenig (1999) suggests:

Those with faith in God rarely feel lost or abandoned giving people a tangible sense of mastery in their lives. When stress from illness threatens to overwhelm religious people, they draw on a reserve of energy and motivation that allows them to persevere. They trust in God to fill the gap between what they could normally endure and what is actually required of them. (pp. 26-27)

Three participants who almost died from a stroke talked about how God is helping them daily through the recovery process. They explained that without their belief in God there would be little hope for the future. For those participants experiencing chronic conditions, which produce symptoms continuously or episodically over time (Ford, 1986), a higher power helped them to cope with the changing conditions that they attempt to control.

In addition, the connections between religion and health show that active involvement in a religious community may protect against physical health problems. First, frequent church attendance may keep older persons mobile and active (Koenig, 1999) because of the necessity to

go to the church location. Second, increasing social involvement lowers levels of loneliness (Johnson & Mullins, 1989), and increases life satisfaction (Ellison, Gay & Glass, 1989). Third, involvement in the religious community reduces high risk behaviors such as smoking and alcohol use associated with health problems (Koenig, 1990) and fourth, helps reduce coping and emotional distress associated with illness (Pargament & Park, 1995). These factors illuminate and clarify a rationale for comments about religious belief provided by the participants in my study. They also provide insight into the potential health benefits of religious beliefs and how these self-directed learners are able take control within a context of challenging health conditions.

Health Care Behaviors

This study uncovered three health care behaviors that older adults control. These behaviors include establishing appropriate physical activity and exercise levels, maintaining positive psychological health, and managing the specific health condition. At the core of these behaviors is a direct relationship between family values and philosophy of life. Family influences and values help these older adults manage their health by providing a strong foundation for determination and perseverance. Several participants referred to their family and health: “My parents taught me the importance of taking care of myself.” “Without my wife’s help I could not do it [self-direct my care].” “My determination comes directly from my exposure to my ornery and stubborn grandmother.”

The literature talks about the role of personal values in relation to learning and managing one’s health. Candy (1991) characterizes autonomous learners as those who have a strong sense of personal values and beliefs. These values provide a solid foundation for planning, goal setting, evaluating choices, accomplishing goals, and exercising self-restraint and self-discipline.

McDonald-Miszczak, et al. (2001), suggest that the type and duration of an illness and specific beliefs about the illness and the aging processes predict self-care behaviors. Acton and Malathum (2000) found that as older adults reach a higher level of self-actualization, more attention is directed to health promoting behavior and maintaining healthier lifestyles. However, it is important to note that the severity or duration of current and past illnesses may also have an impact on how older adults manage and/or control their health care (Berman & Iris, 1998).

All of the older adults in this study held values that led them to believe that they could control their health care. Several of the participants who experienced severe and disabling health events maintain an active role in managing their health. In contrast to the literature, that suggests severe illness and disability may stifle self-direction of one's health (McDonald-Miszczak, et al, 2001), participants in my study with multiple health issues and disability were actively engaged in managing their health. One of the participants, primarily bed-bound, manages her health care through regular collaboration with her health care providers, use of technology, and the assistance of friends.

Establishing appropriate physical activity and exercise levels. A primary part of controlling health involves assessing one's condition in order to accommodate for physical and psychological changes and needs. This process of assessment involves recognition, evaluation, and interpretation of symptoms (Dean, 1986; Stoller, 1998) based upon a lifetime of individual experiences, attitudes and beliefs about diseases (Haug et al., 1989). The nature of the symptoms experienced by older adults influences the interpretation of an illness (Leventhal et al., 1992; Prohaska et al., 1987). Depending on the severity and persistence of symptoms, the older adult learner makes decisions about what activities they can conduct in an effort to control their health (Dean, 1986).

The older adult participants in my study conduct varying levels of physical activities based on their assessment of their health conditions. Older adults, who experience good overall health are walking and swimming to control their health. Other individuals experiencing physical challenges that do not allow them to walk or swim make accommodations based on their health conditions. Several of the participants talked about stretching and exercising from their chairs and participating in organized classes to maintain flexibility and mobility.

All the participants expressed that the rationale and motivation for continuing to exercise is associated with their goal of striving to remain independent. For example, Jean who is bed bound, talks about the importance of exercise as a means to regaining the strength that will allow her to become more independent and mobile. She also recognizes the importance of being realistic about her health. She said, "One must set goals, evaluate them and move forward to see where we are going." These findings are similar to the motivations found by Berman and Iris (1998) which suggests that older adults take charge of their health to improve energy levels, staying active, and staving off the onset of old age in hopes of maintaining independence.

Older adults accommodate for safety issues related to conducting their physical activities. Several of the participants mention that they walk in the mall instead of outside because the temperature is controlled and the walking surface is level, thus allowing them to walk in spite of personal balance issues and weather conditions. Recognizing this need for extra stability when walking, several participants utilize supportive shoes, canes and walkers so that they can safely conduct physical activities. Others attend group activities at their local senior center since they are motivated to continue because of the conversation and encouragement that occurs between their peers and the group leader and/or educator.

Maintaining positive psychological health. These older adults possess positive attitudes about their health and are satisfied with their lives. Randy contends that managing one's health is "making a plan to live" rather than a plan to die. Will shared a similar philosophy through his comments, "Rather than sit around waiting for your health to improve you must become positive and proactive in the management of it." These findings complement earlier findings that suggest older adults who believe their health is good are more confident in their own resilience (Haug et al., 1989). The notion that older adults experiencing poor health interpret symptoms negatively (Stoller, 1993a), and poor self-rated health is associated with further deterioration and decline (Strain, 1996), is not shown in my group of self-directed older adults learners. In my study, the participants' health conditions which one could interpret as poor or serious did not stifle their continued efforts to learn and control their health.

In fact, only two of the women mentioned that their health made them depressed occasionally, when they reflected on some of the things they previously enjoyed doing such as gardening or walking on the beach. More commonly, these older adults expressed that they were not people who felt sorry for themselves. Instead, they energetically move forward learning new health care strategies that ultimately helps them to manage their lives. Several of the participants expressed a renewed sense of "hopefulness" because of the potential outcomes from discovering new treatment options.

Several authors have investigated the relationship between life satisfaction and learning readiness. Brockett (1982) found that there is a significant positive correlation between life satisfaction and self-directed learning readiness. Interestingly, self-directed readiness was not related to age; it was related to a positive self-concept and self-perception (Brockett, 1987). East's (1987) work revealed that the self-directed learning readiness factors—acceptance of

responsibility for one's own learning and love of learning, were most responsible for the effect on life satisfaction. The entire group of older adults in my study had accepted responsibility for their learning and several mentioned how they enjoyed learning about various aspects of their health. Three participants were involved in health related surveys and felt that they were extremely beneficial to them. Their participation in surveys provided access to new information that accelerated their personal learning and motivated them to continue the process.

Managing a specific health condition. According to the U.S. Department of Health and Human Services (2000), a health literate person is able to think critically, solve problems, practices responsible citizenship, is self-directed, practices self-advocacy and is able to communicate with their health care professional. The older adults in my study have provided insight about the health literate individual as they manage specific health conditions on their own. Further, as suggested by Ory and Defriese (1998), these people conduct self-care activities to compensate or adjust for functional limitations, practice prevention activities, and self-manage treatment for symptoms based on the individual health conditions. They control diet, monitor conditions, take medications, and use assistive devices.

Eight of the participants made changes in their diets because they had learned about the effect of diet in relation to weight control, diabetes, and high blood pressure. All of the older adults in this study understand the importance of conducting preventative activities such as monitoring blood and glucose levels, taking medications appropriately, and using assistive devices. They continue to do these things because they have successfully achieved some control over their specific health condition. For example, Nell has gotten control of her diabetes and blood pressure by taking control of her diet. These self-directed learners have learned about the

relationship between their diet and managing of their health and have made adjustments in their diet to accommodate their health conditions.

Monitoring various aspects of health is also an important aspect of taking control of one's condition. Most of the participants checked their vital signs on a regular basis as part of the health management regiment. Some individuals were more attentive to monitoring because of the health issues they were controlling. Joe, for instance, takes his blood pressure three times a day, records it in a book and averages it daily since this is a major health concern for him. Lois and Nell are most concerned about blood sugar levels, consequently checking their glucose on a daily basis. When a health condition can be more effectively managed by monitoring the changes in their body, the learner takes every opportunity to use this information in an attempt to gain more control over their illness.

Self-directed older adults set limits on the medications they are willing to take. They recognize that not all prescribed medications are appropriate for them even when prescribed by their doctor. These individuals take the initiative to conduct research about other treatment options and often bring what they have learned to their health care providers. Because of these proactive activities, two of the participants in my study are taking new medications and having less adverse reaction to their medications. Although trying new medications can provide better options for managing their health, most of the participants recognize that without medications they would not live long because of the number and complexity of their health issues. These individuals consequently spend a considerable time consulting with their physician and pharmacist as they control and manage the use of numerous medications.

Dean (1992) argues that self-treatment involves other responses beyond medications. He suggests that individuals use a holistic approach of managing one's health by making changes in

activity, exercise level, controlling diets, and practicing preventative behaviors. An important component of prevention with older adults is to utilize equipment designed to prevent falls and increase mobility. All of the participants have learned about the importance of protecting themselves from injury. However, two of the individuals are reluctant to use their canes. Betty sums up this notion by providing an explanation about why people choose not to practice preventive activities, “You can know all the things you need to do to prevent a fall, but it’s up to you [the individual] to make the decision to use them” [assistive devices and medications].

Contextual Factors Controlled by Self-directed Learners

The contextual factors controlled by the older adult participants in my study include their living environments, public and social environments. The living environment in which an older adult resides is commonly associated with personal independence. Therefore, it is critical that this home or apartment is equipped with the safety features that help to maintain personal independence.

Living environment. Self-directed older adults recognize and understand the importance of using design features that will allow them to remain in their home. All of the participants in my study have made adjustments in their homes using universal design features to accommodate their current and future needs. These features include making doors accessible for wheelchairs and walkers, installing bathroom safety equipment like grab bars, toilet seats, and bath mats (The Center for Universal Design, 2003). As recommended by a study on injury prevention, they practice safety throughout their homes by removing dangerous items such as rugs, lamp cords, and clutter from floors (Valente, Dignam, Marchman, & Goddard, 1998). In addition, other safety features were found in many homes such as nightlights in the bathroom or hall, telephones placed within easy reach, and handrails placed on at least once side of their stairways. However,

the major concern expressed by many of the participants was home maintenance and the costs associated with general upkeep of their homes.

Older adults in this study choose to live in a variety of different settings, some in their own homes, others large and small apartment complexes, and one in a retirement community. Affordability and safety issues and the locations that are convenient to health providers, shopping, church, and friends influence the rationale for their choices.

Public and social environments. Older adults control their public and social environments by choosing to associate with people who have positive attitudes about health and their lives. They do not like to be around adults who are gossips and dwell on the negative aspects of health. Instead, they prefer to associate with individuals who are positive about life and have a good sense of humor. If they encounter negative thinking people, they avoid participating in conversations or social activities with them. Four of the participants mentioned that they have dropped out of some activities in their apartment complexes because of bad feelings caused by negative talk and gossiping.

Older adult learners choose to participate in a variety of public and social functions including church, clubs, school, senior center activities, and exercise programs. Each function provides the older adult with opportunities to interact with individuals of all ages and allows continued involvement within their own communities. These activities are important to maintenance of their physical and psychological health.

Being involved in the church or the senior center provides an opportunity for these individuals to participate and volunteer while maintaining a sense of worth. As noted earlier, frequent church attendance helps with senior mobility and socialization and may prevent functional decline (Benjamins, 2004; Koenig, 1999; Moberg, 2001). The oldest participate in my

study, 89-year-old Margaret smiles as she talks her experiences reading to pre-school children at her church. Most of the other participants talk about attending church on a regular basis because it gives one an opportunity for reflection and celebration.

In summary, the older adults in my study control the contextual factors associated with both their living, public and social environments. Homes are located and equipped with the structural adaptations to accommodate their health needs (Rogers & Rogers, Takeshima, & Islam, 2004; The Center for Universal Design, 2003). They recognize the importance of preventative health. Research has shown that healthy lifestyles that include preventative activities are more influential than genetic factors in helping older people avoid the deterioration traditionally associated with aging (Kane, 2002). Further, these adults take the opportunities to learn by participating in churches, classes, seminars, clubs, senior centers, and health support groups. They achieve a sense of purpose and well being through their volunteer work at churches, schools and other organizations. In fact, older adults who regularly volunteer even a small amount of time generally have a greater sense of well being than those who do not (Morrow-Howell et al., 2003). According to Lamdin and Fugate (1997),

Beyond the personal benefits of volunteering, these men and women are making possible a new vision of the caring society...their collective potential to transform the way in which we care for the poor, the weak, the sick, and the forgotten. (pp. 157-158)

These people are also very positive about their health, satisfied with their lives, and are hopeful about their futures. When talking with them, one hears expressed tones of confidence in their future combined with an excitement about learning and discussing their experiences, discoveries, and challenges as they self-direct their health care. Studies have documented that “high levels of life satisfaction are associated with high positive levels of health self-evaluation”

(Stolar, MacEntee, & Hill, 1995, p. 151). Older adults view their health with optimism (Segerstrom, Taylor, Kemey, & Fahey, 1998), have more confidence in their own resilience (Haug et al., 1989) and have reconciled the stresses associated with changes in health (Stolar et al., 1995) are more satisfied with their lives. Meddin and Vauz (1999) suggest that factors such as a sense of mastery, maintain a positive attitude of self, health status, and social support contribute toward the older adult's subjective well being. These noted factors which contribute to life satisfaction combined with positive sense of self, play a significant role in the self-direction of the older adults health.

Barriers Experienced by Self-directed Learners

Older adults experience challenges in the self-direction of their health care due to physical limitations, environmental issues, policy regulations, and personal management issues. These issues become barriers to the learner because they interfere with achieving their health goals. However, the self-directed learner recognizes and adjusts their management strategies to accommodate for their needs whenever possible.

Physical limitations. The most frequently mentioned barrier found among the participants were issues associated with walking, such as balance, weakness, and exhaustion. All of the learners made adjustments in their activity levels based on these barriers. What is important here is that the self-directed learner did not give up and quit exercising. Instead, they recognize the problem and substitute other types of activity to compensate for their limitations. They also pay close attention to their bodies by recognizing changes in strength and/or balance that may cause subtle changes associated with daily functioning. For example, George feels dizzy when he has been sitting for a while; he has learned to move more slowly when standing up. Nell, John, and Pat know that if they are standing too long their legs and feet swell.

Other participants recognize that their weakness and exhaustion has dominated their ability to manage their health care. However, they have not given up hope that their health will improve. Additional barriers that pose a threat to self-direction of one's health care are associated with changes in eyesight, digestive problems, pain, hearing loss, and inability to communicate effectively. Changes in vision can affect the ability to see and read both written materials such as health brochures, product labels, prescription directions, and road signs. These issues are challenging to the learner because they may be a barrier to learning and interpreting important health information. Visual changes also affect one's ability to drive safely. Recent studies have documented that changes associated vision lead to driving limitations and in some cases cessation of driving (Ball et al., 1998; Johnson, 1998; McGwin, Chapman, & Owsley, 2000; Ragland, Satariano, & Macleod, 2004). Recognizing problems with eyesight, the older adults in my study limit their amount of driving that they do and avoid night driving.

Physical pain and digestive problems interfere with the self-direction of one's health care. Jim and John refer to their pain as a "detriment to self-directing their health." Often, the debilitating nature of pain requires taking medication that makes the learner sleepy or in John's case, "It knocks me out." Additionally, arthritis pain may prohibit the learner from being able to write. Interestingly, this inability to sign one's name clearly was a very embarrassing event to the participant, since she apologized to me about the messiness of her signature.

Eating a nutritious diet and maintaining appropriate body weight are two critical components associated with maintaining and controlling health (Wellman & Johnson, 2004). Experts suggest that to lower the risk of chronic diseases one's diet should include an abundance of fruits, vegetables and whole grains, adequate protein, and essential fats (Kant, 2004). The difficulty posed by digestive problems can become a barrier to self-directing one's health in that

it interferes with food choices both at home and in social functions. For two of the older adults in my study, these food issues pose particularly challenging problems. Due to irritable bowel syndrome, one individual cannot eat salads. The other individual does not masticate food very well causing acid reflux. Therefore, these issues offer barriers to maintaining proper nutrition and may cause weight loss (Johnson & Fischner, 2004). Weight loss among older people contributes to cognitive and functional impairment and low quality of life (Wilson & Morley, 2003).

Environmental limitations. It was revealed by the study that a variety of environmental limitations interfere with self-directing one's health. They include inclement weather, other people, learning environment, family, and living alone.

Weather and pollution pose challenging issues inhibiting completion of health maintenance activities such as walking and swimming. Cold, hot, windy, rainy weather often interfere with walking or even getting out of the house to go to a facility to swim or attend an exercise class. Pollution also was a barrier for other individuals who lived in metropolitan areas. Consequently, because of these barriers three of the participants in my study are using exercise equipment in their own homes.

Finding health care providers who are willing to talk and listen to their patients is critical to the self-directed learner as they manage their health care. Changes associated with aging and health such as hearing loss make it more difficult to communicate with their physicians and other health care providers. Five of the participants reflected that communication could become a barrier to controlling their health. However, these self-directed learners are willing to take the initiative and ask their health care providers to slow down and explain things during the office visit. These learners come prepared to interact by sharing relevant health information and do ask

questions about treatment and other recommendations that may result from the visit. If their provider is not willing to honor their request, they will find a provider who will listen and collaborate with them.

Effective communication is a critical component to receiving the health care one needs and deserves. Research has found that the amount of information communicated by physicians to patients is predicted by the patient communicative style. Patients who ask questions and expresses concerns most likely will receive treatment information while patients who are anxious will receive information about medical procedures (Street, 1991). Most often older adults ask direct questions and are willing to initiate conversations about new health issues that are concerning them (Beisecker & Beisecker, 1990). Furthermore, if they do not understand what has been shared they ask the doctor for clarification. Situational variables such as length of interaction, diagnosis, and reason for visit are stronger determinants of patterns of information seeking than are attitudinal or sociodemographic characteristics (Beisecker & Beisecker, 1990; Blanchard, Labrecque, Ruckdeschel, & Blanchard, 1988). Interestingly, patients who are more proactive during office visits report fewer health problems, limitations in their activities, and rate their health more favorably during follow-up visits (Kaplan, Greenfield, & Ware, 1989). Similarly, patients who desire greater involvement in their health care and perceive they have more control recover more quickly (Mahler & Kulik, 1990).

The American Medical Association (AMA) (2004) conducted a study investigating what physicians perceive as barriers to effective communication with patients. Findings indicate many of the perceived problems areas are in the office encounter; 87 percent of the responding physicians report that patients have problems completing medical history forms and understanding consent forms. Additionally, 82 percent of the responding physicians say patients

have difficulty providing insurance information and 47 percent indicate that patients have trouble interacting with office staff. Another AMA study investigated information on techniques physicians use in dealing with patients. This study found that many physicians are not using good communication practices; only 31 percent of the physician reported that they often ask patients to repeat information back to them, although 56 percent believe this is an effective practice. Ironically, 56 percent of the doctors said they often hand out printed materials to patients, yet only 32 percent believe it is an effective practice.

Recovery from stroke offers a unique set of issues related to communication with health care providers. Three of the participants in my study mentioned that their doctors did not take the extra time to explain things and this became a barrier to their learning during the early stages of recovery. These individuals subsequently talked with their home health nurses and the nurse helped them to make the physician aware of the problem. Consequently, the resulting collaboration between the health care providers and the patients has begun to improve because of the proactive and self-directed nature of these older adults.

Family members can be very helpful in assisting with management of one's health by providing psychological support and transportation to the doctor's office. However, family members can also become a barrier to the management of one's health if they are not allowing for private conversations between the patient and physician during office visits. One participant was upset by his daughter's insistence of being with him during the private time and said, "I cannot talk, and I have no privacy." Additionally, another participant was struggling with taking care of her own health issues because of the barrier posed by being a caregiver for her mother. These obligations entail so many burdens that the issues of self-care and self-directed learning may deteriorate rather than improve (Rook, Thuras, & Lewis, 1990).

Unlike friendships, family relationships evolve from culturally sanctioned obligations (Brain, 1976); their ongoing enactment may be rooted in a sense of duty and responsibility for older relatives. Helpful kin usually are not peers, differing in age and orientations toward life stages (Heinemann, 1985). Because of these differences, they may display positive concern but do not necessarily like or feel close to the older person. As a result, their patterns of contact may be neither mutually desired nor jointly fulfilling (Rawlins, 1995). Across several studies, participating in friendships is more closely associated than family activity with high morale and psychological well being (Larson, 1978; Wood & Robertson, 1978) and life satisfaction (Pihblad & Adams, 1979; Spakes, 1979).

Living alone can become a barrier to the self-direction of one's health due to safety issues within that environment. Housing deficiencies occur with greater frequency among seniors living alone because of constrained financial situations (Guidry & Shilling, 1995). Safety issues for residents in these situations can pose a number of challenges to older adults experiencing changes in their stability and mobility. This is because over time the home has become unsafe due to lack of proper repairs such as missing or broken handrails on steps and unsafe porches (Valente et al., 1998) and lack of sufficient lighting (Bakker, Iofel, & Lachs, 2004).

Several of the female participants expressed concern about changes in their balance, shakiness and weakness. These health issues coupled with concerns about taking medication appropriately increases the amount of stress that the older adult may experience in managing their health. These issues can become barriers to self-directing one's health because they may need assistance but no one is available to assist them. Sometimes an older adult may choose to ignore their problems. One participant said, "Some days I just give in and stay in bed."

Older people value their self-sufficiency, independence, and privacy (Peters & Kaiser, 1985; Stoller & Earl, 1983). According to Jonas (1979), when an older adult must adjust to declining abilities to care for themselves, their lifelong patterns of independence, dependence, or interdependence influences if they accept assistance and how they feel about depending on others. Overall, the older adults in my study have developed, and continue to maintain a sense of self-reliance, despite the challenges of living alone. They are attentive to their health and recognize their limitations making adjustments suited to their daily needs. Most importantly, they are self-directed in their approaches to working with health care providers, asking questions that will help make their environments safer.

Policy regulations. The health care system has become more complex, patients typically receive less personal attention in their interactions with the system (Schwartzberg, 2001). Because of the complexities associated with the current system, patients are faced with limited educational support to understand drug labels, follow medication regimens and understand the physician's instructions. Although the participants in my study reported good relationships with their health care professionals, they also mention that they did feel rushed during their office visits. Consequently, several of the participants prepare themselves with written notes prior to visiting their doctors so that they could utilize the time efficiently.

Policy changes can become barriers to controlling one's health for both individuals who rely on home health services and for those visiting their health care providers. For example, recent cuts in the number of hours reduce the amount of time bed-bound individuals can be mobile. One of the participants said that she is forced to stay in bed for half of the day because hours of her assistant have been cut back to only a half day. Others mention that they are unable to get all the physical and communication therapy that they need to recover from stroke because

of policy changes that dictate the amount of services covered by insurance, thus serving as a barrier to recovery and self-direction of one's health. Overall changes in the health care system have reduced the amount of time for services provided in the homes, physician office visits, and hospital stays (Schwartzberg, 2001). Therefore, self-directed learning has become an even more important and critical aspect of controlling one's health.

Personal management issues. Personal management issues such as time, procrastination, attitude, fear, depression, lack of diagnosis, and habits can become barriers to self-directed learning. Several participants discussed time and procrastination in relation to conducting their exercise activities. Finding time to fit exercise into their weekly schedule posed problems for some individuals. Other older adults simply procrastinate and may avoid doing exercise because of the weather, balance issues or arthritis. Health issues that require a significant time to recover can pose barriers to the self-directed learner. Those participants who had strokes all mentioned that at times they were frustrated with the slow recovery time. For these people normal daily living tasks are demanding on them and they simply become "frustrated and anxious" to be more self-sufficient.

One's attitude can also become a barrier to self-directed learning. Older adults expressed that on occasion their personal attitudes about their health prevented them from conducting activities to promote their health. Some participants expressed, "simply getting tired of pushing oneself to continue doing things" can become overwhelming. Others talked about "becoming lazy" or staying motivated in continuing an exercise program can also hinder one's self-direction of their health. Interestingly, one participant explained that because of her family's pressure to do more exercise, she began to feel more like a child and developed an attitude of resistance toward exercise.

Three participants expressed an attitude that sometimes they “just want to give up” because of the frustration of not being able to keep up with physical exercise or complicated medication treatments. Two women avoid using assistive equipment even though they know that they need to use it because of balance issues. One man continues to smoke in spite of the threat to his health.

Bernadine and Will mention depression and worry as barriers to their self-directed learning. Bernadine’s condition remains a mystery due to lack of diagnosis. Not knowing how to treat her illness decreases her ability to manage her health. Similarly, after Will experienced stroke he began to worry about his future since he did not know how to manage his recovery. This worrying about his health increased in his blood pressure and depression. For a short period of time he was afraid to leave his apartment, fearing what might happen if he left his familiar surrounding. According to Vaillant and Mukamal, (2001), “depression influences health in a variety of ways and with a variety of diseases” therefore one should seek treatment of depression as a part of maintaining good health (p. 839). Other studies have linked depression to decreases in energy and motivation; resulting in people not taking care of themselves and attending to their health. However, the majority of the time, participants in this study maintained positive attitudes and continued learning strategies to take control of their health. This reflects findings in other literature that found a direct relationship between having a positive attitude and participating in learning, which holds the power to improve long-term health (Vaillant & Mukamal, 2001).

Fear was also expressed by other participants as they talked about their future health and living arrangements. The research supports that older adults may fear the changes associated with health and age (Vaillant & Mukamal, 2001). These fears can create obstacles to learning, especially those related to conducting physical activities. For instance, a remarkable number of

factors can affect an individual's ability to walk, including vision, balance, cognitive function, muscle reflexes, strength, and endurance (Evans, 2000). Consequently, changes in one of these areas may produce fears of falling and may prohibit some older people from walking. Therefore, it becomes critical that older adults manage these fears in relation to self-directing one's health care. Evidence of fear related issues are found in some of the comments provided the participants in my study. Jackie's fear of knowing what is wrong with her has resulted in ignoring her health for a period. Lois osteoporosis continues to progress making her more dependent on others. She fears that she will not have her husband to help her with her issues related to mobility and strength when she needs more assistance with walking. However, the majority of the participants associated fear as a motivator for continued self-direction of their health.

All participants mentioned that they experience being frustrated because of their health conditions. This feeling is due to how changes in their health have forced some of them to adjust their activity levels and they express, "I cannot do the things they like to do" such as walk, garden, or eat certain foods. However, these older adults choose not to let frustration become a barrier to the management of their health and have made adjustments to accommodate for their current health challenges.

Conclusion 2: The Self-directed Learning Process Specific to Health Care involves

Negotiation and Socialization

Personal learning is a central and essential element to taking control of their health for the older adults in this study. This research uncovered various details of the nature and processes of learning, confirming some of the observations noted in early literature on self-directed learning and offering new insight into how older adults use self-directed learning as a tool for taking control of their health care.

Nature of learning. The nature of learning for the participants clearly reflected the characteristics of self-directed learners found in the literature that suggests they are task and/or goal oriented individuals. These individuals take the initiative to learn (Knowles, 1975) with or without the help of others (Knowles, 1989). They are involved in diagnosing their learning needs, formulating goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating outcomes (Knowles, 1975, p. 18). Repeatedly, the study discovered insight into the nature of learning as the older adult reacts to their change in health by investigating resources and developing strategies to manage their condition. My study found that health care professionals play an important role in the process self-directed learning for these older adults. Therefore, it is essential to the learning process that health care professionals listen to problems and work in collaboration with older adults who manage and self-direct their health care. Older adults in this study report that the key to self-directed learning about health is having a supportive relationship with their physician that allows for “frank and collaborative interactions.”

Houle (1984) suggested that adults engage in learning because they have some immediate reason directly related to their stages of life. Evidence from the conversations with these participants revealed that they are motivated and absorbed in learning about their health, thus classifying them as a focused learner. The older adults in this study are conducting a variety of activities on their own and in collaboration with their health care professional seeking information to determine appropriate treatment for their condition. For example, Nell and Joe self-manage and tract their blood pressure while other participants practice preventative health activities, such as regular exercise, to maintain health while others utilize the Internet in search for answers to their health problems. While they are doing these self-directed activities, they are

also work in collaboration with the health care professional as they monitor progress and changes in their health.

It appears that the pattern of learning about one's health could be referred to as "cluster of activities" in that the impetus for learning begins with a health event which ultimately sparks an episode of learning, or defined by Tough (1979), as a learning project. These older adults engage themselves in deliberative efforts to maintain or change their health through their self-directed learning activities.

Self-directed learning for these participants is motivated not only the immediate changes in their health, but also because of an increased awareness of their vulnerability due to increased age. As noted by Knowles (1970), as a person matures there is a shift from a learning orientation of subject-centeredness to problem-centeredness; and adults learn in response to their stage of life (Knowles, 1984). Therefore, "any change such as loss of job, divorce, death of a friend or relative, is likely to trigger a readiness to learn" (Knowles, 1984, p. 11).

This study documented that change in health status is the triggering event leading to a learning episode for the older adults, most noted in older adults who have been diagnosed with life threatening illnesses. For example, when Randy and John were told they had cancer they immediately conducted a search for information, consulting a variety of educational materials and people, equipping them to make informed and immediate decisions about the health care. These, "intentional learning projects" (Tough, 1979), allow the older adult to assume considerable responsibility for planning and directing their health care.

Various authors have discussed the role of self-directed learning in the older adulthood. Lamdin and Fugate (1997) state, self-directed learning of older adults is a direct response to the individual's needs or interests and "it is frequently triggered by some event or change in the

person's environment" (p. 117). The event that triggers self-directed learning in my research is associated with changes in health. Knox (1977) suggested that older people coping with age-related decline are more likely than younger persons to use intentional approaches to learning about their health. Hiemstra (1976) confirmed that personal health is one of the key reasons for engaging in self-directed learning activities. My study confirmed that due to changes in personal health, the older adult is engaged in a variety of learning activities about their health on their own.

Lively (2001) suggests that continued lifelong learning contributes to successful aging. Learning about one's health has also been linked to positive health outcomes (National Employment Studies, 1999). The participants in my study recognized that their age and heredity predisposed them to an increased potential for specific health conditions. Therefore, they developed and conducted learning activities to self-direct and manage their health care.

Similar to earlier research (Hiemstra, 1976; Sears, 1989), the self-directed learners in my study consulted a variety of sources including brochures, books, newspapers, magazines, research articles, television, health seminars, friends, and family for health information. Five of the older adults in my study use the Internet in addition to information sources listed above. Health brochures continue to be the most used and popular sources of information because they are readily available and provide concise details about specific health conditions prompting most of the learners to seek additional information. Interestingly, two participants in my study did not seek information through written materials beyond the simple brochure due to lack of reading ability. Contrary to the literature that suggests education and income predict higher levels of self-care activities (Acton & Malathum, 2000; Meeks & Murrel, 2001; Segall & Goldstein, 1989; Weerdt et al., 1990), these men are subsequently self-directing their health care.

Other research reveals that the way in which one responds to their illness is influenced by personal and cultural orientation and the social interactions that develop around illness (Berman & Iris, 1998; Dill et al., 1995). Thus, the influences of the social context in which one operates may help to facilitate a self-directed learning process (Ory & DeFries, 1998; Segall & Goldstein, 1989) by providing the necessary educational elements necessary to manage and control one's health.

The self-directed learning process. This study offers insight into a new model of self-directed learning specific to health care. After initial diagnosis of a condition by health care professionals, the older adult begins a cycle of self-directed learning. In this cycle, the learner acquires and assesses health information, makes decisions about treatment options and reflects and manages adjustments in his or her lifestyle and/or treatment.

Various authors have developed models including linear, interactive, and instructional, to describe the process of self-directed learning. The linear models identify specific actions taken by the learners as they define their learning projects. In Tough's (1971, 1979) discussion of highly deliberate efforts to learn, twenty-six different steps are listed on how the learner carries out the process. Much of the model focuses on the initial phases of learning but eventually the learner moves through thirteen decision points about choosing what, where, and how to learn.

In comparison, my model is a general summary of the detailed process described by Tough (1971, 1979). In contrast, my model shows a learning process from the beginning to end, yet allowing for movement forward and then back again between the health care professionals and the beginning of the cycle of learning. My model also includes the triggering health event as the impetus for self-directed learning. Similar to Tough's model, is a systematic approach found

within the cycle of learning which requires the learner to make decisions about their immediate treatment and beyond, including life style changes.

Knowles's (1975, 1984) description of the self-directed learning process has six steps: climate setting, diagnosing learning needs, formulating learning goals, identifying human and materials resources for learning choosing and implementing appropriate learning strategies and evaluation learning outcomes In comparison, my process also shows a model of six steps, with the health event as setting the climate for learning. In contrast, learners do not begin the process by diagnosing their own learning needs; it is a health care provider's diagnosis that sparks their entry into the cycle of learning. Found within this cycle, are many of the elements identified by the literature including identifying resources, making choices, implementing, and evaluating outcomes.

Interactive models suggest self-directed learning is not so well planned or linear in nature. They emphasize two or more factors, such as opportunities found within the environment, personality characteristics, cognitive processes, and the context of learning working collectively to form episodes of self-directed learning. Spear and Mocker's (1984) organizing circumstances model is based on three areas: opportunities found in the unique environment, past or new knowledge, and chance occurrences. This model represents the impetus of self-directed learning as a general quest, whereas my model shows the impetus as a health event. In comparison to my model, there are some similarities. The learner is functioning within the unique environment of health care that provides continuing motivation for discovery and learning. Similar to Spear and Mocker who emphasize that learning is an interactive process, I present a model that represents an ongoing collaboration between the health care professionals and the learner as they begin and continue the process of learning. As the older adult moves into the cycle of self-directed

learning, past or current knowledge becomes relevant in how the learner organizes information and interacts with their health care provider. Perhaps even more significant to my model, is that within the process cycle of learning, making and monitoring of health care decisions lead the learner to the necessity of making adjustments in lifestyle and/or treatment. Although the learner makes health care decisions on his or her own, there is a direct connection with their health care professionals for ongoing collaboration as they learn continues to self-direct and manage their health, which corresponds to the interaction noted by Spear and Mocker's model.

Cavalier's (1992) interactive model is the result of a case study of the Wright brother's experiences as they learned to fly. This research revealed a self-directed learning process based on inquiring, modeling, experimenting and practicing, theorizing, perfecting, and actualizing. Found within each of these modes, four processes occurred: goal setting, focusing, persevering, and reformulation. Her work also revealed a new dimension related to the self-directed learning process, frustration, and confusion.

Similar to my model, Cavaliere's (1992) ideas pay close attention to the cognitive aspect of learning. The initial step in the cycle of self-directed learning and health care begins with consulting a variety of informational sources including the health care professional, making assessments to determine the suitability of learning for one's health. This process compares well to what Cavalier called inquiring. The idea of experimenting, practicing or "gaining a focus" and "perseverance" is evident in my model when the self-directed learner monitors and reflects on treatment results. The notion of what Cavaliere describes as "reformulation" is noted in my model through managing adjustments in lifestyle and /or treatment. Modeling is evident in the collaborative nature of learning, where the learner accesses information from their health care professional, family, and friends. The frustration and confusion that Cavaliere discovered, could

be inferred within my model's sphere of the health care professionals when they are unable to provide diagnosis or when treatment does not result in positive health outcomes.

Brockett's and Hiemstra's (1991) Personal Responsibility Orientation (PRO) model provides a framework for self-directed learning comprised of both instructional method processes and personality characteristics. In the instructional dimension, learners assume primary responsibility for planning, implementing, and evaluating their learning experiences. An educational agent or resource often plays a facilitating role in this process. The second dimension centers on the learner's desire, preferences or personality aspects for assuming responsibility for learning. Finally, this model also recognizes the role played by the social context in which self-directed learning occurs.

Similar to my model, it is evident that self-directed learners assume primary responsibility for planning by acquiring and assessing information, for implementing by choosing treatment options, and evaluating by monitoring, reflecting, and managing their lifestyles and/or treatments. Additionally, resources such as health care professionals, family, and friends are consulted to help facilitate their learning. However, my model's focus reflects the steps used in the process of self-direction and does not reveal the personality characteristics of the learners. However, my model positions the social context of learning within health care and provides insight into the self-directed learning processes used by older adults when challenged with changing health conditions.

Danis and Tremblay's (1987, 1988) work was concerned with how participants incorporated multiple approaches in their learning process. In my study, during the acquiring information phase participants also incorporated a variety of approaches in self-directed learning to research their condition. The Danis (1992) model provides additional clarification of the

process by revealing key components of self-directed learning including: strategies, phases, learning content, the learner, and the context. In comparison to my study, the strategies used by learners to acquire or apply new knowledge are evident in the initial step of the learning cycle, acquires and assesses information. The phases or stages of learning activities in my model also reflect interrelationships. The health event serves as the triggering and beginning phase of the process followed by a variety of methods to seek information to manage and control one's health. Older adult's reaction to the changes in their health fosters immediate seeking of specific health related knowledge so that they can begin to organize information that they believe will help them choose treatment options. This new knowledge is then integrated into their lifestyle to control and manage their health care.

As noted by Danis (1992), external factors within the environment do facilitate, inhibit or modify the acquisition or application of new knowledge. Similar to my study, external factors play a significant role in how the self-directed learners manage their health care. For instance, one woman reported that her learning was hampered by assuming a role of family caregiver. Others mention that because of changes in their health care management team or level of health care services they must make decisions about other resources for their care. Overwhelmingly, these learners experience a variety of changes both at the personal level and within the system of health care that constantly challenges them to modify their learning processes.

Garrison's (1997) interactive model integrates self-management, self-monitoring, and motivational dimensions in his approach to describing the process of self-directed learning. Self-management involves learner's taking control of and shaping the contextual conditions so that they can reach their stated goals and objectives. Self-monitoring and motivation represent the

cognitive dimensions of self-directed learning where opportunity is given to think reflectively and critically as one constructs meaning.

Similar to my model, the motivations for learning are included in the first two steps of my process, the health event and health care professional. Self-directed older adults are not satisfied with simply learning the diagnosis and initial recommendations provided to them by their health care providers. They want to have a voice in taking control of their health and move forward by securing additional information, which is listed on my model as “acquires and assesses information.”

The next two dimensions of Garrison’s model, self-monitoring and self-management, represent the cognitive dimensions of self-directed learning. In my model, the process is shown in the phases, choosing treatment options, monitoring and reflecting on treatment results and managing adjustments in lifestyle and or treatment. Both of these models present the key elements of self-directed learning process in a rather simple presentation; however, the dimensions involved in the cognitive processes of information are much more complex.

The contribution of my model is based on learning experiences of older adults ages 65-89, and the process I observed indicated that self-directed learning takes place in response to health related issues. My research disclosed a process of self-directed learning that begins with a change in health or a health event as an incentive to learn. Therefore, once the learner has received a diagnosis from health care professionals, the process of learning by acquiring and assessing specific information about their health begins. Finding the time to learn has little relevance to the learner in my model. The focus of my model is on the process resulting from an immediate health condition rather than learning something new for leisure or pleasure.

Consequently, there is a sense of urgency for the self-directed learner involved in the cycle of self-directed health care.

This new model contributes to the adult education literature by providing new insight into the unique dimensions of self-directed learning as it relates specifically to the management of health care from the perspective of the older adult learner. No other model exists in the self-directed learning literature that illustrates the process used by older adults as they control their care. The model not only provides essential components of the process itself, but also reveals that self-directed learning involves the elements of socialization and negotiation which helps to reaffirm the learner as they access and assess information. This socialization and negotiation occurs between the self-directed learner and their health care providers as they consult with each other during the cycle of learning. Thus, older adult self-directed learners are involved in gathering and confirming information and consulting with their health care providers while moving back and forth through the cycle of learning.

The components found within the cycle of learning reveal a rather simple set of process activities (i.e.: acquires and assesses information, chooses treatment option, monitoring and reflecting on treatment results, and manages adjustments in lifestyle and or treatment). However, within this cycle, movement to the next component is dependent upon learning sufficient information related to the management of health. The complexity implicated within the model is due to the nature of the health care event coupled with values and goals of the learner and the reality of making tough choices. If these values and goals do not correspond readily to the options of care made available to the learner a potential slowing of the process of self-directed learning could evolve. The learner may elect to move back to the initial point of entry of the model which is the health care provider in an attempt to get additional information to resolve

problems that has slowed their personal decision making process. In sum, this model reveals the essence of the process and the socialization and negotiation elements used by older adults as they make decisions that self-direct their learning related to their health.

Conclusion 3: Self-directed Behaviors are Perceived as Positively Affecting Health Care

The literature suggests that adults become ready to learn when the things they need to know help them cope effectively with their real-life situations (Knowles, 1989). The older adults in my study recognize that changes associated with health are real-life situations that are manageable and controllable. These self-directed learners take responsibility by assuming ownership for their own thoughts and actions and taking control over how to respond to a given situation (Knowles, 1975). Older adult participants perceive that engaging in self-directed learning reduces threats to their health, raises body awareness and sensitivity, and increases collaborative management of their health care.

Reducing the threats to health requires a multi-dimensional approach process including contact with health care providers (McDonald-Miszczak, et al., 2001) and consulting a variety of educational resources to determine what will benefit one's health. As a result, the learner is then involved in making choices and critical judgments (Chene, 1983) about using this information to reduce threats to their health. The self-directed learner subsequently makes decisions, choosing and monitoring adjustments in their treatment and/or lifestyle to manage their health.

This information helps to control a variety of health issues. For example, after learning about the benefits of controlling diet and exercise, several of the participants decided to loose weight and incorporate exercise into their daily activities. Others took charge of their health by monitoring specific conditions while others took an active role in checking medications. All participants believe that they reduced the threats to their health by using self-directed learning.

Once they began making changes in their daily routines, they did benefit from the changes physically and psychologically. The improvements in physical health, such as loss of weight, lowering blood sugar, decreasing blood pressure levels, and increasing mobility, confirmed and reaffirmed their inclination to continue learning and being proactively engaged in self-directed learning. Similar to Marks and Lutgendorf's (1999) findings, there are feelings of perceived health competence and, confirmed in my study, a sense of pride expressed by these older adults as they shared ways they had learned to take control of their health, environment, and lives.

Additionally, Berman and Iris (1998) found that older adults firmly believed that they could control many aspects of their health by being actively involved in learning and managing their health care. Other research suggests that if learning is perceived as helping older adults gain a sense of control over their health they are more likely to exercise positive health behaviors (Grembowski et al., 1993; Keller & Fleury, 2000; Rodin, 1986; Waller & Bates, 1992). All of the participants in my study feel that they control some of health issues, so they continued to learn with a sense of confidence. According to Leventhal and Prohaska (1986), mastering self-care strategies for illnesses and learning despite disability reinforces older adult's competence. For example, two women in my study who are coping with a variety of health conditions are relentless in their search for new treatments. Another man, who considers himself a "miracle of modern medicine" does not simply agree with the advice provided by health care professionals; rather, he proactively takes personal responsibility and control over the management of his care. Three of the other participants conduct research on new medications and share their findings with their health care providers. By developing their self-directed and self-care abilities, these older adults are able to reduce dependence on the health care provider resulting in a sense of self-sufficiency (DeFries & Konrad, 1993).

Other literature reinforces that older adult beliefs about their health and perceptions of control over their health may affect their health outcomes (Keller & Fleury, 2000; McDonald-Miszczak, Wister, & Gutman, 2001). There is also evidence that older adults use multidimensional approaches when making self-care decisions beyond the formal health care system. These findings suggest that individual perception of illness, treatment, and perception of self may play a key role in gaining control of one's health. Accordingly, perceived health competence is the best predictor of older adult's participation in health care behaviors (Marks & Lutgendorf, 1999).

The affect of self-directed learning activity is perceived by the older adults in my study to raise body awareness and sensitivity to one's health and the aging process itself. In reality, the more involved in learning and making decisions about one's health the more they are likely to be aware of changes in their body and pay closer attention to them. Recent research echoes the idea that older adults who firmly believe that they can do something about their health, take charge of their health care because they feel this activity will also control many aspects of the aging process (Berman & Iris, 1998).

Because of the increased awareness, when new health issues arise these older adults respond immediately by engaging in self-directed learning activities to determine what may be causing the symptoms and what the treatment options might be. Due to increased sensitivity to one's health, these older adults are able to recognize the signals and signs in their own bodies that suggest when it is time to slow down and rest, adjust medications, and exercise activities. One male in my study mentioned that others called him a hypochondriac in his family because of his willingness to talk about his health. However, because of his awareness of sensitivity to his body, he recognized the signs of heart attack and went for appropriate medical assistance prior to

the attack. There are other visible signs that alert older adults to the need for making lifestyle adjustments such as hurting feet and legs, swelling ankles, and tiredness. The positive outcomes of controlling one's health become visible to these older adults when they notice increases in strength and stamina due to exercise such as walking or swimming.

Self-directed learning is perceived to increase the ability of the learner to manage their health care in collaboration with their current health care professionals. Older adults in this study said that they are able to communicate effectively with their health care professionals. They are proactive sharing what they have learned during office visits or over the telephone with their health care providers in order to determine the suitability of treatments. These older adults approach their office visits as an opportunity for collaboration about management of their health care and utilize their time effectively often taking in a set of written notes about their symptoms, reactions to medications they are taking, and new questions related to management of their health.

Implications for Practice

The current nature of the health care system, which features short and irregular visits with patients, often fails to deal with the crucial issue of patient understanding. Due to time constraints, the ability of medical professionals to elicit responses that would inform patients' regarding understanding of instructions is reduced (Doak & Doak, 2001). Consequently, the educators' role becomes critical in helping older adults to learn how to take personal responsibility for maintaining one's health.

The results of this study provide practice implications for gerontologists, social service workers, health, housing, and adult educators as they are all engaged in providing learning opportunities for older adults that encourage them to take control of their lives. According to

Healthword (2004), “health promotion for older adults doesn’t just mean teaching elders about healthy behaviors, it means motivating them to change (p. 1).” Motivation for healthy living begins with making a personal commitment to improving one’s health combined with a wide range of other motivators such as an event, friends, mentors, beliefs, culture, and environment. Since self-directed learners also rely on these motivators, it is important to provide opportunities for learning that incorporate these factors into educational programs targeting older adults.

Educators must assist in deconstructing the myths associated with the aging. Stereotypes of aging have had a devastating impact on the public perception of mental abilities of the old (Cusack, 2000; Lamdin & Fugate, 1997). Because of these misconceptions, older adults may accept and internalize the myths of aging and begin to act in accordance with them. One of the myths is that intelligence decreases with age. Research indicates that fluid intelligence may decrease, but crystallized intelligence stays the same and may even increase with personal learning (Quadagno, 1999; Schaie, 1996; Schaie, Willis, & Caskie, 2004). Skills that are likely to decline with age such as memory, speed, visual-motor flexibility, are compensated for by the accretion of experience and education or crystallized intelligence (Schaie, Willis, & Caskie, 2004). Thus, older people can improve their cognitive skills through training and conducting learning activities. Furthermore, the more one is motivated to be involved in learning activities, the more potential for one’s ability to learn expands (Lamdin & Fugate, 1999).

The *Blueprint for Health Promotion* (2004) suggests that health educators working toward motivating and empowering older adults should incorporate healthy activities in everyday life. This means that as educators we must realign our view of older adults from patients to self-healers and help older adults adopt that view as well. We must teach the older adults skills to attain the confidence to self-heal. Self-healing connotes that these adults are becoming self-

directed in their approaches to management and control of their health. However, there is the potential for learners to get the wrong information that could result in negative health outcomes. Therefore, as adult educators it is important to recognize this potential for harm by making recommendations that encourage ongoing consultations with their health care professionals.

These recommendations illustrate that there are connections between the field of adult education and health education. The emphasis on self-responsibility for health by the medical establishment reinforces the importance of what adult educators can do to empower seniors through their educational efforts. Doak and Doak (2001) suggest that,

The health and education fields address issues using different philosophies, with health providers typically focusing on shorter-term outcomes (successful treatment) compared with educators' emphasis on long-term outcomes (learning). The health community often holds misconceptions about how language affects interaction with patients, since medical professionals are not trained [to be] teachers. (p. 11)

Furthermore, there is a gap between medical specialists and lay knowledge. The contrast between everyday language of health professionals and health related forms, suggest that there is a need to improve communication skills and techniques of providers (Freebody & Freiberg, 1997; Rudd et al., 2000).

Adult educators play a role in closing this gap by developing collaborative relationships with health professionals (Nurss, 1998) since they are experts in designing appropriate and culturally sensitive training. We know that effective communication between the patient/learner and health care professionals is a crucial element for older adults using self-directing learning. Therefore, it is our responsibility as adult educators to reach out and provide educational support to seniors at a variety of venues, both locally and nationally. As mentioned earlier, the work

begins by building collaborative networks with health professionals, gerontologists, housing educators, and older adults. At the local level, educational activities promoting communication, health literacy, and self-directed learning, need to be developed and presented to older adults. These presentations could be shared at senior centers, churches, hospitals, clubs, libraries, and even through Internet. At the national level, research findings and implications about older adult self-directed learning needs to be shared with individuals representing governmental organizations, health care providers, drug companies, insurance companies, other businesses, researchers, and educators.

Another implication resulting from this study relates directly to professionals working within a medical model of health care. Older adults managing chronic conditions may see seven different physicians and fill at least 20 prescriptions per year (Anderson & Horvath, 2002). Historically, health care providers have devoted little time to assessing older adults' functional ability, providing instruction in behavioral change or self-care, or addressing emotional and social distress (Gillespie & Mollica, 2003). Consequently, care is often fragmented, resulting in little communication between the older adult and the various health settings (Chen et al., 2000). These issues pose major challenges for both the older adult and the medical professionals coordinating care.

It is therefore critical that health care professionals and older adults work in collaboration to manage the older adults' health. One important implication of these challenges posed by chronic illnesses is to move from the medically-based, disease management approach of care, to a coordinated philosophy that focuses on preventative care initiatives like that of integrative medicine.

Integrative medicine combines the best conventional and complementary therapies while emphasizing the primacy of the doctor-patient relationship and the importance of patient participation in health promotion, disease prevention and medical management (Pancio, 2003). This type of medicine utilizes a holistic approach that emphasizes the uniqueness of the individual and the importance of relationship and community. It also promotes self-care, working in groups, respect for other healing traditions, and recognizes the spiritual nature of health care. Among the elements of this approach to health management are the notion of empowerment, transformation, creative expression, and a quest for meaning. The integrative model of health management compliments what has been learned about the factors that motivate and influence self-directedness in older adults.

There are also practical implications for older adults themselves resulting from this study, particularly those seniors who are not engaged in self-directing their health care. These implications provide insight into the learning process of gaining a sense of control, increasing understanding of health, and working in collaboration with health care providers.

Self-directed learning allows the learner to develop a sense of control of their lives both physically and psychologically. The motivation for using self-directed learning becomes evident to the learner when one gains a better understanding of the relationship between age, health, genetics, and mortality. This process increases personal awareness of health and empowers the learner to take charge by continuing to work toward better health and quality of life.

Taking charge of one's health is a critically important element of self-directing one's health care. This involves intentionally developing healthful habits and practices that will promote health such as regular physical exercise and eating an appropriate diet. Older adults who practice regular physical activity tend to have improved cardiovascular health, better balance and

increased joint mobility (National Blueprint for Health Promotion, 2004). Despite proven health benefits, one third of older adults in the U.S. are not taking part in any leisure-time physical activities (Center's for Disease Control and Prevention, 2004). Additionally, two thirds of older adults do not eat the recommended five servings of fruits and vegetables a day. Nearly one-fifth of older adults are obese or 30 pounds above recommended weight.

Self-directed learners can take charge of their living environments by making the necessary changes to reduce risks of injury. Falls among persons aged 65 and older pose a serious and significant threat to health. Ninety-five percent of the falls with reported injuries occur in and around the home, primarily in the bathroom and bedroom (Tideiksaar, 1992). The U.S. Consumer Product Safety Commission estimates that each year 6,800 older adults go to hospital emergency rooms for treatment associated with injuries caused by tripping over rugs (Steorts, 1999). Consequently, self-directed learners can make changes within their living environments by removing safety hazards, such as slippery rugs and installing safety devices such as grab bars in the bathroom (Rogers et al., 2004; Valente et al., 1998).

Collaboration plays a key role in helping to facilitate self-direction of one's health. Health care providers are usually the first point of contact when it comes to making decisions about a health condition. With limited time, it is important that one be prepared for the office visit. Keeping track of illness symptoms, recalling when they started, and how often they occur can help clarify the problem. Self-directed learners often take a written list of information and questions to the appointment and take notes about treatment options and possible side effects related to medications. By being prepared for the appointment, the interaction with the physician is more effective because one can focus on the health concerns. As the nation's health care system moves toward a consumer-driven model of care, older adults are given a greater stake in

and more responsibility for making decisions about their care (Frist, 2005). Consequently, in our world of changing policy, insights into the processes of self-directing one's health care becomes even more relevant in maintaining good health.

Recommendations for Future Research

The purpose of this study was to understand how older adults utilize self-directed learning to control their health care. The research incorporated a qualitative research methodology to investigate the process of self-directed learning within the context of their everyday lives. Based on the findings, the following recommendations are suggested for future research:

1. Repeat this study with a sample of older adults managing chronic illnesses. Since the nature of chronic illnesses typically requires people to use multiple health care providers and a variety of medications, there is an urgent need to understand how older adults with these challenges manage their care through self-directed learning. This new study could be particularly relevant in that our current health care system does not place a high priority on primary, secondary, and tertiary prevention efforts to avert disease or slow its progression. People with multiple chronic conditions report receiving conflicting advice from different physicians and differing diagnoses for the same set of symptoms, and often not getting the services needed to maintain health and functional status (Anderson & Horvath, 2000).
2. I recommend a survey study that investigates the relationship between self-directed learning of health care by older adults and the interpersonal dynamics with primary individuals within the older adults' social networks. Since my study found other people impact self-direction, this proposed work would provide additional insight into

how interpersonal dynamics impact the process of self-directing one's health care.

According to existing research, there appears to be a link to important health practices (Rook et al., 1990) including self-care behaviors and older diabetic women (Connell, Fisher, Houston, 1992). However, little theory exists regarding the relationship between self-direction of health care by older adults and the interpersonal dynamics with primary individuals within the older adults' social networks. Only a few studies have looked at associations between interpersonal dynamics and health care in older adults.

3. All of the participants in my study mentioned the importance of good communication with their physicians as a primary element in successful self-direction of their health care. Communication between the older adult patient and physician and the affect on learning should be investigated. I recommend a study that looks at this interaction, specifically looking for clues that relate to patient involvement, participation, and self-directed learning.
4. All the participants in this study had a strong sense of self and maintained a positive self-image. A study looking at the relationship between positive self-concept and learning could provide additional insight into the affects on health.

Chapter Summary

Based on an analysis of in-depth interviews with 15 older adults, three conclusions are presented on how older adults utilize self-directed learning to impact their health care. First, older adults are motivated to take control of certain aspects of their health care. Second, the self-directed learning process specific to health care involves negotiation and socialization. Third, self-directed behaviors are perceived by the older adult learner as positively affecting health care.

Older adults in this study are motivated to gain control of certain aspects of their health care. They are aware of the relationship between health and age. They seek ways to improve their health and gain more control of their health through knowledge acquired from self-directed learning. Motivation occurs for these individuals through interactions with other people including family, friends, and religious activities. These associations help to reinforce learning by providing psychological support and promoting self-directed learning and activities.

Self-directed learners manage health care behaviors such as establishing physical activity and exercise levels, maintaining positive psychological health, and managing specific health conditions. These health behaviors are influenced by a lifetime of experiences, values, attitudes, and beliefs about health. These learners manage specific health conditions by using what they learn to compensate or adjust for functional limitations by practicing prevention activities and managing treatments.

The living, public, and social environments are controlled by self-directed learners. They learn to modify their living environment to meet their current and future needs. Within their public and social environments, they choose to associate with positive people and attend a variety of functions offered within their community including church activities, clubs, schools, and senior centers. They also volunteer within these organizations to maintain a sense of purpose and involvement.

The most common barrier that the self-directed learner experiences is directly associated with their own physical limitations due to changes in their health. Living alone also poses additional challenges to physical and mental abilities that may impact their participating in learning opportunities. Personal management issues such as procrastination, fear, depression, attitude, and habits can inhibit taking control of their health. Health care policies that dictate

reduced medical care can impact the self-directed learner's opportunity to control their health care.

Older adults use the self-directed learning process to control their health care. A health event is the impetus for the process of learning. These individuals take the initiative to learn and are involved in identifying their learning needs, formulating goals, identify resources, and implementing treatment strategies through collaboration with their health care providers. This process model allows the older adult learner to move forward from the initial diagnosis by the health care provider into the cycle of learning and self-directed care which involves negotiation and socialization. Thus, the dynamic nature of this interactive model allows for movement between the cycle of learning and the collaborative efforts involved in managing health care.

Older adults perceive that self-directed behaviors positively affect their health. Learning about one's health increases body awareness and sensitivity to physical and mental changes that are occurring. Through making changes in lifestyle and activity level, these older adult learners became motivated by the positive impact that self-directed learning has on their health and health care services.

This study has provided new insight into the lives of older adults who are involved in self-directing their health care. The positive attitude and enthusiasm for life reflected throughout conversations provided a remarkable illustration of strength and fortitude given the number and severity of the health issues they are managing. The stories provided by these self-directed learners offer insight into a new and hopeful relationship between health, learning, and quality of life issues.

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APPENDIX A
CONSENT FORM AND INTERVIEW GUIDE

CONSENT FORM

I, _____, agree to participate in a research study titled **“Self-directed learning: The impact on older adult health”** conducted by Janet Valente from the Department of Adult Education at the University of Georgia (706-542-2214) under the direction of Dr. Sharan Merriam, Department of Adult Education (706-542-4018). I understand that my participation is voluntary. I can stop taking part without giving any reason, and without penalty. I can ask to have all of the information about me returned to me, removed from the research records, or destroyed.

The reason for this study is to test how adults learn to take control of their health.

If I volunteer to take part in this study, I will be asked to do the following things:

- 1) Answer questions about my health, where I look for information about treatments, and how I use the information the expected duration of one hour.
- 2) Agree to have the conversation with the researcher tape recorded the expected duration of one hour.

No risk is expected but I may experience some discomfort or stress when I discuss emotional issues related to my health or stress as a result of our interview being taped. If stress should occur, I will be referred to the Samaritan Counseling Center. My insurance company or I will be billed for the costs of any such treatment. No provision has been made for payment of these costs or to provide me with any other financial compensation.

I understand that the potential benefits from this study will be to contribute to an increased understanding of how adults learn and gain control of their health.

I understand that no compensation will be provided to me, participating in the study is voluntary.

All information concerning me will be kept confidential. Information will be stored in a locked cabinet in the researchers home for 5 years. If information about me is published, it will be written in a way that I cannot be recognized. However, research records may be obtained by court order.

The investigator will answer any further questions about the research, now or during the course of the project, and can be reached by telephone at 706-542-2214 or email: janetvalente@msn.com

I understand that I am agreeing by my signature on this form to take part in this research project and understand that I will receive a signed copy of this consent form for my records.

 Name of Researcher
 Phone: (706) 542-2214
 Email: janetvalente@msn.com

 Signature Date

 Name of Participant

 Signature Date

Additional questions or problems regarding your rights as a research participant should be addressed to Chris A. Joseph, Ph.D. Human Subjects Office, University of Georgia, 606A Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone (706) 542-3199; E-Mail Address IRB@uga.edu

INTERVIEW GUIDE

1. I understand that you are concerned about your health. Tell me about your health?
2. What motivated you to learn about your health?
3. Tell me, in detail about the kinds of things you have done to learn more about your health?
(What did you do first?)
4. Where do you find information about your health?
5. Tell me about a time when something you learned had a positive impact on your health care.
6. What kinds of things have you changed in your life because of your learning?
7. Whom do you talk to about your health?
8. Tell me about your current interactions with your health care providers?
9. Tell me about what you do to keep track of your health?
10. What other things do you do to manage your health?
11. What kinds of challenges (barriers) do you experience when managing your health care?
12. What else would you like to share about your health related learning?