Improving community participation of the inactive elderly: preferred learning style-based interventions

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Improving Community Participation of the Inactive Elderly:

Preferred Learning Style-Based Interventions

by

Catherine Bailey

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This Scholarly Project Paper, submitted by Catherine Bailey in partial fulfillment of the requirement for the Degree of Masters of Occupational Therapy from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

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ABSTRACT

Improving Community Participation of the Inactive Elderly: Preferred Learning-Style Based Interventions. Catherine Bailey and Carla Wilhite, Department of Occupational Therapy, University of North Dakota School of Medicine & Health Sciences, 501 North Columbia Road, Grand Forks, ND 58202

Occupational therapists believe social engagement is vital to the health and well-being of the older adult. Social isolation has been linked to loss of physical, cognitive and emotional health. Elders at risk of social isolation are not specifically addressed by community health programs due to lack of knowledge and resources. Social isolation and loss of meaningful activity are significant precursors to rapid decline in the health and well-being of elderly people living in their communities.

Literature indicates that use of personal learning style preferences to problem solve improves success in occupation. Older adults often lack awareness of their personal learning styles and how to use them as tools to experience success in new learning, relearning of old skills and adapting to changing contexts in community living. Failure to understand often leads to ineffective approaches to new occupations or avoidance of activities that led to frustration or perceived loss of ability in the past. This leads to loss of self-efficacy, isolation and apathy. The older adult population is in need of education in recognizing their individual learning styles and how to best use this information as a tool to optimize their function in meaningful community occupations. They will benefit from learning and practicing learning strategies specific to the needs of the older adult to improve effective community engagement.
The population of interest for this scholarly project are elders who are living in community but are not actively engaged or rarely engaged in occupations outside their homes, from the "very elderly (70+) to the oldest-old (80+)" (Maderer & Skiba, 2006, p. 126) who are at increased risk of reduced health status and quality of life due to isolation and inactivity. These are elderly men and women who are regarded as most vulnerable to a future need for home health care or eventual institutionalization.

A comprehensive literature review was conducted to gather information regarding social isolation and the benefits of participation in occupations that have meaning to the individual. The findings indicate that community health interventions frequently take place in group settings with a select population of elders dwelling in senior housing. Direct therapy services to provide individualized, occupation-based interventions can provide the impetus for future group participation for this at risk population. A need exists for a manual to present the role of the occupational therapist in addressing the social participation needs of the elder hoping to remain in place.

The goal of this project is to provide a manual designed to enhance the knowledge and confidence of occupational therapists working with this challenging population. It provides the practitioner with education in and application of adult learning styles and experiential learning theories and includes a quick reference pamphlet for learning style identification in the field. It contains learning strategies for older adults as important aspects of teaching the elderly an effective means of learning, reflecting and applying self-directed goals toward meaningful social occupations.
"Presenting material in a way that matches a client’s preferred learning style can increase the efficiency and effectiveness of occupational therapy intervention" (Lofland, 2009, p. 13). Occupational therapy is a key discipline working with older adults living in their community and can be a healing force in helping this population to remain in place successfully in their respective homes. *The Occupational Therapy Practice Framework: Domain and Process, 2nd Edition* (2008) states that occupational therapy has as its focus health promotion activities, educational services, self-management and environmental modification:

Practitioners direct their interventions toward current or potential health problems and disabling conditions within the population and community. Their goal is to enhance the health of all people within the population by addressing services and supports within the community that can be implemented to improve the population’s performance (AOTA, 2008, p. 655).
Occupational therapist practitioners will want to have adequate knowledge to establish an effective community health program that promotes participation and wellness. Using the Occupational Adaptation frame of reference, the *Use Your Experience* manual will help occupational therapy practitioners develop confidence in their ability to identify their client’s learning style, how to adapt therapeutic education and training to meet their client’s individual instructional needs, and what cognitive strategies are effective in teaching the older client.

Sabir et al. (2009) report on several academic studies that regard social isolation among older adults as a high priority area for intervention and research. They found that a variety of damaging psychological and physical health outcomes in older adults have been associated with social isolation, which researchers define as physical separation from other people. Sabir et al. (2009, p. 220) cite several authors who concur that:

With prevalence estimates reaching as high as 20% (Findlay, 2003), social isolation places a growing number of older adults worldwide at increased risk for hypertension, coronary disease, and stroke (Barefoot et al., 2001; Tomaka, Thompson, & Palacios, 2006), elder abuse (Cohen, 2006), depression, and suicide (Hawton & Harriss, 2006; Labisi, 2006).

The authors cited indicate that those who have lost friends, spouses and valued social roles; such as worker; the poor, the less able and people responsible for the care of a parent or spouse; are at higher risk for social isolation. They go on to state that as a cohort, the baby boomer population may experience a higher risk of social isolation as
they age due to their higher rate of divorce, reduced rate of remarriage and lower fertility rates (Sabir et al., 2009).

Bonder and Bello-Haas (2009) propose that the most prevalent psychosocial task involved in aging is that of changes in social status and lifestyle due to retirement, illness, spousal death or relocation of friends, children and grandchildren. These losses impact the older adult's decision making, autonomy and independence. This may cause a downward spiral resulting in isolation, reduced coping mechanisms, a diminished sense of personal value, identity, and societal worth. Frequently, these at-risk elders in our communities go undetected and untreated due to limited access, awareness and finances.

Meador (2010) describes a need for an increase in community intervention services as a means of helping the majority of elders achieve their goal of remaining in their homes, described as “aging in place”. Markwood, Gotwals and Hertz (2011) state that given the high cost of nursing home care (a national average of $70,000 per year) with a current resident count of 1.8 million nationally (US Census, 2006) coupled with older adults' desire to age at home, communities will need to ramp up the availability of home and community-based service options. This extensive literature review focused on the best practice strategies required to reduce social isolation and improve learning for the older adult. The research findings consistently indicate the value of applying individual learning style preferences to client centered interventions (Dreeben, 2010). Improved social engagement will have a substantial impact on reducing the
number of individuals that require increased health care interventions and admissions to institutions. As described in the model of Occupational Adaptation, the process of guided experience, reflection and success will help the elderly individual to seek out further experiences in community occupation.

The *Use Your Experience* manual and the accompanying *Quick Reference for Learning Styles* pamphlet (Appendix A) were created to meet the need for the education of the OT practitioner in the use of cognitive strategies to enhance their rehabilitative teaching skills and positively impact their client’s learning retention and independent use of those skills. The manual provides the framework for a community occupational therapy intervention program that can address the physical and mental health challenges of the elderly person who does not engage in their community. The pamphlet provides a readily available resource for identification and application of interventions to meet the client’s learning style preference. Practitioners enter into an individual’s home life and regularly see that older adults’ problems are embedded in or highly interconnected with other problems (Sabir et al., 2009). “Additionally, receipt of social support may directly or indirectly enhance one’s capacity to enhance personal competence and enable one to access needed resources or services” (Locher et al., 2005, p. 748). The occupational therapist will need the knowledge and skills necessary to address the underlying factors associated with social isolation that these resources provide.

The information leading to the development of the community intervention program entitled *Use Your Experience* is presented in the following
chapters. Chapter II consists of a comprehensive review of literature implications of social isolation, cognitive challenges of the older adult, learning styles and cognitive strategies applied to therapeutic instruction and intervention theory and application applicable to this population. The methodology utilized throughout this project is described in greater detail in Chapter III, and the finished manual and quick reference pamphlet are presented in Chapter IV. Chapter V consists of a summary of the scholarly project, including limitations and recommendations for further development of the project. The scholarly project concludes with a full listing of the references used throughout.
CHAPTER II
LITERATURE REVIEW

An extensive volume of research was examined to determine the occupational health needs of the community dwelling older adult at risk of social isolation. The profession of occupational therapy values social participation as a necessary and key component for healthy functioning (AOTA, 2002). Conversely, occupational therapy services are rarely mentioned in studies specific to social isolation.

There is a need to incorporate an occupational therapy treatment intervention program designed to address the underlying barriers to the community engagement of this population. The potential and established role of the occupational therapy profession in providing interventions to improve the health and well-being of this client population are examined. A review of literature relevant to the application of learning style theory as a means of directing and enhancing individualized therapeutic teaching and learning as a vital component of client centered treatment has been addressed. This information has proved of value in establishing an intervention program designed to assist occupational therapy practitioners to maximize the functional capacity of the older person striving to remain in their home (age in place). This literature review aims to identify cognitive challenges and learning style needs of the older adult population in order to establish a community-based program designed to prevent,
reverse, or ameliorate the negative mental and physical health impact and resultant life dissatisfaction caused by the loss of meaningful social occupations. The goal of this project is to provide the practicing occupational therapist with the information they need to provide evidence based, effective interventions.

Americans are living longer, with the average life expectancy moving from 47 years of age in 1900 to 84 years old in 1998. Three classifications of older adult age groups have been established in the literature; the young-old adult is from 65 to 74 years old, the old-old adult is from 75 and 84 years of age and the oldest-old are those elders 85 years and older (Dreeben, 2001). The “oldest old” population of those 85 and above has currently increased to over 4.9 million and is expected to reach 8.6 million by 2030, exploding to 16 million by 2050 (US Census Bureau, 2006). The significant growth in numbers of this age group is important for the future of our health care system because these individuals tend to have increased health needs and require more health services. With the marked increase in the worldwide population of those 65 years old and older projected to be 71 million by 2030 (US Census, 2006) the cost of institutionalization presents a looming financial burden to society. Medicare costs reached $599 billion in 2008, which was 20% of all federal spending, and 30% of the Medicare went toward nursing home care (Potetz, 2008). Nursing home care costs a national average of $70,000 per year compared with US Census (2006) figures that state the average annual costs for elders receiving community health services as just over $12,000. The research data presented by Stuck et al. (1995) supported a
significant financial return in preventing the health decline of elders with the use of reactive versus proactive solutions. Stuck et al. (1995) stated that community health interventions resulted in disability-free life gain of 4.1 years for the older population studied. Markwood et al (2011) indicate that if society can keep elderly persons out of nursing homes, a significant financial improvement will accrue for all. The Cornell University Project Home study (2010) found that 12 percent of nursing home residents were designated as “low-need”, meaning that the assistance that they do need could conceivably be delivered in their own homes or in assisted living. Meador (2010) reports that more than half of that low-need population could transition back into the community with the right social supports. The benefits of a program designed to engage the elderly aged 70 years of age or older in meaningful social occupation using learning style intervention as a cognitive strategy are supported in the literature review that follows.

To retrieve literature relevant to this study, the search terms “social isolation”, “learning styles”, “elderly”, “older adult”, “community”, “health prevention”, “cognition” and “occupational therapy” were used within the CINAHL, PubMed, Cochrane, and Scopus databases. Pertinent articles are discussed below.
Social Isolation

Social isolation is defined as physical separation from other people; a state in which a person or group experiences a need or desire for increased involvement with others but is unable to make that contact (Biordi & Nicholson, 2008). Social isolation places the elderly person living in their community at risk for decline in health status, reduced quality of life and increased early mortality rates (Cattan, White, Bond, & Learmouth, 2005). According to the World Health Organization (1999), social isolation leads to ill health with studies indicating a relationship between all-cause mortality, coronary disease and cognitive impairments.

Findlay (2003) cites a worldwide estimate regarding the prevalence of social isolation of the elderly population to be as high as 20 percent, with a correlating risk of depression, stroke, elder abuse, hypertension and heart disease. Biordi and Nicholson (2008) note that perhaps most relevant to health and cost outcomes was that socially isolated older adults were found to be four to five times more likely to be hospitalized in a one year period than those with increased involvement with others. Sabir et al. (2009) reported that scientists and practitioners identified social isolation as a top priority for research and intervention in the health outcomes of older adults. The authors’ document extensive data regarding the causes and associated negative outcomes of social isolation, but less information exists in regard to how to reduce or prevent them. Sabir et al. (2009) state that current efforts to address and decrease the risk of social isolation in old age and its negative psychological and physical effects have
been justified and propelled by the anticipated demographic growth of the elderly population and the need to enhance well-being in the later life span.

Bonder and Bello-Hass (2009) refer to studies that state that life-changing events often predispose the older adult to the health risks of social isolation. Upon retirement, older adults face role loss or change and the loss of social networks previously provided by interactions with co-workers. With increasing age, the risk of social isolation and its negative health consequences becomes greater as the elderly experience the death of friends and spouses. Social isolation, loneliness and decreased social support are frequently attributed to societal changes, with the separation of families due to divorce or geographic moves causing a disruption of an elder's social support systems. The loss of traditional family stability contributes to isolation as elders have less contact and interaction with children and grandchildren.

**Contextual Barriers to Community Engagement**

The following studies indicate that a variety of contextual barriers often present seemingly insurmountable challenges to community access by the older individual. Berkelan and Flinn (2005) state “one problem for seniors is that, as they age, they may move into new environments and lose the support of their communities. These individuals often have difficulty developing support systems in their new environments, and part of the goal of occupational therapy programs for these groups is to help create new support structures in their current living situations” (p. 433). The study by Bryant, Beck and Fairclough (2002) evaluated the perceived health of persons age 60 years and older over a 3 year period and found that reduced physical performance, especially
mobility, contributes dramatically to this population's perception of their health, with a
direct correlation to significantly reduced performance of activity of daily living skills. In
spite of the current belief that elderly persons are more satisfied aging in place in the
community, the study by Tse and Howie (2004) indicated that when getting out of the
home becomes difficult, the home loses its ability to be a source of independence,
personal control and security. Individuals studied felt that limitations of home due to
external environmental hazards or physical limitations restricted opportunities for social
contact. The older adults studied stated that they were forced to abandon home
maintenance jobs such as minor repair work, yard and garden care, and heavy housework
due to physical strength, endurance and mobility limitations. These elders described
reduced opportunities for occupation in their home, such as a minimal need for laundry
and housecleaning and reduced meal preparation due to role loss (i.e. wife and mother)
and describe the slow passage of time with little to do (Tse & Howie, 2004). Jackson, et
al (1998) cite several researchers who agree with the proposal that occupational
deprivation, or circumstances that prevent a person from getting, using or enjoying an
occupation, reduce adaptation to changing life situations and stunt personal growth.
Occupational alienation, described by Jackson et al (1998) as dissatisfaction with the
performance of tasks that are seen as boring, meaningless, or stressful, also impacts
individual health and well-being.

Biordi and Nichloson (2008) address physical barriers or architectural features,
such as heavy doors, uneven sidewalks and crowded walkways as contributors to social
isolation or "homeboundness" and further propose that these limitations "contribute to
social isolation in ways that motivation alone cannot easily overcome” (p. 91). Common contextual barriers identified by the Area Association of Aging (Markwood et al., 2011) are associated with accessing transportation in order to participate in occupations outside of the home. Loss of driving ability or access to rides from family and friends may precipitate the older adult’s experience of social isolation. The study by Saliba et al. (2005) indicate there is a significant number of elderly persons experiencing difficulty using the telephone and public transportation which are seen as major barriers to community access. Elders identify many factors that interfere with their use of public transportation, some of which are described in the study by Shaheen and Rodier (2007) regarding public transportation use by the senior adult community in the Berkley area. Participants indicated that transit travel time, lack of door-to-door service, and transfers are significant barriers to transit use. Additional barriers identified by elders included; carrying packages, climbing stairs, lack of education regarding schedules and poor communication of information from the telephone contact person. Locher et al (2005) found that the inability to access adequate transportation, perceived lack of social support and having limited independent life-space were significant contributing factors to loss of health and well-being. In addition, social isolation and lower income were identified as contributing to nutritional risks in the elderly population studied (Locher et al., 2005).

Impact of Social Isolation on Mental Health and Well-being

Maderer and Sibka (2006) found “total loss of participation is synonymous with isolation and depersonalization. Changes at one level are followed by changes at other
levels. Lost mobility shows changes at the neuronal level—such as a degenerative process in the brain—resulting in changes in perception, memory and at the social level.” (p. 126). The evidence that loss of meaningful activity and social isolation causes a downward spiral in loss of health and function was emphasized by Bukov et al. (2002) who note there is an important relationship between complete disengagement from social activity and the increased risk of death. This is considered “social dying”; the gradual disengagement from activity with others, and is thought to be a prelude to biological dying (Bukov et al., 2002).

Bryant et al. (2002) found that depression has a substantial negative impact, independent of other variables, on perception of health. The National Institute of Mental Health (NIMH) reports that symptoms of depression may vary, but are commonly described as having feelings that are persistently sad or anxious, hopeless and guilty with irritability, restlessness, fatigue and loss of interest in once pleasurable activities. People with depression report problems concentrating, insomnia, changes in eating habits, thoughts of suicide, suicide attempts and somatic aches and pain that do not ease despite treatment (NIMH, 2011). Depression is not a normal part of aging, but symptoms are often less obvious and elders may be less inclined to acknowledge feelings of grief or sadness. Symptoms may be associated with medical conditions and the side effects of medication (NIMH, 2011).

Butters et al. (2004) studied late-life depression and its effect on cognition. Prior studies indicate that the cognitive effects of normal aging are almost entirely attributed to slow information processing. When compared to control subjects, half of the late-life
depression patients studied demonstrated a significant decline in information processing speed: Cognitive slowing appears to be a trait feature for geriatric depression which often persists despite antidepressant treatment.

**Effect of Reduced Social Activity on Cognition**

Bassuk, Glass, and Berkman (1999) conducted a longitudinal study of 2,812 community dwelling older persons aged 65 years and older, over a twelve year period, to determine the effects of social disengagement on cognitive function. Respondents with no social ties had over two times the incidence of cognitive decline, with a negative impact due to loss of socialization found both in subjects who reported long term social disengagement and those who had been socially active but reported declines. In their study of the effects of social and cognitive engagement on the old and very old, Lovden Ghisletta and Lindenberger (2005) discuss the “disuse” hypothesis that states that changes in an elder’s lifestyle (e.g. loss of spouse, retirement and subsequent social isolation) can result in reduced mental stimulation and magnification of cognitive decline. Lovden et al. (2005) propose that the aged person’s decline to lower levels of cognitive functioning may lead to subsequent withdrawal from an active lifestyle but question if declines in general neurophysiological vitality may be the cause of concurrent changes in cognitive performance and lifestyle. Study outcome data caused them to conclude that the empirical evidence gathered to date suggests that an engaged and active lifestyle in old and very old age may alleviate decline in perceptual speed.
Challenges to Cognition as a Result of Aging

Cognitive challenges resulting from social isolation can be compounded by the decline in some areas of cognition already present in the aging population.

Bonder and Bello-Haas (2009) cite psychologists who agree that although cognitive aging varies between individuals, certain types of cognitive capacities decline with increasing age in most adults. As humans age, some cognitive abilities are slowed, such as processing speed, short term memory and the ability to adapt, defined as fluid intelligence (Bonder & Bello-Haas, 2009). Singh-Manoux, Hillsdon, Brunner and Marmot (2005) propose that fluid intelligence is intrinsically associated with reaction time, abstract thinking, information processing, creativity and the ability to solve novel problems. Older adults tend to process information at a slower pace, have less working memory (the ability to process multiple bits of information at a given moment), and experience difficulty in abstract reasoning (Speros, 2009). Bonder and Bello-Haas (2009) explain that “normal” age-related changes in cognition are related to memory skills, speed of processing information and decision making, such as following a fast-moving movie or making quick decisions while driving. They cite research that supports the role of decreased attention to relevant information in some older persons as having a negative impact on preserving memory skills, while noting that sustained attention is less affected by increased age. The older individual may experience more episodes of losing objects, forgetting names or being unable to recall
multiple item lists. These experiences can lead to the avoidance of new people, novel situations, and having busy social schedules (Bonder & Bello-Haas, 2009).

**Amelioration of the Effects of Social Isolation and Inactivity**

It has been established that the explosion of population in the group of older adults aged 70 and over has led to an increased direction in health care to help the community dwelling older adult to age in place with dignity, independence and well-being (World Health Organization, 2010). Maderer and Skiba (2006, p.126) state:

As Cusack (1999) outlines, 'the new perspective on the extended life span invites us to take bold steps to develop the human potential for growth and productivity to the end of life... longevity demands that we embrace ‘old age’ as the most significant human achievement of the 20th century’ (Cusack, 1999, p. 22).

The World Health Organization (WHO, 2006) has indicated a focus on successful aging in societies as a worldwide effort, defining health as not merely the absence of disease but physical and psychosocial wellbeing. These investigations support the idea that those who live a purpose-driven life will be predisposed to be successful elders, with a change in therapeutic focus on well-being leading to health, not health leading to well-being.

The need to intervene in behalf of those at risk of health decline due to social isolation and challenges in cognitive function has been confirmed. *The Occupational Therapy Practice Framework: Domain and Process, 2nd Edition* (2008, p. 652) support this focus:

> [F]ollowing an occupation-focused health promotion approach to well-being embraces a belief that the potential range of what people can do, be, and strive to
become is the primary concern and that health is a by-product. A varied and full occupational lifestyle will coincidentally maintain and improve health and wellbeing if it enables people to be creative and adventurous physically, mentally, and socially (Wilcock, 2006, p. 315).

In short: social support, social participation and cognitive functioning are important aspects of developing the elderly person's resistance to functional loss and include context as vital to performance.

Bukov, Maas, and Lampert (2002) found the most important predictor of future social participation was the amount of participation each person had four years prior. More demanding participation, (i.e., altruistic, voluntary and productive activities) improved perceived quality of life for older adults with improved self-esteem, life satisfaction and will to live. Those participating in more demanding social activities were also more likely to also take part in less demanding types of activities as they became less able. However, if a choice had to be made between occupations, it was to stop the more demanding activities and continue the less demanding activities rather than no longer participating in any activity. Lovden, Ghisletta, and Lindenberger (2005) found that those with a lifestyle rich in mental, physical and social stimulation experienced less decline in perceptual speed.

Nilsson, Lofgren, Fisher and Bernspang (2006) performed a cross-sectional study of 165 individuals living in northern Sweden who were 85 years old and older, to determine the relationship of the level of occupational engagement as related to life satisfaction among this age group. The elders reported increased perceived well-being
from involvement in social and cultural activities and activities involving watching videos and television programs with continued interest in and motivation for these activities over time.

Stessman, Hammerman-Rozenber, Cohen, Ein-Mor, and Jacobs (2009) examined the effects of continuing, increasing or decreasing physical activity level on survival, function and health status among the very old (ages 70 to 88 years old) and found positive benefit in the health status and function of active versus sedentary individuals. A three year study conducted by Bryant et al. (2002) found significant correlations with purposeful activity and the perceived health of older individuals compared with those who remained inactive. Data results indicated that being employed or volunteering full or part time had a positive effect on elders' physical health and reduced symptoms of depression (Bryant et al., 2002). The results of the study by Bassuk et al. (1999) indicate that the maintenance of social activities and interactions can help to postpone or prevent cognitive deterioration associated with aging. Bassuk et al. (1999) stressed that the evidence of prevention of the deleterious effects of reduced cognitive function in the aged, with the accompanying financial and caregiver burden should make the development of social policies and programs promoting social engagement among older citizens a priority.

A study by Milligan, Gatrell, and Bingley (2004) relating to healthy and active aging indicate social support and social networks are among the most significant
determinants of the health and well-being of older adults. Milligan et al. (2004) found that social networks are a buffer to hospitalization and enhance quality of life.

Elderly persons studied by Tse and Howie (2005) stated they were not satisfied with just filling time with meaningless activities, such as they experienced in a local adult day care, but expressed a need for engagement in age appropriate activities that fulfilled a real purpose and gave them a sense of accomplishment. The subjects expressed a need for programs that are sensitive to individual interests in providing activities that have greater personal meaning. The research done by Tse and Howie (2005) linked temporal benefits to engagement in occupational activities, which indicates that through activities, older persons could better organize their time and become more oriented to the past, present and future. Their research suggests that in conjunction with government policies aimed at assisting elders in aging in place, further considerations need to be given to extend services for the elderly that would assist them in getting out of their homes to participate in programs that foster companionship and participation in purposeful activities.

Berkelend and Flynn (2005) discovered several studies that showed that the meaningfulness of a task can alter a client’s tolerance for activity, tolerance for pain, and range of motion in ways that imaginary activities or rote activities do not. These results also held true when participants were given choices and some control over the tasks. The research data collected by Berkelend and Flynn (2005) verify that activity engagement in the “oldest old” also shows a statistically significant positive health impact.
Clark et al. (1996) conducted a randomized controlled trial of 361 community dwelling elders over 60 years of age to evaluate the effectiveness of professional occupational therapy services specifically designed for health prevention in this population. The nine month treatment program addressed specific goal-directed, biweekly group programs that involved community-dwelling older adults in purpose-driven occupations. The group programs were supplemented with a once-monthly individual occupational therapy intervention. Results were compared with two control groups, one receiving non-professional general social activities and one receiving no intervention. The outcome study produced the first conclusive evidence that the elders receiving professional occupational therapy health prevention programs showed significant positive physical and mental health benefits. The results demonstrated that “activity for activities sake” was of no more benefit to the participants’ well-being than no activity at all.

In their study of barriers to the use of public transportation by the elderly, Shaheen and Rodier (2007) found that use of an educational video helped elders surveyed to indicate a significant and positive attitudinal change regarding transit schedule, cost and payment functions but there was no change in responses regarding difficulties reading schedules and climbing stairs. In a focus group formed of elders to explore solutions to the many barriers identified, in-person information access was found to be an important component of effective information access. In addition, the focus members felt opportunities for elders to “practice” using the transit system would be beneficial (Shaheen & Rodier, 2007).
Amelioration of Cognitive Challenges of the Older Adult

Research conducted by Wang, Karp, Winblad, and Fratiglioni (2002) synthesized several recent studies that suggest a rich social network may decrease the risk of developing dementia. They hypothesized that such a protective effect may be due to social interaction and intellectual stimulation. Compared with those who did not engage in activity, elderly subjects who participate in social, mental or productive activities have a lower incidence of dementia. Individuals who indicated an increased frequency of participation in all three areas show an additional decrease in incidence of dementia. Of significance was that these associations were independent of the effects of age, sex, education, cognitive function, co-morbidity, depressive symptoms and physical functioning. The authors’ findings verified that stimulating activities that involve either mental or psychosocial components may act as stimuli to preserve cognition or deter cognitive decline, indicating the potential for inhibiting elderly persons from the development of dementia.

Concepts such as cognitive reserve (Bonder & Bello-Haas, 2009) suggest that educational, occupational and life experiences over the life span, and the benefits of these factors on cognitive functioning, provide a protective resilience against late-life neurological and cognitive decline. In support of these findings, Bonder and Bello-Haas (2009) report that the results of research regarding participation in cognitively stimulating activities indicates an increase in reserve capacity for cognitive function: that cognitive experience can be banked and those with more reserve capacity have the ability to delay
the signs of cognitive loss that may come with normal aging or brain pathology such as Alzheimer's Disease. "These findings suggest that all adults, including those nearing retirement age and beyond, would benefit from continuing a pattern of engaging in cognitively stimulating activities" (Bonder & Bello-Haas, 2009, p.184).

Cognitive training can be guided using environmental adaptation, crystallized intelligence, (defined as wisdom; cognitive ability composed of learned information and skills) and emotional regulation (Bonder & Bello-Haas, 2009). These are all factors found to be positive influences on the aging adult's ability to compensate for less agile processing skills and short term memory. Bonder and Bello-Haas (2009, p. 457) add, "Problem-solving coping strategies, such as information seeking and other behavioral and cognitive actions, have been found most effective in promoting a sense of well-being and physical health". Cognitive intervention strategies require the older learners to be active participants in seeking and using adaptive learning techniques.

A study by Martine et al. (2008) indicates that intervention programs must include helping the older adult overcome fear and motivation barriers to participation in new learning and social activities. Healthy individuals perceive themselves as forgetful and are interested in interventions to help their memory function and reduce their worries (Martine et al., 2008). Despite this fact, the authors state that only a small percentage of people who perceive themselves as forgetful attempt memory training or other educational activities to improve their function and decrease their worries. The authors indicate that the correlations between memory, self-efficacy and perceived forgetfulness were significant. Martine et al. (2008) found that negative perceptions of self-worth as a
result of declines in memory can be significant precursor to self-doubt, low self-esteem and decreased confidence in one’s ability to mobilize skills for a task rather than experiencing an actual lack of skills. The study indicated that memory-related anxiety leads to arousal and tension which diverts the energy bank available for memory retrieval, causing a cycle of forgetfulness. The subjects indicated their memory was also affected by negative attitudes and beliefs about their memory functions and their subjective beliefs of the disapproval of others, which led them to avoid social interactions rather than face perceived public scrutiny and criticism. Amelioration of these perceptions can begin with guidance toward successful engagement in learning or re-learning occupations with encouragement and support. In addition, use of the client’s learning style preferences to design client-specific strategies can improve their perceived control over learning and life experiences with a resultant increase in self-esteem and improved likelihood of continued occupation (Martine et al., 2008).

Previous research has indicated that cognitive training has been effective in improving the cognitive abilities in older adults, but effects of cognitive training on functional activities required further research: The ACTIVE study recruited 2,832 well elderly persons with a mean age of 73.6 years living independently in six US cities to discern the effects of cognitive training on daily function and the durability of such training on cognitive abilities over time. It was also hypothesized that the three areas of training would have a cross training effect on one another (Willis et al., 2006). Ten training sessions were conducted in three areas: speed of processing (visual search and identification), memory
(verbal episodic memory) and reasoning (deductive reasoning). A random sample group received booster training sessions after the initial training period at 11 and 35 months post intervention. Assessments were conducted at baseline, at completion of initial training and yearly at 1, 2, 3 and 5 year intervals. At year 5, subjects in all three intervention groups reported less difficulty in more complex daily activities compared with the control group, but data was significant for those in the reasoning group and especially for those receiving booster training. Results of the study by Willis et al. (2006) support the hypothesis that improvement in cognition is directly related to improved functional occupation. Willis et al. propose a possible reason for the 5 year delay before evidence was seen in the transfer of the effects of training to improvement in function; that previous research suggests a time lag between the onset of decline in cognition and the subsequent impact on daily function. It was suggested that the delay seen in the current study may be due to the difficulty adapting to emerging physical limitations affecting daily living tasks. Willis et al. (2006, p. 2813) state:

However, if cognitive abilities were maintained or enhanced by training, then this could result in a gradual emergence of adaptive, compensatory strategies for dealing with physical limitations. We consider these results promising and support future research to examine if these and other cognitive interventions can prevent or delay functional disability in an aging population.

*Kolb’s Experiential Learning Theory*
It has been 41 years since Kolb’s initial contribution to the Experiential Learning Theory (ELT) and the development of the *Kolb Learning Style Inventory* (Kolb, 1984). Experiential learning theory defines learning as "the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 41). The experiential learning theory is based on the original works of Dewey, Lewin, Piaget, and Freire, who gave experience a prominent role in their theories of human development and learning to create a holistic, multi-linear model of the process of feedback in learning. This information feedback provides the basis for a continuous process of goal directed-action and evaluation of the consequence of that action. According to Kolb (1984) Lewin believed that reduced learning effectiveness could be traced to a lack of adequate feedback processes. This ineffectiveness is a result of an imbalance between observation and action; caused either from a tendency for an individual to have a greater disposition for decision and action at the expense of gathering information or to be more inclined to be bogged down by collecting and analyzing data. The aim is integration into an effective and goal directed learning process (Kolb, 1984). “In Paulo Freire’s work, the dialectic nature of learning and adaptation is encompassed in his concept of praxis, which he defines as ‘reflection and action upon the world in order to transform it’” (Kolb, 1984, p. 29).

The *Experiential Learning Theory Bibliographies* (Kolb & Kolb, 2005, 2011) have 2,453 entries, validating their extensive use as teaching and research tools. “Experiential learning is a process of constructing knowledge that involves a creative tension among the four learning modes that is responsive to
contextual demands” (Kolb & Kolb, 2005, p. 2). The experiential learning theory describes two opposite means of grasping experience: Concrete experience (CE) and Abstract Conceptualization (AC) (experiencing or thinking) and two opposite ways of transforming experience: Reflective Observation (RO) and Active Experimentation (AE), (watching or doing). Learners resolve the conflict between being concrete or abstract and between being active or reflective in patterned, characteristic ways which are termed preferred learning styles. The key to effective learning involves all four phases; individuals may need help in both seeking information and experiences in their preferred style, and completing their learning by touching “all the bases”. The experiential learning theory argues that a learning style is a dynamic state resulting from transactions between the person and environment; that learners must be active participants in the learning process. A successful experience will lead to an increased self-confidence which in turn increases the likelihood of continued participation in similar occupations (Kolb & Kolb, 2009). According to Kolb and Kolb (2009):

Since it is virtually impossible, for example, to simultaneously drive a car (Concrete Experience) and analyze a driver’s manual about the car’s functioning (Abstract Conceptualization), we resolve the conflict by choosing. Because of our genetic make-up, our particular past life experiences, and the demands of our present environment, we develop a preferred way of choosing. We resolve the conflict between concrete or
abstract and between active or reflective in some patterned, characteristic ways. (p. 43).

Concrete experiences are the basis for observations and reflections; reflective observation goes beyond “common sense” reflection (i.e. “that went well”) but needs to be articulated in a systematic manner so we recall our thoughts and can build on our experience for the next time. This can be accomplished by the use of logs or journals, audio or video tapes, or reliable feedback from others. These judgments or analysis of what was effective or not effective are put together. Secondly, abstract concepts are formed by learning from the experience, and thirdly, the learner begins seeking more information in order to plan what one would do in a similar or different manner. Thus, one is able to form an informed conclusion about the experience from which new ideas for action can be made. These changes can be tested actively and serve as the basis for creating new experiences, and on through the cycle. Each dimension of the learning process presents us with a choice. Kolb (1984) describes learning as a recurring progression through the learning cycle over time. Individuals often give up their learning effort because they have an expectation of instant mastery or a “quick fix”. The experiential learning cycle, conceptualized by Kolb (1984) is a spiral, ongoing learning process, “a concrete experience enriched by reflection, given meaning by thinking and transformed by action that causes the new experience created to become broader, deeper and richer” (Kolb, 1984, p. 54). The Kolb Learning Style Inventory-Version 3.1 (Kolb, 2001) was designed to help individuals determine how much they rely on each of the four learning modes (See Figure 1). Although everyone learns continuously, all people have a
learning style or a preference for how they learn and this is the place they start on the learning cycle. Learning preferences are scored by plotting the intersection of the top two or primary choices. Diverging style learners, “Feelers” (CE & RO) consider situations from different perspectives; are creative in coming up with possible solutions. Assimilating style learners, “Thinkers” (RO & AC) tend to absorb the learning situation in a larger framework of ideas to assimilate information into a model or theory. Converging style learners, “Planners” (AC & AE) enjoy taking in information to solve problems to converge on the answer or solution. Accommodating style learners, “Doers” (AE and CE) prefer to put ideas into action, practice what has been learned and adapt to changing circumstances.

Cattan (2005) asserts that the process of reflecting on one’s own strategies of learning in a systematic way is most valuable in its revelation to the learner that they may be different, not ignorant; that past failures were not the end-all and that a change in approach can bring improvement. A move toward a positive self-identity can offset the tendencies that reinforce negative self-talk, avoidance of risk, and the potential for failure. Kolb and Kolb (2009) examine learning self-identity as a person’s belief about themselves, especially about how they learn, that if a person does not believe they can learn, they will not. The authors propose that every success or failure can trigger a reassessment of one’s learning ability.

Truluck and Courtenay (1999) conducted a study of the learning style preferences of older adults from 55 to 75 years of age and older using the Kolb Learning Style Inventory (1984). Results suggested that rather than certain age groups being identified with a specific learning style, as people age, their preferred styles become more varied. The increased variation of individual preferences as we age indicates that interventions for learning should not be based on one teaching method. Approaches should be individualized dependent on results of learning style preference testing. The effect of learning style on learning efficacy does not decline with age, but rather becomes more personalized, and for many, more reflective and observational. Therapists working to help clients improve cognitive strategy use can be prepared to present information in a manner that speaks to individual styles of learning.

Fleming (2001) proposes that individuals not only have a preference for the process in which they learn, but also have a bias toward how they receive information
through their sensory systems. Kolb (2009) states that the manner in which the person captures the initial concrete experience influences the effectiveness of their initial learning but also the effectiveness of the remainder of the learning cycle. Also, determining the person’s sensory modality preference will impact the clinician’s choice of how to present concrete information and learning experiences to their clients. Such attention to learning style needs should result in improved interest, sustained attention and improved retention. Thus Fleming’s (2008) work is adjunctive to Kolb’s inventory, and Fleming has developed a questionnaire termed the VARK (Visual, Aural, Read/Write and Kinesthetic) to help individuals discover their preferences for particular sensory modes of information presentation.

Fleming describes the VARK inventory as not a learning style questionnaire, but a small part of a complete package or process that deserves to be called a ‘learning style’. In discussing the use of the VARK, Fleming (2001, p.1) states that “Any inventory that encourages a learner to think about the way that he or she learns is a useful step towards understanding, and hence improving, learning”. The VARK is included among the recommended tools found in the student’s product.

Kolb’s work is extensively used in the product for this study, the Use Your Experience manual. It is a reference tool for use by occupational therapists in a variety of settings such as home health, out-patient or in-patient facilities interested in community health promotion; or for use by the independent OT assisting the older client to “remain in place” successfully. The Use Your Experience program manual was developed using the Occupational Adaptation frame of reference, as well as incorporating learning styles
information to serve as a guide for the occupational therapist in better understanding of
the learning needs of the older adult, and resulting in the use of cognitive strategies and
learning styles as a component of therapeutic teaching that positively affect learning and
improve successful social participation. The next chapter will discuss methods used in
program development using Occupational Adaptation as a framework for assessment and
intervention of the elderly persons targeted for this community health intervention
program.
CHAPTER III

METHOD

An extensive review of literature was conducted by first searching multiple online databases available through the University of North Dakota Harley E. French Library ProQuest databases, including CINAHL, PubMed, SAGEpub, EBSCO and PsychINFO, along with the use of occupational therapy textbooks and obtaining current information through the internet. The purpose of this search was to gather information regarding the features of social isolation in relation to the aging population, the positive effects of meaningful social activities on this at-risk population and the learning needs of the older adult applied to community interventions. The process involved research of various topics including, cognition and the elderly, learning strategies for the older adult, learning styles and experiential learning theory and their application to client-centered patient education in therapeutic interventions guided by the occupational adaptation frame of reference. Specific themes were developed based on consistency in the literature findings, which included the impact of social engagement and meaningful activity on the health and wellbeing of the elderly population. The literature also provided information regarding the positive effects the use of learning styles, the experiential learning cycle and adult learning strategies have when applied to learning, retention and success in
occupational adaptation. Research also disclosed statistical information regarding the rapid growth of the elderly population and the corresponding increase in institutional health care costs. Information gathered indicated potential funding and referral sources, and optimal time frames for community health intervention programs. Screening tools were developed and suggested assessment and intervention methods congruent with the Occupational Adaptation frame of reference were located for use in program development and implementation. The importance of continuing the self-efficacy of the community dwelling older adult calls for there to be more emphasis in research and intervention on the mutual benefits of engagement of elders in social relationships versus increased dependence (Sabir et al., 2009).

Research revealed the need for expanding community health services for the older adult at risk of social isolation and the valuable role of occupational therapy in providing those services (Scaffa, 2001). Multiple occupational therapy theories and models were evaluated to determine the degree of relevance for treating this population. Schultz & Schkade (1992, p. 924) propose that the Occupational Adaptation model “offers a generic perspective; it is not specific to any particular dysfunction or condition. The model is applicable to many settings, such as schools, hospitals, and home health care, which indicates this theory is fully applicable to assess and assist the elderly population at risk for social isolation living in their community. Furthermore, the Occupational Adaptation frame of reference demonstrates a working congruence with the experiential learning theory developed by Kolb (1984) which is used as an intervention tool throughout the proposed community intervention program. Consequently, the Occupational Adaptation
frame of reference was selected for use as a resource in creating the community intervention manual entitled *Use Your Experience*. Therapeutic interventions included in the *Use Your Experience Manual* will involve influencing the client’s inner adaptation process leading to the ability to achieve success and satisfaction due to mastery over occupational challenges, leading to independent transfer of adaptation methods to other occupations. “The intervention tools are the therapist’s occupational therapy knowledge base, therapeutic assessment and intervention skills, therapeutic use of self, understanding of occupational adaptation concepts and engagement of the client in a collaborative relationship” (Bouteloup & Beltran, 2007).

The Occupational Adaptation practice model does not “disregard the necessity of functional skills” (Schkade & Schultz, 1992, p.) but rather utilizes occupational activities as active, meaningful and process-oriented with an end product that can be tangible or intangible that can elicit the process of occupational adaptation. Occupational readiness activities regarding preparatory skill-based activities such as instruction in use of adaptive strategies, therapeutic techniques or use of adaptive equipment can be necessary prerequisites to engagement in activity. Kolb (1984) proposes that the immediate force that shapes learning style is the specific task or problem the person is currently working on; that each task we face requires a corresponding set of skills for effective performance and that adaptive competence is the effective matching of task demands with personal skills.

Both the therapist and the client are empowered to contribute to the adaptation process; “The therapist as the agent of the patient’s occupational environment and the
patient as the agent of his or her unique persons systems” (Schkade & Schultz, 1992, p. 918). There is nothing incongruent in the occupational therapists’ mode of intervention being that of modifying the client’s learning environment to include the use of learning styles to address the mastery of occupational adaptation.

Occupational therapists will benefit from a manual containing a design for the development and implementation of an occupational therapy community re-engagement program for elderly individuals at risk of social isolation. The manual will provide the occupational therapy practitioner with a guide for suggested assessment and treatment sequences with appropriate evaluation tools common to occupational therapy to be used to support outcome evidence. Occupational therapists will use the information in this manual to assist them in guiding the older client in the use of his or her preferred learning style to address self-identified goals leading to successful engagement in meaningful activities in their communities. In addition, a quick guide to learning styles and their therapeutic application has been created to assist the occupational therapy practitioner in the timely and efficient application of learning style-based teaching strategies.

**Occupational Adaptation Frame of Reference**

A frame of reference is the organization of theory for use as a guide to occupational therapy practice (Kramer, Hinojosa & Royeen, 1999). The Model of Occupational Adaptation (OA) was developed in the 1990’s by Janette Schkade, PhD, OTR and Sally Schultz, PhD, OTR as a response to the trend in occupational therapy toward increased specialization with a departure from treating clients in a holistic manner (Schkade & Schultz, 1992). These theorists define occupational adaptation as a normal
process that allows each person to master and respond adaptively to the various occupational challenges that are met in the course of a lifetime and that occupational activity must have meaning to the patient and their society. Motivation is created by the assumption that each person forms internal expectations about their occupational performance which results in a desire for mastery and that the occupational environment also has a demand for mastery: together these internal and external motivational forces provide an interactive press for relative mastery (Schultz & Schkade, 1992). The authors of the Occupational Adaptation frame of reference describe relative mastery as having three components: satisfaction to self and others, efficiency, and effectiveness (Schkade & Schultz, 1992; Schultz & Schkade, 1992).

The Occupational Adaptation theory is based on core occupational therapy concepts that have as their focus the merging of occupation and adaptation into a unified idea developed over time. King (1978) states that the essential purpose of occupational therapy is to stimulate the adaptive processes through which an individual may best survive and develop. King considers the adaptive process to be divided between developmental learning and the process of adjusting to change or stress. For adults, the occupational challenges that most threaten occupational adaptation arise at times of transition or trauma in their life (Schkade & Schultz, 1992). Marginal self-evaluation and integration processes will result in pronounced difficulties in times of major adaptive transition needs.

According to Kramer, Hinojosa & Royeen (2003, p.13) the possibility of occupational adaptation through a structured therapeutic relationship is one reason
that the profession of occupational therapy exists. Although they did not use the
same terms, the founders of the OT profession believed that one person (the
therapist) could help synthesize the occupational form of another person (the
patient) in such a way as to help the patient make a change for the better in his or
her own being. King (1978) postulated that adaptive responses are most effective
when they are subcortical and therefore generated and organized in the
subconscious of the person, that energy is required to form an adaptive response.
This creative, subconscious level is defined as secondary energy; the other type of
energy, termed primary energy, is cortical or highly aware and considered to be
less efficient (Schultz & Schkade, 1997). When a person becomes “stuck” at the
primary level without problem resolution, they may need therapeutic intervention
to help them shift to the secondary level for more efficient processing and
232); “In the Occupational Adaptation framework, the therapist’s role is to
facilitate the discovery of the modified or new response mode by the client.
Therefore the client is the agent of change, and the therapist is the agent of the
occupational environment (Schultz, 2003; Schkade & Schultz, 1992)”.

The Occupational Adaptation frame of reference proposes that interventions
directed toward facilitation of the internal adaptation process are considered more likely
to generate to other contexts. This leads to the independent use of effective occupational
adaptations as the client meets new occupational challenges. The therapist helps to guide
clients in the development of the ability to reflect on chosen occupational role expectations.

For example, an elderly woman with mild sensory or cognitive deficits using the telephone to contact the public transportation bus for the first time may use primary energy (focused or cortical energy) to read the telephone number, watch the number key and dial the correct number, which may hinder her from focusing her higher cognitive functioning on setting up the ride appointment and recording it accurately on the calendar. She may get “stuck” at this level and abandon the activity due to the excess effort involved combined with the potential for failure. Because the client has confused pickup dates and missed the bus in the past, she has a large psychosocial and emotional component associated with the task developed from criticisms and judgments from family members and how she judges her own skill. The therapist may use the occupational adaptation frame of reference to guide the development of this client’s adaptive response process by helping her identify a self-directed goal.

Occupational Adaptation encourages the client to be their own agent of change, promoting self-efficacy, adaptation and successful performance of their chosen occupations (Kramer et al., 2003). The client becomes the agent of change because she is now focused on what she has determined is purposeful and meaningful and what specific tasks this chosen occupation requires. It may also help her to determine at what level of performance she will be satisfied; this may differ from that of the practitioner. When she has deemed her performance acceptable to her, she will generalize the knowledge of her
improved adaptive capacity to continue to experience success; thus she is not reliant on skill acquisition, but a process leading to goal attainment.

Active participation in client-selected, goal directed activities followed by instruction and practice in self-reflection and self-assessment can direct the client’s attention to internal and environmental factors that influence performance. The process is mirrored in the development of an awareness of one’s preferred modes of experience and learning styles. The Use Your Experience manual will provide a case study to help guide the practitioner in using the Occupational Adaptation frame of reference for client centered intervention and treatment of this population.
Use Your Experience

An Occupational Therapy Manual for Applying Learning Strategies in a Community Intervention Program For the Socially Isolated Adult

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The Use Your Experience Manual

The manual contains the following: An overview and rationale for use of the OA frame of reference; descriptions of adult learning strategies, experiential learning theories and learning styles, and questionnaires to determine preferred learning styles and sensory modality preferences. Included are suggested referral sources, proposed program funding sources, intervention time frames and suggested assessment options and outcome measurements. Therapist learning goals and a case study based on occupational adaptation and experiential learning concepts were provided. To impact the learning of the occupational therapist, a power point presentation format is used and the Quick Reference to Learning Style pamphlet (Appendix A) is provided for ready use in the community setting. This manual strives to (1) increase awareness of the social activity needs of the elderly; (2) enhance the knowledge and confidence of occupational therapists working with this target population; (3) provide information that is user-friendly and easily accessible; and (4) strengthen the occupational therapy profession by using evidence-based literature to guide practice.

Introduction

Since occupational therapy values the importance of social participation as a necessary and key component for healthy functioning (AOTA, 2002), there is an increased need for community occupational therapy services to become a vital component in the national effort to assist the aging population in aging in place successfully in their homes.
This manual and accompanying quick learning style reference pamphlet serve as a resource for occupational therapists working with the older adult at risk of social isolation. The *Use Your Experience* manual will help occupational therapists develop confidence and skill in their ability to identify their client’s learning style and adapt their instruction to meet their client’s individual learning needs. The manual teaches the therapist about learning strategies for the older adult and the use of the experiential learning cycle as teaching tools in therapeutic instruction and training in community re-engagement skills. The therapist will need this guide to locate potential referral and funding sources to initiate this program, as well as the initial screening form, suggestions for assessments and the means of structuring an intervention program based on occupational adaptation and experiential learning models. The case study provides clarification of real life application of the product. Outcome measures to assess the client’s quality of life and social activity are included.
Occupational Adaptation Frame of Reference
The field of occupational therapy uses theoretical constructs to connect the philosophy of human occupation to practical application through the use of client-centered, evidence-based intervention. The Occupational Adaptation Frame of Reference was developed in the 1990s by Schkade & Schultz as a response to the increasing trend toward specialization within the profession with a departure in consideration of the client in a holistic manner as the core determinant of evaluation and intervention. The Occupational Adaptation Frame of Reference (OA) is a holistic approach or one which views the client as a whole person. In this approach, a variety of environmental and personal factors impact the assessment, treatment goals and course of rehabilitation (Buddenberg & Schkade, 1998). By broadening the scope of practice, the presence of holistic thought positively influences the therapist's opinion of the client's ability to actively participate in the intervention process. Conversely, when the therapist takes full responsibility for the course of treatment, they deliver the message that the client is incapable of participation and relegate the patient to the role of passive participant.

Many seniors not only experience the impact of ageism, (negative bias regarding the abilities of the elderly) from others, but hold these limiting stereotypes to be true about themselves (Bonder & Bello-Haas, 2009). The use of the OA Frame of Reference is ideal for this target population as it does not reinforce the idea of passivity and helplessness but engages the client as the master of their treatment process.

The foundational principles of OA are centered in the core occupational therapy concept that states that the essential purpose of occupation is to stimulate the
adaptive processes through which an individual may best survive and develop (King, 1978). Occupational adaptation is a process that allows each person to master and respond adaptively to the various occupational challenges that are met in the course of a lifetime. A developmental process is presumed where occupational readiness skills in the person subsystems (sensory, cognitive and psychosocial) are influenced by genetic, environmental and experiential subsystems (Schkade & Schultz, 2003) and set the stage for interaction in the environmental context of work, play, leisure and self care (Jackson & Schkade, 2001).

Occupational activity must have meaning to the patient and their society. Motivation is created by the assumption that each person forms internal expectations resulting in a desire for mastery and that the occupational environment has a demand for mastery: Together these internal and external motivational forces provide an interactive press for mastery (Schultz & Schkade, 1992). The authors describe relative mastery as having three properties: satisfaction to self and others, efficiency, and effectiveness; all serve as explanations of the influence of the interactions between external and internal motivation.

The basic framework of OA is seen as the occupational environment, the person and the interaction of the two as they merge in occupation. Schultz & Schkade, (1992) describe the process as an open loop system where feedback from an experience influences the subsequent input of that system into future experiences.

The Occupational Adaptation Frame of Reference is consistent with the underlying principles of occupational therapy which propose that rather than
interventions focused on general skill development, intervention directed toward facilitation of the internal adaptation process is considered more likely to generate to other contexts. Integration of the adaptive modification is demonstrated by independence use of that modification in a new occupational challenges. The therapist helps to guide clients in the development of the ability to reflect on the expectations of the role or meaningful activity they have selected. Active participation in client-selected, goal-directed activities followed by instruction and practice in self reflection and self assessment can direct the client’s attention to internal and environmental factors that influence their performance and future adaptation. The process is mirrored in the development of an awareness of one’s preferred modes of experience and learning styles. Occupational Adaptation encourages the client to be their own agent of change, promoting self-efficacy, adaptation and successful performance of their chosen occupations (Kramer et al., 2003).

In their descriptions of the subprocesses of adaptive responses, Schkade & Schultz (1992) refer to the research of Seyle (1984) who explored the excess energy consumption caused by stress and the resultant overuse of a limited supply of adaptive energy. The two theorists present the rationale that with a finite amount of adaptation energy available, careful management of that supply is needed to enhance occupational function; that the amount of energy is sufficient for a lifetime unless depleted by inefficient use caused by ineffective occupational adaption. The use of primary or focused energy to adapt to occupational challenges depletes the supply more quickly than that of the secondary level, which involves a more creative and sophisticated awareness
level that depletes energy reserves more slowly. The authors base this assumption on the theory of creative problem solving which involves methods for seeking alternatives to current approaches when they no longer produce effective solutions (Schultz & Schkade, 1992). For example, an elder can accumulate and read several pamphlets about public transit systems, read bus schedules, and look at routes to the senior center, but never get on the bus. Another may get on the bus before learning where to transfer, experiencing failure with this attempt. When a person becomes “stuck” at the primary level without problem resolution, they may need therapeutic intervention to help them shift to the secondary level for more efficient processing and possible identification of a solution; this can involve directing them toward learning styles opposite to their own to explore another way of solving the problem. “In the occupational adaptation framework, the therapist’s role is to facilitate the discovery of the modified or new response mode by the client. Therefore the client is the agent of change, and the therapist is the agent of the occupational environment” (Schultz, 2003; Schkade & Schultz, 1992” (Bouteloup & Beltran, 2007, p. 232). The person learns to attend to relevant cues and is helped to use a systematic consideration of available options. Finally, the mature response is that of a balance between mobility and stability which promotes relative mastery.

Active participation in client-selected, goal directed activities followed by instruction and practice in self reflection and self assessment can direct the client’s attention to internal and environmental factors that influence performance. The process is mirrored in the development of an awareness of one’s preferred modes of experience and learning styles. The next section will help you motivate your client for action.
Motivational Factors
Motivation Factors

Fear of past events or the unknown future tends to increase the older adult’s cautiousness, which in turn creates a reluctance to take action. The fact that the clients’ current status (social isolation) creates an enormous personal cost to their health and well-being must be emphasized throughout therapeutic teaching. Providing medical proof that increased socialization and activity will improve one’s physical and mental status, prevent dementia and increase lifespan may help tip the balance from inactivity to a willingness to try a new behavior (Rowe & Kahn 1998). The therapist’s skill and knowledge of the client discovered during the evaluation process, (occupational profile) coupled with the ongoing establishment of a therapist-client trust and rapport will be necessary to provide the encouragement needed for the client to risk the potential for failure. It is the therapist’s responsibility to arrange a context to allow for the opportunity for success. The personal efficacy that results from such success will positively bias their reflections about the experience, judgements regarding future experiences and motivations to adapt, repeat or retry the experience and/or transfer their learning to a new experience. Dreeben (2010) emphasizes the fact that adult learners are self directed and presents adult learning theories which propose that motivation is vital to help the learner recognize the need for the information the therapist is providing; that older clients must be able to easily relate learning to their daily lives and that this learning must be applicable to solving present problems in their lives. This process adds relevance and improves motivation; a critical element to older learning. Discussion of learning to be a
learner must take place during the initial evaluation period to help the patients determine how the learning information will help them in goal setting and self-direction. Before successful therapeutic teaching can take place, elements that are critical to adult teaching and learning must take place. The need for teaching techniques that connect the knowledge the older learner has accrued from his or her vast wealth of life experiences to the new information being presented while keeping in mind their internal desire to be responsible for self-direction is important (Dreeben, 2010).

Dreeben (2010) proposes that motivation can be the result of the client perceiving a threat to their health based on their perceived susceptibility to a disease or illness plus a belief that the consequence of their behavior is serious. The individual then balances the benefit versus the barriers to engaging in health care education and adopting the new set of health behaviors. Barriers could include cost, degree of required change, changes in social life, changes in role, changes in self-concept and the sheer effort involved. Finally, the clients belief in their ability to carry out the health change recommendations may be the largest influence of all, both positive and negative. "The practitioner's intervention, from a health belief model, is to support the credibility of the threat, articulate the benefits of the new learning outcomes, acknowledge and realistically deal with the environmental barriers to carrying out the behaviors, and, finally, engage the client in a learning experience graded to provide a sense of self-efficacy for effectively applying the new learning" (Dreeben, 2010, p.423).

Kolb (2001) proposes that experiential learning allows people to be challenged, to think about and experiment with new concepts, and to take some risks: it can be as much
about reflecting on setbacks and disappointment as it can be on success. Kolb suggests that the key to personal growth and success in practically every endeavor is the willingness to step outside of one's “comfort zone”. The way that experiential learning allows freedom of choice while presenting reasonable risks means that learners remain in control of the learning process; if experiential learning placed people in situations of great discomfort, then learners would be preoccupied with comfort reinstatement rather than experiential learning. When the older adult knows that their experimentations resulted in success, they continue to seek the feeling of empowerment that experiential learning generates.

The following pages describe common challenges to learning the elder client may face, with recommendations for presenting information and teaching new learning strategies. Included is information pertaining to learning styles and their application to therapeutic teaching and instruction. Power Point format designed for future application as a teaching tool for occupational therapists and other health professionals.
Learning Strategies for the Older Adult
Older Adult Learning Strategies Applied to Therapeutic Interventions

Bring your experience
Use Theirs

- Providing the older client with tools to improve their learning can increase motivation, attention and a change of behavior that is vital to promoting self-efficacy and enduring lifestyle change (Dreeben, 2010).

Your older adult clients have a lifetime of experiences to help them learn......

- Respect
- Relate
- Repeat

As O.T. practitioners, you are skilled in clinical reasoning using initial interview and theoretical knowledge

Occupational Profile

1. Culture
2. Education
3. Work History
4. Social Network
5. Avocational Interests

Each client is unique:
Beware of ageism and assumptions......
What are our Clients saying with Body Language? Communication Style? Content?

- Recollections of work?
- Family Dynamics?
- Comments about school?

- Past learning stories.....
- What has worked best for them?

Physical Challenges Can Affect Our Client's Ability to Learn

Vision

Physical Challenges Facing the Older Adult That Affect Learning

Hearing

Visual Changes are often inevitable

- Decreased acuity
- Problem seeing the blue end of the color spectrum
- Reduced peripheral vision
- Less light reaching the retina
- Reduced pupil adaptation to change from light to dark and back
- Reduced night vision
Hearing Changes are often present.....

- Problems filtering out background noise
- Loss of ability to hear high and low frequencies
- Problems discriminating between 't, s, k and sh' sounds
- Increase in auditory reaction time
- Quiet environment
- Speak in moderately low tone; do not shout
- Give more time to process
- Make pencil and paper available
- Wait: Then ask client to repeat instructions

Changes in Motor Skills Challenge Learning.....

- Illness
- Pain
- Motor and Sensory Challenges

VERBAL COMMUNICATION

- Be concrete and specific
- Limit content to 3-5 points
- Limit session time
- Have client bring a friend or family member
- Speak slowly and clearly in a low tone
- Ask client to repeat the instructions
- Repeat key points
- Summarize key points

- Face your client directly; use good eye contact: avoid standing in front of window
- Write or use handouts
- Use gestures and demonstrations; have your client repeat the actions or exercises
Revise Your Handouts!

- Are they old and faded? ... use black ink on white no glare paper
- Is the print small? ... increase to 14-16 point type with plain font
- Are there diagrams? ... simple, age appropriate line drawings are best

Did you know ......

- Older adult literacy rates can be at a 5th Grade Reading Level
- Your computer will analyze the reading level for you ... keep words 10 to a line and under 3 syllables!

Make Posters and Flyers Easy to Read

What about color?
- It may look more interesting to you ....
- But the older adult needs black and white .............
- High contrast
- Low glare
- Large print size

Watch out for clutter!
- More is not necessarily better!
- Normal font that is consistent throughout
Changes that commonly occur in brain function as we age.....

+ Decrease in maximum amount of attentional resource available
+ Working memory is reduced by change in encoding systems used to transfer data
+ Decline in ability to separate relevant from irrelevant material
+ Evidence of a degree of absolute decline in secondary or long term memory
+ Loss of spontaneous use

Intervention Strategies

- Eliminate irrelevant material
- Your teaching intervention must have personalized meaning and a valid purpose
- Give client opportunity for self-paced learning
- Give client opportunity to practice specific skills
- Use structure to impose strategies on the cognitive system:
  - The use of mnemonics has proven to diminish problems transferring information to the secondary storage system
  - Learning has been shown to improve using these strategies (Bonder & Bello-Haas, 2009)

- Occupational Therapists can impose structure to improve function:
  - Teach our clients how to rehearse and repeat information
  - Show our clients how to organize information
  - Help our clients group information using categories
  - Make practice random and variable to allow active processing and problem solving

- What about the disuse theory?
- Use it or lose it!
- If novel information is associated with information already learned, improved memory will result
- Reading, playing challenging games and increasing verbal and written communication can improve storage capacity (Bonder & Bello-Haas, 2009)
Give the older client more time.....

- Older persons require twice as much exposure time to show the same skill gains as young adults (Speros, 2009).
- Increase the magnitude
- Emphasize why it is important for them to know and do

Give Older Learners The Desired Action First

- Attention and lasting memory traces are closely linked
- Material should be of personal interest to the client
- Associate new learning with previous learning experiences
- Reduce distractions
- Why do they need to know it?
- Reminisce, Relate, Repeat

Section II

Learning Preferences of the Older Adult

Wilken and Isaacson (2005) state that adult education is the key to the process of empowerment. They indicate that older adults learn best with auditory and visual information, need supplemental written material to take home and study and an opportunity to practice the skills or techniques demonstrated by the instructor.

With age there is a tendency to become more observational and reflective (Truluck, 1999).
Use of Learning Styles is Key to Priming the Brain of Older Adults to Improve Learning and Application of Therapeutic Interventions

- "Presenting material in a way that matches a client’s preferred learning style can increase the efficiency and effectiveness of occupational therapy intervention" (Loftland, 2009, p. 13).

WHAT ARE LEARNING STYLES??

- Our preferred approach and response to learning tasks
- How we learn in the most familiar, natural way
- What makes learning easier for us

Learning Styles

- "Successful patient education occurs when health care providers affirm the presence and validity of diverse learning styles ..." (Dreben, 2010, p. 208).
- Individuals have a preference as to how they best learn.
- Receiving information in our preferred learning style helps us to be actively involved in the learning process.
- Teaching to the person's preferred style increases their ability to learn and experience success with new learning.
- We can bias our client’s ability to participate, experience and learn by matching our instructional design with their learning style (Koib, 1984).
Kolb's Experiential Learning Theory

- Learner's learn by selectively reflecting on their experience in a critical way
  - Experience is essential for learning to take place
  - Experiential learning is a process created through transformation of experience

(Kolb, 1984)

Kolb's Cycle of Learning

- States that learning is a continuous process
- All learners approach a learning situation based on:
  1. Environmental demands and
  2. Past experiences (Kolb, 1984)

We all choose between two opposite sets of choice in a learning experience:

**Processing** = Watching (RO) or Doing (AE)

**Perspective** = Feeling (CE) or Thinking (AC)

We can not grasp an experience by simultaneously doing and watching

We can not transform the experience into something meaningful and useful by simultaneously feeling and thinking

We have to pick one choice for each approach

(Kolb, 1984)
Each learning preference is the product of two variables or two separate choices.

Learning preferences are related to two variables:

1. How learners approach the task or "processing":
   • Are you directly involved in the learning task (feeling) or concretely experiencing it?
   • Do you prefer to think about theories or logic related to what you have learned (thinking) or abstract conceptualization?

2. How learners respond to the task or "perspective":
   • Watching: Do you observe, listen and reflect?
   • Doing: Do you apply what is learned to a new situation or actively experiment?

We may start with our preferred style and move around the cycle from there...

We may skip a style we do not like to use....

Kolb's ideal form of learning is for the learner to be able to integrate all four styles of learning.

Chase the learner around the cycle.......

Ask questions that engage reflection, help in conceptualization and in ways of testing the ideas.

Assimilation includes fitting particular instances into general categories.

Accommodation is about working from the general principle to the particular application.

Apprehension: Direct experience

Comprehension: Knowing about it

Transform Knowledge by:

Thinking about it

or Using it
Remember…we can enter the cycle anywhere, but must go through the whole cycle for learning to take place!

This process allows the learner to truly transform experience into knowledge!

What is your learning style?

- Look at your preferences
- How does your preferred style learn?
- Look at the other 3 styles; how do they learn?
- How can we apply these strategies to help our clients?

Take the Quick Kolb Learning Style Inventory

- Think of a recent learning experience and answer the questions in relation to that experience!
- First choose the answers that are Most like you (4), then Least like you (1) and then consider the middle ranges (2-3)
- Score your responses

Kolb, 2001

- Practitioners tend to teach in their preferred style
- Pay attention to these tendencies and adapt your teaching strategies to meet your client's preferred learning style!

(Dreeben, 2010)
• Keep your quick Learning Style Reference Pamphlet handy to help guide your teaching intervention strategies.

"Feeler/Creato"r
• Diverger
• CE & RO

LEARNING STYLES
• Use clinical observation skills to spot your client's preferred learning styles

• Generate a number of recollections of experiences;
• Make private, creative judgments about the quality of divergent knowledge and skills
Intuitor: “The Planner”

- Assimilator
- RO/AC

Thinker/Decision-Maker

- Converger (AC/AE)

- Particular to general
- Introverts
- Scientists, Theorists

- Bring together a number of facts on a single topic
- Answers are right or wrong
- Mathematicians, engineers
**Sensor: “The Doer”**

**Accommodator Style:**
AE/CE

Learning experiences can be enhanced by involving the senses:

*Fleming's VARK Questionnaire (2001-2009)* will help identify the individual’s sensory modality preferences:
- Visual
- Aural
- Read/Write
- Kinesthetic

"Physician, Know Thyself......"

Examine your sensory modality preference:

Find the VARK questionnaire online at:

**Score** to Find Your Modality Preference:

**Use** your findings to be aware of your own modality preference.

**Assess** your clients to discover and use their modality preferences in your therapeutic interventions.

(Fleming, 2010)

---

**Visual**

- use visual materials such as pictures, charts, maps, graphs, etc.
- have a clear view of your therapist or group leaders when they are speaking so you can see their body language and facial expression
- use colour to highlight important points
- take notes or request and read handouts
- illustrate your ideas as a picture or brainstorming bubble before writing them down
- write a story and illustrate it
- use multi-media (e.g., computers, videos, and flipcharts)
- study in a quiet place away from verbal disturbances
- read illustrated books
- visualize information as a picture to aid memorization

---

**Aural**

- participate in discussions
- make speeches and presentations
- use a tape recorder instead of taking notes—listen repeatedly
- read text out loud
- create musical jingles to aid memorization
- create mnemonics to aid memorization
- discuss your ideas verbally—explain your ideas to another
- dictate to someone while they write down your thoughts
- use verbal analogies, and story telling to demonstrate your point

---

**Read/Write Learners**

- make lists
- use headings/routines
- use computer/dictionaries to find definitions
- read textbooks, handouts, and manuals
- take detailed notes
- seek out teachers who use words well and have lots of information in sentences and notes
- write essays
- To help retain information:
  - Repeatedly Write out information/descriptive words/use different descriptions
  - Repeatedly read over notes (silently)
  - Transform graphs and diagrams into dialogue, i.e., most elderly...
Learning Styles in Occupational Therapy

The occupational therapist will want to develop a new sense of awareness about their clients and how they learn. Nonverbal cues can include facial expressions, expressions of the eyes, gestures, body placement and stance. Clues as to the learning style of the client can vary according to quality and quantity of action or movement. For example, “Feelers” use facial expressiveness with informal gestures and body stance. “Thinkers” may seem withdrawn with flat affects; they don’t seem to be paying attention. “Planners” hold themselves stiffly, arms folded; are formal and reserved. “Doers” may use large gestures and seem impatient; they shift their weight, tap their fingers and seem anxious to “get going”.

Verbal cues can include the quantity of words used during the interaction, vocal tone, verbal responsiveness, and types of words used, such as authority, action, affect, and conceptual words. For example, “Feelers” use personalized words carrying emotion, “Thinkers” conversations are scattered, “Planners” are articulate and to the point and “Doers” use action words.

The therapist’s job is to match their own responses to the learning style characteristics exhibited by their clients and provide the client the opportunity to practice using a learning approach that has the most meaning to the individual, using the following suggestions:

1. Engage the client in seeing themselves as “learners”
2. Discuss past learning experience and the effect on current learning challenges
3. Explore the idea of learning style preferences as part of how you can teach the client to problem solve.

4. Create effective communication through the use of their learning styles characteristics.

5. Focus on their perspective, follow their cues, be aware when instruction is not achieving the desired outcome; provide adjustment to therapeutic teaching and time for the client to engage in the process.

6. Use the *Quick Guide to Learning Styles* pamphlet to note the client’s facial expression, words, tone and body language. This will aid in directing intervention strategies in the client’s preferred means of learning or processing information immediately. Initial learning and retention is key to transferring knowledge to new tasks.

7. Results from the *Kolb LSI* and the *VARK* questionnaires will give the client and therapist specific information regarding their preferred styles of learning. Teach the client how to request information in their preferred style and then how to use the style opposite to them on the learning cycle to help them look at a different way to approach problem solving, then guide them to all the styles; experiencing, reflecting, planning and doing.

8. Use their preferred sensory mode for receiving information: Visual, Aural, Tactile or Kinesthetic

9. Weave the use of learning styles and the experiential learning cycle throughout the teaching and learning process.
10. Guide the client in learning about the process of adaptation, reflection and self
efficacy; that what has been learned about how to adapt is a skill that can be applied to
new experiences for a life rich with meaningful activity.
Learning Objectives for the OT Practitioner

The learner will be able to administer, score and interpret the Kolb Quick LSI in 30 minutes with 100% accuracy.

The learner will be able to implement older adult teaching strategies with 100% accuracy.

The learner will be able to state the purpose of the LSI to the senior client that reflects a clear, client centered approach.

The learner will be able to describe identified learning style preferences to the senior client appropriate to their client centered learning needs.

The learner will be able to apply older adult learning strategies to modify interventions with seniors that are client centered & occupation-based.

The learner will be able to express motivation to use the LSI in a variety of therapeutic settings.

The learner will be able to reflect on the value of using educational strategies in therapeutic settings as applied to client centered occupational needs by using resource materials independently.

It is recommended that the therapist implementing this intervention program become acquainted with basic learning style concepts, beginning by discovering their own preferred styles and modalities by self-administering and scoring the Kolb LSI and the VARK (Kolb, 1987; Fleming, 2010).
Funding and Referral Sources
Funding Sources

Implementation of this community project may require seeking funding sources through private, local, state or federal government resources interested in helping the older adult to age in place successfully in their community.

Agency Contact Information:

- Administration on Aging: http://www.aoa.gov/AoARoot/Grants/index.aspx
- Older American’s Act Service Providers in Wyoming: http://wdh.state.wy.us/aging/counties/index.html
- AllFoundationsbycity_001

- This program can be used for community program development in an established health care facility.
Referral Sources

Marketing:

- Provide education to all referral sources regarding the scope and intent of this project
- Project information can be made available through public service announcements in the local newspaper and on local television and radio stations. Posted, distributed and mailed flyers can be provided.
- Public meetings with interfaith church groups, senior centers, civic groups and state and city council meetings

Contact Sources:

- Data taken from State of Wyoming census can provide demographic information
- Senior Centers, Meals on Wheels Volunteers and others in daily contact with the potential client such as postal workers and newspaper delivery persons
- Referral sources include physicians, health care professionals, therapists and rehabilitation coordinators from hospitals and rehabilitation centers, skilled nursing facilities, and assisted living centers (target clients being discharged home), home health agencies, senior centers, social service organizations, churches, families and friends, and the older person seeking help.
Proposed Program Duration

The question of optimal program duration is perceived as important for community program planners, funders, researchers and clients seeking to optimize their time commitments to various activities. Fitts, Chang, Williams and Snyder (2008) studied the optimal duration of a community based health promotion for older participants. They determined that the first 6 months of their 12 month program was more effective, with the final 6 months showing smaller improvement in severity of disability risk factors and stated that a 6 month in-home intervention program for this aged population was optimal to benefit participants. Stuck, Egger, Hammer, Minder and Beck (2002) studied the effects of home visitation programs on prevention of functional decline in elderly community dwelling adults. The use of multidimensional geriatric assessments and follow-up were most important deterrents to institutionalization (Stuck et al., 2002, p. 1025). The authors found significant positive impact on participants in programs with 5 or more follow-up visits. For significant reduction in the risk of nursing home placement, the mean number of visits necessary was forty.
Assessments
Assessments

The Occupational Adaptation Frame of Reference does not recommend the use of specific evaluations but rather relies on the therapist to employ their clinical reasoning skills to determine which assessments most accurately meet the needs of the client. Schultz & Schkade (1992) propose that the Occupational Adaptation frame of reference can be applied to any clinical practice and any occupational dysfunction associated with any condition, which indicates this theory is fully applicable to assess and assist the elderly population at risk for social isolation living in their community. The assessments included in this handbook have been suggested as guidelines for the occupational therapist working within the concepts of the Occupational Adaptation frame of reference with elderly clients in an in-home and community based setting. The practitioner may be required to use assessment or client intake forms expected by their respective employers or funding agencies; collaboration with the client must continue to be a priority with careful wording and explanations necessary to ensure the evaluation process is client-centered and empowering. Tse and Howie (2004) state the identification of client-centered goals determined through specific occupational profiles and evaluations will help the older adult identify barriers to community access and develop goals to identify social activities with personal meaning to promote self efficacy.

Case studies documenting the use of the OA frame of reference have indicated use of standardized occupational therapy tests of the person’s sensorimotor, psychosocial and cognitive systems (Schultz & Schkade, 1992) and non-standardized assessments
which include checklists and daily progress notes (Bouteloup & Beltran, 2007). The results of these assessments help provide a more complete picture of the client's strengths and difficulties in readiness skills needed for occupational performance. The main assessment is the status of the person's occupational adaptation process. If this process is found to be dysadaptive, the therapist will need to determine what is impeding successful adaptation (Bouteloup & Beltran, 2007).

The Occupational Adaptation practice model does not disregard the necessity of functional skills (Schkade & Schultz, 1992) but rather utilizes occupational activities as active, meaningful and process-oriented with an end product that can be tangible or intangible that can elicit the process of adaptation. Occupational readiness activities regarding preparatory skill-based activities such as instruction in use of adaptive strategies, therapeutic techniques or use of adaptive equipment can be necessary prerequisites to engagement in activity. The following section contains established valid and reliable assessments proposed for consideration by the OT practitioner.
Canadian Occupational Performance Measure

The COPM is an individualized measure designed for use by occupational therapists to detect change in a client’s self-perception of occupational performance over time. It is designed to be used in client-centered occupational therapy practice.” (Law, 1998, iv). It is a national and international standard for measurement in research, practice and education in OT. The test evaluates three areas: Leisure, productivity and self care and considers two dimensions: satisfaction and performance. It is client defined and impacted by the individual’s social roles, environment and developmental level. It is a measure of interest.

Source:

Canadian Occupational Performance Measure, Third Edition
CAOT Publications ACE
Carleton Training and Technology Centre
Suite 3400
1125 Colonel By Drive
Ottawa, ON K1S 5R1
Tel: (613) 523-2268
Internet http://www.caot.ca

References:

Law, M., Baptiste, S., Carswell, A., McCall, M., Polatajko, H., & Pollock, N.
Activity Card Sort

A measure of Occupation designed for older adults. The instrument allows the therapist to assist clients to describe their social, leisure and instrumental activities. The format consists of 80 pictures of real-life older adults performing activities. The information obtain by use of this tool assists the OT practitioner to develop an occupational history and information to help the client build a personal life of activities that are “meaningful and healthful” (p.9). Form C is specifically addressed to community living older adults.

Administration time: 20 minutes

Resource:

Folstein Mini Mental Status Examination

The Mini-Mental examination can be used to assess a person's mental state. It is intended to be given quickly (usually less than 10 minutes) and easily which is useful in patients with only limited spans of attention or cooperation. It can be used over time to assess changes in status with recovery further deterioration or treatment interventions.

• The test only concentrates on cognitive aspects of mental functions.

• The test does not concern mood abnormal mental experiences or the form of thinking.

Interpretation:

• Minimum score: 0; Maximum score: 30; Mean score for normal individuals: 27.6, Mean score in dementia: 9.7; further evaluation is warranted in the elderly if score is < 24.

References:

HTTP://www.medal.org/docs_ch18/doc_ch18.3.html#A18.3.1


## Folstein Mini Mental Status Examination

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Item</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Orientation</strong></td>
<td>What is the year?</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>What is the season?</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>What is the date?</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>What is the day (of the week)?</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>What is the month?</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>What state are we in?</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>What county are we in?</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>What town or city are we in?</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>What building are we in?</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Which street or floor are we on?</td>
<td>1</td>
</tr>
<tr>
<td><strong>Registration</strong></td>
<td>Name 3 objects slowly and carefully then ask the patient for all 3 items giving 1 point for each correct item named. Then repeat the items until the patient knows all 3.</td>
<td>3</td>
</tr>
<tr>
<td><strong>Attention and Calculation</strong></td>
<td>Serial 7's from 7 to 35 giving 1 point for each correct. (Alternative: spell &quot;world&quot; backwards with 1 point for each correct letter.)</td>
<td>5</td>
</tr>
<tr>
<td><strong>Recall</strong></td>
<td>Ask for names of the 3 objects repeated above giving 1 point for each correct.</td>
<td>3</td>
</tr>
<tr>
<td><strong>Language</strong></td>
<td>Ask the patient to identify a pencil.</td>
<td>1</td>
</tr>
</tbody>
</table>
Ask the patient to identify a watch.  ---  1

Ask the patient to repeat the phrase "No ifs ands or buts."  ---  1

Ask the patient to follow the 3-stage command: "Take a paper in your right hand fold it in half and put it on the floor."  ---  3

Read and do: "Close your eyes."  ---  1

Ask the patient to "Write a sentence."  ---  1

Read and do: "Copy this simple design." (of two overlapping pentagons). To score the point all 10 angles must be present and the two items must partially overlap.  ---  1

Score =

Courtesy of Behavioral Solutions, Inc.
WHOQOL-BREF

The WHOQOL-100 was developed simultaneously in 15 field centers around the world. The important aspects of quality of life and ways of asking about quality of life were drafted on the basis of statements made by patients with a range of diseases, by well people and by health professionals in a variety of cultures. The instrument was rigorously tested to assess its validity and reliability in each of the field centers and is currently being tested to assess responsiveness to change. The WHOQOL-BREF, an abbreviated 26 item version of the WHOQOL-100, was developed using data from the field-trial version of the WHOQOL-100. The WHOQOL instruments can be used in particular cultural settings, but at the same time results are comparable across cultures. The WHOQOL is now available in over 20 different languages and its development in further languages is progressing.

Sample:

Instructions
This questionnaire asks how you feel about your quality of life, health, or other areas of your life. Please answer all the questions. If you are unsure about which response to give to a question, please choose the one that appears most appropriate. This can often be your first response. Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life in the last two weeks. For example, thinking about the last two weeks, a question might ask: Do you get the kind of help you think you should get from others?

(Please circle the number)

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A little</th>
<th>Moderately</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Resources

Address:
A. E. Bonomi & D. L. Patrick
User’s manual and interpretation guide for the United States Version
of the World Health Organization Quality of Life Instrument
WHOQOL Center
Seattle, WA

Internet:
WHOQOL-BREF: depts.washington.edu/yqol/docs/WHOQOL_Info.pdf
depts.washington.edu/yqol/docs/WHOQOL-BREF.pdf
Kolb Learning Style Inventory (LSI) Version 3.1

The Learning Style Inventory (LSI) describes the way you learn and how you deal with ideas and day-to-day situations. We all learn in different ways. This inventory can serve as a stimulus for you to interpret and reflect on the ways you prefer to learn in specific settings. Learning can be described as a cycle made up of four basic processes. The LSI takes you through those processes to give you better understanding of how you learn.

Alice Kolb Ph.D.
Adjunct Professor of Organizational Behavior
Case Western Reserve University
President
Experience Based Learning Systems, Inc.
Internet: http://learningfromexperience.com/

<table>
<thead>
<tr>
<th>The Kolb Learning Style Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 = most like you</td>
</tr>
<tr>
<td>1 = least like you</td>
</tr>
</tbody>
</table>

Example:

<table>
<thead>
<tr>
<th>When I Learn</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am happy</td>
</tr>
</tbody>
</table>

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Kolb LSI Version 3.1 forms may be purchased online from the Hay Group and an online version of this evaluation is also available.

The VARK Questionnaire (Version 7.1)

How Do I Learn Best?
Choose the answer which best explains your preference and circle the letter(s) next to it.
Please circle more than one if a single answer does not match your perception.
Leave blank any question that does not apply.

1. You are helping someone who wants to go to your airport, town centre or railway station. You would:
   a. go with her.
   b. tell her the directions.
   c. write down the directions.
   d. draw, or give her a map.

2. You are not sure whether a word should be spelled ‘dependent’ or ‘dependant’. You would:
   a. see the words in your mind and choose by the way they look.
   b. think about how each word sounds and choose one.
   c. find it in a dictionary.
   d. write both words on paper and choose one.

3. You are planning a holiday for a group. You want some feedback from them about the plan. You would:
   a. describe some of the highlights.
   b. use a map or website to show them the places.
   c. give them a copy of the printed itinerary.
   d. phone, text or email them.

4. You are going to cook something as a special treat for your family. You would:
   a. cook something you know without the need for instructions.
   b. ask friends for suggestions.
   c. look through the cookbook for ideas from the pictures.
   d. use a cookbook where you know there is a good recipe.

5. A group of tourists want to learn about the parks or wildlife reserves in your area. You would:
   a. talk about, or arrange a talk for them about parks or wildlife reserves.
   b. show them internet pictures, photographs or picture books.
   c. take them to a park or wildlife reserve and walk with them.
d. give them a book or pamphlets about the parks or wildlife reserves.

6. You are about to purchase a digital camera or mobile phone. Other than price, what would most influence your decision?
   a. Trying or testing it.
   b. Reading the details about its features.
   c. It is a modern design and looks good.
   d. The salesperson telling me about its features.

7. Remember a time when you learned how to do something new. Try to avoid choosing a physical skill, eg. riding a bike. You learned best by:
   a. watching a demonstration.
   b. listening to somebody explaining it and asking questions.
   c. diagrams and charts - visual clues.
   d. written instructions - e.g. a manual or textbook.

8. You have a problem with your heart. You would prefer that the doctor:
   a. gave you a something to read to explain what was wrong.
   b. used a plastic model to show what was wrong.
   c. described what was wrong.
   d. showed you a diagram of what was wrong.

9. You want to learn a new program, skill or game on a computer. You would:
   a. read the written instructions that came with the program.
   b. talk with people who know about the program.
   c. use the controls or keyboard.
   d. follow the diagrams in the book that came with it.

10. I like websites that have:
    a. things I can click on, shift or try.
    b. interesting design and visual features.
    c. interesting written descriptions, lists and explanations.
    d. audio channels where I can hear music, radio programs or interviews.

11. Other than price, what would most influence your decision to buy a new non-fiction book?
    a. The way it looks is appealing.
    b. Quickly reading parts of it.
    c. A friend talks about it and recommends it.
    d. It has real-life stories, experiences and examples.

12. You are using a book, CD or website to learn how to take photos with your new digital camera. You would like to have:
    a. a chance to ask questions and talk about the camera and its features.
    b. clear written instructions with lists and bullet points about what to do.
c. diagrams showing the camera and what each part does.
d. many examples of good and poor photos and how to improve them.

13. Do you prefer a teacher or a presenter who uses:
a. demonstrations, models or practical sessions.
b. question and answer, talk, group discussion, or guest speakers.
c. handouts, books, or readings.
d. diagrams, charts or graphs.

14. You have finished a competition or test and would like some feedback. You would like to have feedback:
a. using examples from what you have done.
b. using a written description of your results.
c. from somebody who talks it through with you.
d. using graphs showing what you had achieved.

15. You are going to choose food at a restaurant or cafe. You would:
a. choose something that you have had there before.
b. listen to the waiter or ask friends to recommend choices.
c. choose from the descriptions in the menu.
d. look at what others are eating or look at pictures of each dish.

16. You have to make an important speech at a conference or special occasion. You would:
a. make diagrams or get graphs to help explain things.
b. write a few key words and practice saying your speech over and over.
c. write out your speech and learn from reading it over several times.
d. gather many examples and stories to make the talk real and practical.
The VARK Questionnaire Scoring Chart

Use the following scoring chart to find the VARK category that each of your answers corresponds to. Circle the letters that correspond to your answers. e.g. If you answered b and c for question 3, circle V and R in the question 3 row.

Question a category b category c category d category

3 KVRA

Count the number of each of the VARK letters you have circled to get your score for each VARK category.

Total number of Vs circled =
Total number of As circled =
Total number of Rs circled =
Total number of Ks circled =

Calculate Your Score
Brief Descriptions of Modality Preferences:

**Visual Learners:**
- use visual materials such as pictures, charts, maps, graphs, etc.
- have a clear view of your therapist or group leaders when they are speaking so you can see their body language and facial expression
- use color to highlight important points
- take notes or request and read handouts
- illustrate your ideas as a picture or brainstorming bubble before writing them down
- write a story and illustrate it
- use multi-media (e.g. computers, videos, and filmstrips)
- study in a quiet place away from verbal disturbances
- read illustrated books
- visualize information as a picture to aid memorization

**Auditory Learners:**
- participate in discussions
- make speeches and presentations
- use a tape recorder instead of taking notes
- read text out aloud
- create musical jingles to aid memorization
- create mnemonics to aid memorization
- discuss your ideas verbally
- dictate to someone while they write down your thoughts
- use verbal analogies, and story telling to demonstrate your point

**Tactile/Kinesthetic Learners**
- take frequent study breaks
- move around to learn new things (e.g. read while on an exercise bike, or mold a piece of clay to learn a new concept)
- work in a standing position
- chew gum while studying
- use bright colors to highlight reading material
- dress up your work space with posters
- if you wish, listen to music while you review information
- skim through reading material to get a rough idea what it is about before settling down to read it in detail.
Short Functional Disability Screen

Purpose: Screening instrument to consistently identify disabled and high-risk individuals in population-based rapid health screens and individual risk assessments. IADL and ADL items were consistently related to overall disability for community-dwelling older persons, men and women, and oldest-old individuals. Five item IADL/ADL items determined to be most appropriate to use in a general population-screening instrument valid across gender and age subgroups for persons aged 65 and older for IADL and ADL disability. Items Included: Shopping, walking, transferring, light housekeeping and bathing.

Sample
Response Options: (1) Yes_______ (2) No ______ (3) Doesn’t Do_______

- If your client answers “Doesn’t do”, ask if for health-related reasons

“Because of a health or physical problem to you have any difficulty…..?”

1. Shopping?

2. Doing light housework?

3. Bathing or Showering?

4. Getting in or out of bed or chairs?

5. Walking across a room?

Resource:

Readiness Skills Testing: The clinical judgement of the practitioner will determine the tests selected: For example, ADL testing using measures such as the FIM and established occupational therapy testing tools may be employed to test sensory systems, muscle coordination and strength.
Intervention Program
Occupational Adaptation Program Model

- The Occupational Adaptation model does not rely on specific styles or methods of intervention
- Interventions are driven by client priorities identified in collaboration with the client
- The Occupational Therapist must aspire to create an environment that will help their client to develop the skills to adapt, thus enhancing their acquisition of relative mastery over meaningful occupations, regardless of their challenges.

1. Therapist and client collaborate to complete the selected evaluation, defining primary role selection or task meaningful to client related to current problems or barriers to action.

2. Patient involvement in goal planning was achieved by asking each client to identify 3 activities that he or she would like to perform and basing goals on these activities.

3. Request that client identify what was most important to him or her when performing the task. Choices include:
   - How well task was performed (Effectiveness)
   - How much time and energy were required (Efficiency); consider time, energy and resources used
   - How satisfied the client and others were as result of ability to perform the task (Satisfaction of self and society)

4. After choice was selected, ask client to perform the task

5. After task performance, request that client rate his or her performance regarding perception of performance in each category (Relative mastery) through self evaluation (any scale 1-10 may be used)

6. Was response masterful or adaptive? How did the performance meet the challenge and how can responses be integrated to other occupational challenges?

7. Client is encouraged to be an active participant in problem solving and planning needed to perform each selected activity

8. Memory of successful responses and knowledge of adaptive capacity will help the client move around the learning cycle to help them predict outcomes and generalize the adaptive responses to new occupational challenges.

Structuring an Experiential Learning Program (Kolb, 2001)

1. Needs analysis

2. Treatment modules can be interwoven or stand alone. Are sequential and build on and anchor the experiential learning generated.

3. Holistic; challenge mental, physical, intellectual and emotional. The client and therapist work together to plan, anticipate, problem solve, make decisions and identify role needs. The therapist provides feedback, listens, explores feeling, trust, effective questioning, communication, risk taking, reflection and review.

4. Design subsequent experiential learning experiences after learning from previous activities occurs. Each treatment session begins with an evaluation of action plans before moving forward in the experiential learning cycle.

5. Length of program will be dictated by the client-centered objectives and whether they are met, not met or need to be revised or replaced with new goals. The goal is to have the client apply their learning to social engagement in meaningful activities.
Occupational Adaptation Outcome Measures

- Client demonstrated outcomes indicating change in OA process
  - Self-initiated adaptation
  - Enhanced relative mastery
  - Generalization to new activities

✓ Determine program changes needed to allow optimal opportunity for occupational adaptation to take place
Intervention Outcome Measurements

According to the *Occupational Therapy Practice Framework* (AOTA, 2002), client follow-up is critical for all intervention programs and is part of the occupational therapy practice process. New behaviours that are not constantly reinforced may revert to previous unproductive habits.

To determine the impact of the Use Your Experience community intervention program, comparative post-testing should be done to assess program effectiveness using the WHOQoL-BREF and the post-intervention questionnaire developed for this product (see Appendices, p. )

1. Increased self rated Quality of Life per post test using WHOQOL-BREF
2. Check list to determine number of times engaged in community occupations per self report
Case Study: Mrs. O.

Before implementation of the program, the occupational therapy staff member self administered and scored both the Kolb LSI and the VARK to heighten awareness of their preferred personal learning style aid in their experiential learning and to guard against the tendency to instruct in that style rather than in that of their client.

Mrs. O. is a 76 year old woman, recently widowed, who was referred to the Use Your Experience program by her pastor. He expressed concern regarding her rapid decline in attendance at church services and related activities. He reported that her daughter had recently accepted an out of town job offer. Mrs. O. had told him that the loss of the daily interactions with her grandchildren was a difficult adjustment that had a negative impact on her quality of life. The pastor had been made aware of the Use Your Experience community outreach program through public service information on television and radio; when he asked Mrs. O if she would be willing to participate, she said she would give it a try.

Mrs. O. was contacted by telephone and the program content and reliability were established. The Initial Contact Form was used as a guide to obtain screening and demographic information (Appendix B). When asked “How many times have you left your home in the last 3 weeks?” she answered “Once”, indicating she was at risk of social isolation. An appointment date and time were scheduled.

The focus of the initial interview was to establish a rapport with Mrs. O. while helping her to discover her community interests and barriers to their accomplishment. Education was given regarding the health benefits and personal strength derived from meaningful social participation and altruism and the health dangers social isolation presents. The idea of looking at herself as a reflective learner was proposed. Throughout the initial session, the therapist was alert for speech and body language cues indicative of a preferred learning style. The COPM evaluation tool was used to help the client identify occupational goals and barriers to reaching those goals. Learning styles were discussed with an emphasis on old learning experiences and the idea of becoming a learner using...
new tools and strategies that applied to her current life problems. She stated she didn’t care about the theory, but “did it work?”. She expressed an interest in improving her memory and remarked how embarrassed she was that her ‘memory was going’. The therapist used the discussion as a lead-in to describe the Folstein Mini Mental Status Test to Mrs. O. as a means of increasing insight to any possible barriers to achieving her goals, and she agreed, scoring 23, which was adequate to proceed with the intervention program. She described past interests, such as participation in a local charity and stated she had belonged to a competitive bridge club. She continually tapped her fingers on the table and interrupted the conversation to inquire what was next. Mrs. O. indicated she was willing to try to get out of the house more, but with her daughter no longer available to help her with transportation, she felt fearful about using public transportation and did not think she could use it for several reasons: problems with moving about easily, getting short of breath and tiring quickly, climbing stairs to get on the bus, fear of new experiences, and limited knowledge regarding transportation options and procedures. She was given instruction in self administration of the WHOQoL-Brief to complete on her own before the next session. A schedule of 3 sessions per week for the next 6 weeks was established.

The therapist used the Quick Reference Pamphlet to guide her initial impression of the client’s preferred learning style and found suggestions to modify her own teaching preferences to meet those of Mrs. O.. Based on clinical observations and results of the Canadian Occupational Performance Measure, the therapist helped Mrs. O. explore the occupations she would like to engage in by using the Activity Card Sort and the Activities List (Appendix C) to generate interest and motivation. The Kolb LSI and VARK were used to identify Mrs. O’s preferred learning style and modality preference and it was discovered that she is a “Doer” (Accommodator style) indicating she may experience difficulties in thinking before acting, which may predispose her to failure and frustration. Mrs O. was taught to move around the learning cycle starting with doing, but including thinking and reflecting to experience success. In fitting with the OA frame of reference, Mrs. O. had identified reading to elementary school children as having meaning to her; her desire to meet this goal would generate an adaptive response leading to success and continued experimentation with new learning. As Mrs. O. preferred to receive information through the aural mode, the therapist first modified educational handouts about transportation use compensate for vision and learning needs (Appendix D) and the information was reviewed verbally. Mrs. O. was encouraged to read the procedures aloud to herself and to share the information with her daughter on the phone. As all steps of the learning cycle should be completed to ensure thorough
learning, Mrs. H. was taught to begin reflecting on what worked and what did not using the journal reflection guide handout (Appendix E). A portable tape recorder to read from her reflections helped her to enjoy and remember the adaptations she had made. She was guided to journal her learning progress in first her readiness skills training and later in her experiences in actually using public transportation. Meaningful activities identified by Mrs. O were used to address her goals to increase her motor strength, balance and endurance. Role playing was used to practice using a telephone equipped with amplification and large keys to schedule and access the bus. The school was contacted to clarify their volunteer program expectations and Mrs. O’s excitement and motivation increased as she made progress toward her goals. The therapist accompanied and provided feedback as she got on the bus, and travelled to the school and back. This was done initially to provide support and assist in problem solving strategies in a safe ‘risk taking’ environment. Mrs. O. was encouraged to reflect about what she felt was effective in her work with her young ‘students’. She became a part of the volunteer group and the teaching staff as well. Integration of her new learning was evident when she began apply adaptive strategies and use what she had learned about learning styles to help her young readers. Mrs. O. was soon using the bus to go to and from the school twice a week; she exceeded her initial goals, which she deemed a huge success. The experiential learning process was considered to be complete when she announced she was now using the bus to attend a tai chi class at the local senior center.

Mrs. O’s excitement and motivation increased as she made progress toward her goals.....

Mrs. O. was contacted once weekly for 6 weeks after the Use Your Experience program to provide support and answer questions. Mrs. O. was then given the opportunity to reassess her sense of well being and purpose using the WHOQoL-BREF and the post intervention questionnaire (Appendix F), and she recorded a marked increase in her perceived quality of life and community activity level. This outcome measure will be used to qualify the effectiveness of the occupational therapy interventions to encourage continued program support and funding.
CHAPTER IV

SUMMARY

The purpose of this scholarly project is to address the health implications of social isolation and the elderly. The science of occupational therapy values the importance of social participation and meaningful occupation as key components of healthy functioning (AOTA, 2008). The occupational therapy profession has as its focus the improvement of their client’s physical and mental functioning to enable maximum independence in their occupations. Occupational therapy is a key discipline working with older adults living in their community and can be a healing force in helping this population to remain in place successfully in their respective homes. Occupational therapist practitioners will want to have adequate knowledge to establish an effective community health program based on the Occupational Adaptation frame of reference. They will develop confidence in their ability to identify their client’s learning style and how to adapt therapeutic education and training to meet their client’s individual instructional needs.

A comprehensive literature review was conducted to obtain information regarding the older adult population and the effects of social isolation on their health and well-being. Research revealed that cognitive challenges facing the elderly can
affect their ability to apply new learning to occupational needs. Evidence indicates that the use of cognitive strategies will ease and solidify experiential learning as applied to client-based goals. Barriers to successful community engagement need to be assessed and interventions provided to help the older adult identify and pursue meaningful occupations outside of their homes.

Based on these findings, the *Use Your Experience* manual has been developed to provide a framework for a community health program designed to provide home-based occupational therapy services that will assist the socially isolated elder in successful community engagement. It includes suggestions for assessments that are appropriate for use with the elderly population and addresses motivation, adult learning challenges and learning strategies that can be applied to effective community interventions. A case study was created to clarify procedural concepts and context. The information will serve as a platform to allow the occupational therapist to develop critical observation, thinking and reflection skills in providing client-based, experiential learning principals to their therapeutic instruction. The goal of this manual is to (1) increase awareness of the needs of the elderly at risk of social isolation for community-based intervention services; (2) enhance the knowledge and confidence of occupational therapists working with the elderly in community; 3) provide information that is user-friendly and easily accessible and (4) strengthen the occupational therapy profession by using evidence-based literature to guide practice.

Limitations and Recommendations
The *Use Your Experience* manual is limited to addressing the needs of the elderly living in their communities. Interventions presented in the preferred learning styles of individual clients have the potential to improve the learning and retention of information presented in many rehabilitative learning settings to clients from a variety of age groups and with a wide variety of diagnoses. The *Quick Reference Guide to Learning Styles* provided would be useful in most of these cases. In order for occupational therapists to use this manual with other age groups, further study of the literature and use of evidence based research to modify the content to meet the needs of that group would be required.

The literature review conducted for this project found mention of a limited number of critics: Coffield (2001) conducted a rigorous evaluation of thirteen models of learning styles which includes critiques from Desmedt (2000) who finds fault with the large number of learning style theories and assessments available and questions the qualitative reliability of the measurements used and thus their effective application for learning. Coffield (2001) concludes that the bulk of research continues to support the use of learning styles as valuable in not only demonstrating how people learn, but by showing them how to enhance their learning. There are many proponents of learning styles and a variety of questionnaires and theories that accompany them, but Kolb et al. (1999) continues to evaluate and describe his theories and measurement tools as a means of self-discovery that were never created to be diagnostic tools.

A final limitation of the manual is that it is twofold in its efforts: (1) Effective
application of the intervention program relies on the efforts of the occupational therapists to explore their own learning style biases and gain a working knowledge of the information contained in the manual and (2) Provision of a guideline for a community intervention program for the elderly at risk for social isolation. It is important to note that although the material generated is research evidence-based, the intervention program has not been tested in the community setting.

It is recommended that further clinical research be conducted to establish the validity of this intervention proposal to better serve the OT practitioner, their clients and their funding organizations. Evidence based treatment intervention programs are vital to continue to establish the validity of the role of occupational therapy professional in community health settings.

The format for presenting learning strategies, learning style and experiential learning theories to the occupational therapy practitioner has been created in a power point presentation format that lends itself readily to an in-service education program and the quick reference pamphlet is a valuable supplemental resource for practitioners. It is recommended that they be made available to expand the occupational therapist’s knowledge of effective means of teaching clients information regarding health care, prevention and application of therapeutic instruction. The information included could potentially be used as a learning tool in the occupational therapy student curriculum.

The Use Your Experience manual and The Quick Reference Guide to Learning Styles modified from Kolb’s Learning Style Theory (1984) provide occupational
therapists with suggested assessments, sample interventions and Occupational
Adaptation guidelines to assist them in their work with the elderly “living in place” in
their communities. The Learn by Experience program provides the practicing
occupational therapist with an adaptive experiential learning approach to
assist the elderly person at risk of social isolation to access the community
and participate in meaningful activities that will benefit not only the elder’s health
and well-being but that of their families and communities.
APPENDICES
Appendix A
Quick Reference Guide to Learning Styles
Resources

Dreeben, O. (2010). Patient education in rehabilitation, Sudbury, MS: Jones and Bartlett Publishers


Experiential Learning Cycle Diagram
1 Reprinted with permission.

A Quick Reference Guide to
LEARNING STYLES

Kolb’s learning styles

Concrete Experience - Feeling

Accommodating (feel and do)
CE/AE

Diverging (feel and watch)
CE/RO

Reflective Observation - Thinking

Converging (think and do)
AC/IE

Assimilating (think and watch)
AC/RO

Active Experimentation - Doing

Processing - how we whole about things

Perception Continuum - how we think things

1Reprinted with Permission
**The Feeler/Creator**

**Diverging Style:** Combines Concrete Experience (CE) with Reflective Observation (RO)

**Strengths**
Concrete experience is processed through powers of observation: prefers to watch to gather information
Active imagination creates alternative ideas
Enjoys brainstorming to solve problems
Uses many viewpoints to process concrete situations
Interested in people and emotional

**Challenges**
Over-reliance on these skills can cause this type to become overwhelmed by alternatives and indecisiveness

**What is your client like?**
Personalizing, emotional, empathetic, spontaneous, subjective, and impulsive: Artistic

**Non-verbal Cues**
Facial expressiveness with informal gestures and body stances

**Verbal Cues**
Emphasis on affect words and personalizing

**Behavioral Cues**
Personable; interested in and enjoy the opportunity to interact with others
Sensitive

**Intervention strategies**
Allow ample time for reflection
Provide expert interpretation and judge performance by external criteria
Thrive in group rehab settings
Empathize, personalize and encourage; they will regularly seek further interaction
Move through information in interactive manner
Get information from their descriptions
Show enthusiasm for their follow-through and discoveries
Provide strategies to help client to attend to priorities and avoid allowing issues of less importance to clutter learning field
"The Planner"

**Assimilating Style:**
Reflective Observation (RO) & Abstract Conceptualization (AC)

**Strengths**
Able to take in new information abstractly
Good at inductive reasoning using models and theories
Systematic planners and goal setters
Take a wide range of information and make it concise and logical

**Challenges**
Logical soundness of theory can be more important than its practical use

**What is your client like?**
Imaginative, idealistic, scattered and probing, often scientists or theorists
Have a tendency to create ‘castles in the air’; goals can be impossible to achieve in reality

**Non-verbal Cues:**
Distracted manner; seem to not be paying attention

**Verbal Cues**
Verbose with scattered conversation
Unable to focus on specifics; frame content into broad categories
Connections between statements are not clear at times

**Behavioral Cues**
Learns by imagining
Creates categories of possible outcomes and options
Engages in problem solving and future long-range planning

**Intervention Strategies**
Need reflection time to engage in brainstorming
Prefers to work alone: Listen for longer periods until connections and central issues become clear or some place from which to start can be identified.
Use imagery and problem solving scenarios
Encourage use of day planners, calendars and schedules
Make interventions orderly and logical
Make sure of accurate fit between intervention and theory
Help create long term goals and time frames that break down big picture into achievable, short term goals
"The Decision Maker"

Converging style: (AC) Abstract Conceptualization and (AE) Active Experimentation

Excel in practical application of ideas
Take in new information in the abstract and process it into a concrete solution
Use hypothetical deductive reasoning to arrive at a single best solution to a question or problem.
Able to solve problems and make decisions

Challenges
Can be too hasty; this can lead to a premature definition of the problem
At times focus prematurely and can produce unproductive conflict and competition

What is your client like?
Deliberate, objective, rational, logical, analytical, unemotional and serious: Often engineers

Non-verbal cues
Stiff and Formal

Verbal Cues
Articulate, definite, to the point. Present their need in a logical, relatively unemotional manner

Behavioral Cues
Accept responsibility for outcome of their work
Expect therapist to be authoritative and knowledgeable
Like ranked alternatives from which they can choose
Avoid personal or informal interactions
Place emphasis on details of any action to be taken or resource to be used

Intervention Strategies
Prefer hands-on, trial and error
Use specific examples where they are directly involved
Don’t pressure them: Pressure is misconceived as questioning their style, authority and responsibility
Use peer feedback
Provide rationale behind strategy being offered
Provide plentiful details
Offer alternative approaches in a logical manner from which they can choose
Acknowledge suggestions, cite sources, clarify and verify
Maintain a professional relationship
Accommodator Style:
Active Experimentation (AE) and Concrete Experience (CE)

**Strengths**
Able to take in new information concretely and transform it actively.
Enjoy hands-on tasks; doing things, carrying out plans and tasks and getting involved in new experiences.
Excel in adapting to changing circumstances on the spot
At ease with others and rely heavily on them for information

**Challenges**
Can be seen as 'pushy' and impatient

**What is your client like?**
Practical, action-oriented, competitive, efficient and directive; often nurses, therapists or teachers

**Nonverbal Cues**
Impatient movements indicate a desire to move to a conclusion quickly, such as tapping a pencil, drumming fingers or shuffling papers

**Verbal Cues**
Emphasis on action words with practical or simplistic descriptions

**Behavioral Cues**
Opinionated without evidence
Busy in a meddlesome way
Concerned with everyday application, not theory, speculation or explanations
Practical action is paramount to learning: learn by doing using intuitive trial and error manner

**Intervention Strategies**
Avoid long, drawn out dialogue without concrete tasks or results
Take action as soon as possible, offer instruction in the process of doing; model hands on techniques
Most effective techniques are role playing, skill practicing, problem solving, small groups discussions and peer feedback
Try not to make them wait; provide strategies to reduce impatience
Help them learn to get commitment from rest of team before taking action
Avoid unnecessary conflict and competition
Watch safety issues due to potential risk taking while exploring possibilities
Appendix B
Initial Contact Form
Initial Contact Intake Form

*Introduce self as professional, explain project/verify reliability

Date:____________________

Client Name________________________.

Telephone__________________________.

Referral Source______________________.

Appointment Date____________________. Time___________

Address______________________________

Screening Questions:

1. ‘Do you get out of the house as much as you would like?’

2. ‘How many journeys outdoors have you taken in the last month’

3. ‘In general, would you say your health is’ (Ware, 1995).

1 = excellent  2 = very good  3 = good  4 = fair  5 = poor

This single item has been shown to be valid (Manderbacka, Lundberg, & Martikainen, 1999), reliable (Martikainen et al., 1999), and sensitive to change (Idler & Kasl, 1995) in older adults.
Measuring Social Isolation

The study by Hall, Havens and Sylvestre (2003) cited authors they studied who found significant associations between loneliness and life space in addition to the overall number of leisure activities the individual has participated in within a week. Hall et al. (2003) found that those who participated in five or fewer leisure activities a week were more likely to be lonely (62% versus 7%) are seldom active in the community and indicated a Low Life Satisfaction score. Hall et al. (2003, p. 101) cite the results of the Life Space score:

While only 12% of the men were found to be extremely isolated as measured by the Life Space score, another 69% were in the next lowest category. For the women, while 19% were extremely isolated, another 70% were in the next lowest category. Consistent with the theory of disengagement on which the Life Space score is based, we found, then, that most of our sample of older Manitobans had few contacts overall with other people.

Biordi et al. state that a review of the literature found that some researchers have used instruments that define social isolation as extreme lack of social support and others use groups of questions that purport to measure isolation. Biordi et al. (p. 100) found that the two most commonly used and reported measures were the Lubben Social Network Scale (LSNS) (Lubben, 1988) and the Berkman-Syme Social Network Index (SNI) (Nerkman & Syme, 1979). Both tools essentially measure the number and importance of contacts one has with others. The LSNS and SNI are recommended to be used in conjunction with semi-structured interviews to confirm a diagnostic label of social isolation.
Appendix C
Activities List
Activities Interest List

Volunteer Opportunities

Adopt a Grandparent program
Read to Children program; elementary schools
Assistant coaching; elementary schools
Church activities
Telephone services/Shut Ins
Arrange a Ride services for church or senior center
Preschool; art or music
Board Member
High School activities; plays, sports, music
College students; English as a Second Language,
Food Banks
Hospice/Angels Program
Homeless Shelters
Teen Homes
ARC
Special Olympics
Library
Sewing groups for nursing home residents

Activity Ideas

Talking to
other people
Writing or editing
Public speaking
  Listening to audio tapes
Watching television
Courses or study groups
Travel
Continued professional learning
Volunteer or social work
New sport or skill
Work on boards, committees
New art, hobby, or craft
Use technology
Start a new business or new job
Licensure in new area or profession
Clubs or organizations
Learn with grandchildren
Teaching or mentoring
Games and puzzles
Landscape
Home and community safety
Reminiscence group
Appendix D
Transportation Handout Model
Call a Ride in Casper

CATC: 265-1313
*Call the day before to set up your pick up time.

- The cost is only $4.00 round trip
- Ask about waivers and weekly rates

Taxi: 235-5203
$7.00 pickup/$1.95 a mile
Senior discounts available

Church Phone: ______________
Your Address: ________________________
Your Phone Number: __________________

Friend Phone: ______________
How to Get a Ride
• Keep your phone number list by the phone

• Write your address and phone number down and keep it where you can see it

• Make a list of your appointments for the week

• Before you call, check the time of your appointment

• Plan in advance. *Call the day before

• Ask them to come to the door to walk you to the vehicle

• Tell them you if you have a walker or wheelchair: They are happy to help you.

The night before:
• Decide what you will need to take and put it by the door
• Get clothes, shoes and coat ready

• Make sure you have money or your bus ticket ready.

**In the morning:**

• Get up 30 minutes early to give yourself plenty of time to get ready.

• The driver will be happy to come to your door and help you to get on and off the bus.

• When you return to your home, the driver will help you to your door.

• The driver will be there to help you with your bags, walker or wheelchair

• *Remember... call the day before your appointment and enjoy the ride!*
Appendix E
Journal Reflection Guide
JOURNAL REFLECTION SHEET

WHAT WAS YOUR EXPERIENCE?

DID YOU WATCH OR DO THE TASK

WHAT WENT WELL?

WHAT DID NOT GO WELL?

WHAT DID/DO YOU THINK ABOUT IT?

HOW DO YOU KNOW IT WAS GOOD OR NOT?

WHAT DID YOU LEARN FROM THE EXPERIENCE?

WHAT WOULD YOU DO DIFFERENTLY OR IN A SIMILAR MANNER?

WHAT EXTRA LEARNING CAN YOU DO?

SUGGESTIONS: READ HANDOUTS OUT LOUD, WRITE DOWN CUE CARDS, WATCH VIDEO, LISTEN TO RECORDINGS, TELL SOMEONE ABOUT IT

TRY OUT WHAT YOU HAVE LEARNED: WHAT WOULD YOU LIKE TO DO?
Appendix F
Post Intervention Questionnaire
The Use Your Experience Program Outcome Form

Name: __________________________
Date of Birth: ______________________
Date: ____________________________

Please let us know how the Use Your Experience program has impacted your life!
Your answers will remain confidential.

Since the End of the Use Your Experience program:

1. Have you used public transportation? ___yes ___no
   If so, how many times per week? ______

2. Have you used your personal learning style to get information or to help you remember or adapt your activities? ___yes ___no
   If so, how many times per week? ______

3. Have you participated in your chosen community activity? ___yes ___no
   If so, how many times per week? ______

4. Have you needed Home Health Services? ___yes ___no

5. Have you been admitted to the Hospital? ___yes ___no

6. Have you needed to be admitted to a Nursing Home? ___yes ___no

Data could be graphed to determine program effectiveness and make decisions regarding the future of the program. Results can be shared with stakeholders and program funding providers and can be used to fulfill grant requirements.
References
References


Clark, F., Carlson, M., Zemke, R., Frank, G., Patterson, K., Fnevor, B. L.,


Tse, T., & Howie, L. (2005). Adult day groups: addressing older people’s needs for


