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Healthy Seniors: A Program Evaluation

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Healthy Seniors: A Program Evaluation

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A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree

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School of Health and Natural Sciences

Dominican University of California

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This thesis, written under the direction of the candidate's thesis advisor and approved by the Chair of the Master's program, has been presented to and accepted by the Faculty of the Occupational Therapy department in partial fulfillment of the requirements for the degree of Occupational Therapy. The content and research methodologies presented in this work represent the work of the candidate alone.

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Abstract

OBJECTIVE: The purpose of this research study was to perform a summative evaluation of the Healthy Seniors program at Dominican University of California, a wellness program for older adults facilitated by occupational therapy students and faculty.

METHOD: A non-experimental mixed-methods descriptive research design composed of quantitative and qualitative methods was used to analyze data from the 2011 Healthy Seniors sessions.

RESULTS: The majority of participants in the Dominican University of California Healthy Seniors program were women between the ages of 75 and 85. Overall, participants in the Healthy Seniors program improved in functional status and were satisfied with their experience.

CONCLUSION: Results support the usefulness of community-based wellness programs in sustaining healthy aging, and suggest that the Healthy Seniors program is a much needed and valued service for older adults within the community.

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Introduction

By 2030, 30% of America's population will be over the age of 60 (Administration on Aging, 2010), and in 40 years the number of people in America over 60 is expected to exceed two billion (Center for Disease Control, 2009). Marin County has one of the most rapidly aging populations in the state of California, with a 38% increase in residents over the age of 60 since 1990 (Bagtas, 2011). All of these older adults will experience physiological changes in health and wellness as they age, including decreased balance, slowed protective reflexes, a loss of bone density, changes in vision and hearing, and less efficient cardiopulmonary functioning (Center for Disease Control, 2011). A number of older adults in this population will have chronic health conditions such as arthritis, diabetes, hypertension, and high cholesterol levels, sensory impairment, congestive heart failure, and dementia, as well as a need to manage those conditions. More than 37 million Americans over the age of 60 (60 percent) will manage more than one chronic condition by 2030 (Healthy People 2020, 2011).

Preventive community services are valuable for maintaining wellness in older adults. These adults over 60 with chronic health conditions who may not qualify for home health or other services need support to maintain community living (Bagtas, 2011). The ability to complete basic activities of daily living may decrease if illness, chronic disease or injuries limit physical or mental abilities of older adults. Community-based programs reduce falls, decrease institutionalization, and increase social engagement in older adults (Knickman & Snell, 2002). National government mandates such as Healthy People 2020, the National Prevention Strategy Report (2011), and the Affordable Care Act (Healthcare.gov, 2010) all require more community-based health programs focusing on wellness, promotion, and prevention (Healthy People 2020, 2011).

The Occupational Therapy Department at Dominican University of California facilitates a “Healthy Seniors” community-based program for older adults as part of its academic program. Currently, it has two sites: one on the Dominican University campus and one at an off-site senior living facility. The program runs for eight weeks annually during the Fall and Spring semesters. Healthy Seniors is a free service designed to serve older adults who may have chronic health conditions but may not meet health or income criteria to qualify for government-subsidized, hospital-based or in-home support. The sessions are held once weekly for two hours per session, and are conducted by second year occupational therapy students under faculty supervision. Participants complete an intake form; and an initial assessment is made about their current functioning. Student therapists use this information to determine which additional standardized assessments are needed to create an individualized intervention plan for their client. Although the Healthy Seniors program has been implemented for the last several years, there has not been a comprehensive program evaluation completed.

Therefore, the purpose of our study was to conduct a program evaluation of the Healthy Seniors program at Dominican University of California. The researchers analyzed data from 2011 regarding participant demographics, assessments and interventions used, changes in participants’ functional status, relationships between program variables and functional status, and participant satisfaction with the program. Results of this program evaluation may help define participant characteristics, services and benefits participants are currently experiencing in Healthy Seniors, and participant variables that impact functional status. Results may also suggest improvements to the Healthy Seniors program at Dominican University of California. Findings of this study may also help to secure grants for continuation of this much-needed program in the community.

Literature Review

By 2030, people over 60 will comprise more than 30% of the population in America, with one in every four homes having residents age 65 and older (Administration on Aging, 2010). Americans age 60 years and older will exceed two billion by 2050 (Center for Disease Control, 2009). The first of the “baby boomer” generation who turned 65 in 2011, and the increase in life expectancy to 78.5 years are large contributors to the rapidly aging population. This growing number of older adults in America presents many challenges for our country and affects policymakers, health care providers, families, and businesses (Administration on Aging, 2010). Society will be challenged to meet the growing demands of older adults as their health and wellness needs begin to increase. Community-based wellness programs where health care professionals and university students have an opportunity to promote wellness for these older adults have been promoted as part of government policy documents such as Healthy People 2020.

This literature review addresses several factors that contribute to healthy aging and quality of life as people age. Lifestyle choices including exercise, balanced nutrition, social participation, and engagement in meaningful activities such as leisure and self-care contribute to healthy aging. Community-based wellness programs have also been implemented to support “aging in place”, which enables older adults to remain living independently in their homes and community. This section also discusses chronic illness in older adulthood and the impact on the cost of care and quality of life.

Healthy Aging

Rowe and Kahn (1997) define healthy aging as having a “low probability of disease and disease-related disability, high cognitive and physical functional capacity, and active engagement

in life” (p. 433). This definition links healthy aging with independence and self-sufficiency in daily life. Lifestyle choices that encourage healthy aging include exercise, balanced nutrition, social and productive activities, leisure, and self-care (Peralta-Catipon & Hwang, 2011). Peralta-Catipon & Hwang (2011) studied lifestyle factors that influenced healthy aging among community-dwelling older adults 55 years and older. Participants were 253 older adults who agreed to complete the Health Enhancement Lifestyle Profile (HELP), a comprehensive measure of health-promoting behaviors. The HELP measured personal factors including demographics, illnesses, and self-rated health. The HELP also assessed health-related lifestyle factors in areas of exercise, diet, social activities, leisure, ADLs (activities of daily living), stress management, and spiritual participation. Participants were asked to answer the HELP questionnaire based on their performance in daily routines and activities within the last three month period. Higher scores on the HELP represented greater frequency of health-promoting behaviors.

Data were analyzed using correlations and regression analyses to assess predictor variables of health-related lifestyles. Results indicated that lifestyle factors, including exercise and diet, significantly decreased the risk of developing chronic conditions including hypertension, respiratory disease, depression, and diabetes in older adults (Peralta-Catipon & Hwang, 2011). Levels of social participation also correlated with positive health outcomes, including physical and cognitive functioning, self-efficacy, and quality of life. Results suggest that demonstrating positive lifestyle behaviors will lead to fewer physical and emotional disturbances that interfere with daily life activities for older adults.

Bryant, Beck & Fairclough (2000), studied factors that contribute to healthy aging of community-dwelling older adults. Participants included 793 Health Maintenance Organization (HMO) members aged 60 years and older living within the community. The participants

received questionnaires that rated their health status, socioeconomic status, presence of health conditions or disability, functional mobility, physical performance in ADLs and IADLs, and social support. A linear regression model and inferential statistics were used to analyze the relationships between these variables. The authors found that healthy aging and quality of life depended on the participant's functional mobility, physical and mental functioning, and access to social supports (Bryant, et al., 2000). Participants who reported higher rates of perceived health did not have physical or psychological illnesses that impacted their community mobility or access to social supports. Predictors of poor health included decreased levels of functional independence, poor physical and cognitive functioning, and decreased social participation.

Healthy aging has become a key objective for policymakers as they shift their emphasis to enabling older adults to maintain their health and independence through cost-effective prevention programs (Hay, et al., 2002). In order to improve health and well-being of older adults, policymakers and health care providers are encouraged to address concerns and barriers that restrict meaningful participation and the ability to successfully 'age in place' (Law, 2002). Preventive programs guided by meaningful activities including lifestyle and daily routines, social engagement, exercise and health education have demonstrated positive effects on quality of life and independence among older adults (Peralta-Catipon & Hwang, 2011).

Aging in Place

"Aging in place" is defined as the ability to live in one's own home and community safely, independently, and comfortably, regardless of age, income, or ability level (Center for Disease Control, 2009). "Aging in place" is a key element in promoting successful aging through improving health, wellness, and quality of life (Knickman & Snell, 2002). Older adults prefer to 'age in place' because it allows them to maintain independence and participate in meaningful

activities (Knickman & Snell, 2002). Older adults experience health-related changes as they age, which can impact their functional independence and ability to engage in meaningful activities.

Vrkljan, et al., (2011) studied the occupational performance of older adults living independently in the community and how their habits and routines supported aging-in-place. Participants were ten retired adults over the age of 65 living independently within the community. Participants completed a two hour narrative interview designed to explore changes in performance patterns and daily routines over time. They were asked to reflect on their daily routines and occupational performance at ages 45-50 years old and compare it to their performance in current activities. Participants also reflected on a time where their lives had been changed by a life event, and how this disruption affected their daily occupations and ability to adapt to the situation. At the end of the interview, participants were informed about community programs that could support their participation in meaningful activities and ability to age-in-place (Vrkljan et al., 2011). A common theme among participants was how habitual occupations such as running errands, exercising, shopping, and meeting friends for coffee provided an important link to community participation. Participants reported that community activities enabled them to develop social relationships and friendships that offered support. Participants also expressed a willingness to adapt their home environments to maintain their level of functioning in daily habits and routines. Results demonstrated that maintaining regular occupational routines enabled participants to remain physically and emotionally healthy and actively engaged in their community. The study also identified key indicators that promoted aging in place, including transportation, community-based programs, proximity to essential services, and social interaction (Vrkljan et al., 2011). The study emphasized the importance of maintaining occupational functioning to promote aging-in-place.

Government healthcare policy such as Healthy People 2020, The National Prevention Strategy Report (2011), and the Affordable Care Act (Healthcare.gov, 2012) all promote community-based health programs focusing on wellness, promotion, and prevention that help decrease chronic health issues, enable participation in meaningful occupations, and support aging in place for older adults.

Aging and Chronic Illness

Aging is often associated with poor health, chronic illness and disability. Older adults experience physiological changes as they age. These age-related changes are a natural part of the developmental process leading into older adulthood. Older adults experience decreased balance, slowed protective reflexes, a loss of bone density, changes in vision and hearing, and less efficient cardiopulmonary functioning (Center for Disease Control, 2010). Large numbers of older Americans are also at risk of developing hypertension, sensory impairment, diabetes, arthritis, congestive heart failure, and dementia (Healthy People 2020, 2011). These conditions are strongly influenced by lifestyle factors, including diet and exercise.

Older adults are at high risk for fall-related injuries due to chronic conditions and environmental hazards. Fall-related injuries can be very traumatic and cause disability, mortality, and loss of independence. Chronic diseases and fall-related injuries are the leading causes of death among U.S. adults age 65 and older (Center for Disease Control, 2009).

Although advanced health care has contributed to a healthier society in recent decades, over three-quarters of older adults suffer from at least one chronic medical condition (Potter, 2010). These chronic conditions are accompanied by painful symptoms that require medical management and therapy. Chronic conditions in older age can limit occupational function and participation in meaningful activities (Law, 2002). Older adults may also have to rely on others

and lose their functional status even earlier if they are not shown the skills to help themselves maintain their own wellness.

Social isolation caused by a loss of independence is a significant concern for older adults. Cornwell & Waite (2009) studied the effects of perceived isolation and social disconnectedness on the physical and mental health of older adults using data from the National Social Life, Health, and Aging Project (NSHAP). Participants included 2,910 community-residing older adults ages 57 to 85 who were involved in the NSHAP study. Data from the NSHAP study were collected through personal interviews and questionnaires. Participants answered questions regarding their frequency of social participation, the amount of social support they received, how often they felt lonely, and their current physical and psychological health status. Waite analyzed this data using the Social Disconnectedness and Perceived Isolation Scales to draw conclusions about how these variables impacted the health and wellbeing of older adults within the study. Results indicated that there were several health risks associated with social disconnectedness and perceived isolation, including depression, anxiety, and morbidity (Cornwell & Waite, 2009). The study also found that social disconnectedness was directly associated with poor physical and emotional health. This study supports the idea that maintaining social relationships and functional independence can promote physical and psychological health of older adults.

Cost of Care for Older Adults

The cost of health care is increasing due to the large number of older adults living in the United States. States are being urged to develop prevention and disease management programs to help alleviate the rapidly increasing Medicaid spending for older adults (Potter, 2010). In order to decrease the costs of healthcare spending and medication, it is important for older adults to remain healthy. Healthy aging enables older adults to maintain their independence and quality

of life, thus avoiding excess spending on medication, hospital care, or nursing homes (Potter, 2010).

In America, medical care for older adults is covered by Medicare, a federally funded health insurance program for adults 65 and older (AARP, 2011). Medicare spending is projected to increase from \$560 billion in 2010 to just over \$1 trillion by 2022 (AARP, 2011). The Medicare program was originally designed to cover older adults with acute care and surgical needs, not the high volume of people with chronic conditions that require a large amount of ongoing health care attention and spending (Potter, 2010). If older adults are unable to afford Medicare co-payments, health care coverage shifts to Medicaid, a federal and state program for the poor and disabled. A large population of older adults age 65 and older who experience chronic health conditions rely on Medicare or Medicaid to pay for their monthly prescription medications and medical care. Medication adherence is critical for older adults to manage their chronic health care problems (Piette & Heisler, 2006). Poor medication management increases the risk of infection, falls, and even death. Health promotion programs may reinforce the importance of properly managing medications.

Barriers within health care insurance policies limit coverage for older adults. These include copayments, gaps in coverage that contribute to increased out-of-pocket spending for older adults, and the complexity of the health care policies that may be difficult for older adults to comprehend. Many older adults struggle to keep up with complex changes in their health care insurance policies and medication coverage. The Medicare prescription drug policy has been particularly criticized because of its complexity (Piette & Heisler, 2006). This may present issues with decreased drug adherence which is linked to poor health outcomes in older adults.

Piette & Heisler (2006) studied the relationship between older adults' knowledge of their medication coverage and the problems associated with medication costs. Participants included 4,264 adults age 50 and older receiving prescription medication for at least one of the following conditions: diabetes, depression, heart problems, and hypertension. Inclusion criteria required participants to have VA (Veteran's Administration) health care, Medicare, Medicaid, or private insurance. Participants completed a nationwide internet survey that addressed current knowledge about their health care policies. Survey items included knowledge about drug copayments and coverage, costs of prescriptions, and monthly out-of-pocket medication costs. Participants also provided information regarding problems associated with medication costs and cost-related adherence issues. Participants then answered questions related to medication underuse related to the cost of prescriptions, whether they decreased spending on basic need items to afford the cost of medicine, and whether they borrowed money from family or friends to afford medication.

Results indicated that a significant number of participants lacked knowledge about their insurance plans and medication coverage. Older adults with Medicare insurance age 65 and older were found to have the highest out-of-pocket costs per month due to the number of chronic conditions compared to the younger participants in the study. The lack of knowledge about medication coverage and increased out-of-pocket spending on chronic illnesses increased financial stress and negative health outcomes for older adults (Piette & Heisler, 2006).

Programs that support healthy aging have an important role to play in enabling older adults to comprehend and manage their health care spending and improve their overall health. The U.S. is currently focusing on prevention programs to support healthy aging with the goal of reducing the cost of care. An integral part of community-based prevention programs to support healthy

aging for older adults is to assess their health status in order to facilitate intervention plans that can increase functional status and promote wellness, using a client-centered approach.

Functional Assessments for Older Adults

A variety of different assessments are used in wellness programs to determine specific areas of need and document results. The assessments reviewed in this section are the Functional Independence Measure, Berg Balance Scale, Fall Risk Assessment, Tinetti Performance Oriented Mobility Assessment (Balance Version or Gait Version), Timed Up and Go Test, Home Hazard Screening Checklist, Montreal Cognitive Assessment, Saint Louis University Mental Status Examination, Geriatric Depression Scale and CarFit. These particular assessments were reviewed because of their use in the Healthy Seniors Program.

Modified Functional Independence Measure (FIM)

The Functional Independence Measure (FIM) scale assesses physical and cognitive disability. Items are scored on the level of assistance required for an individual to perform activities of daily living. Each item is scored from one to seven based on level of independence, where one represents total dependence and seven indicates complete independence (Young, Fan, Hebel & Boulton, 2009). Clinicians and researchers use the FIM instrument to monitor the recovery of functional ability, patient progress and rehabilitation outcomes. (Young, et al., 2009).

Although generally used in either acute or post-acute rehabilitation facilities, the FIM can be modified for use as a measurement instrument for community-dwelling elderly people (Yamada, Liu, Fujimoto, Hase, Tsuji, Fujiwara & Okajima, 2009). In a study done in Japan, a modified version of the FIM using seven subset activities from the original thirteen motor items yielded high correlations to the original 13-item motor FIM scores, and was able to predict which individuals in the study could benefit from rehabilitation and intervention (Yamada, et al., 2009).

In a study of a wellness program for twenty-eight community dwelling, cognitively intact, elderly patients with hip fractures, FIM data were collected by interview (Young, et al., 2009). At admission the mean FIM ratings assigned by the interviewer and by the team were 84.3. At discharge, the mean FIM ratings were 104.4. Researchers concluded from the results of this study that the modified FIM was a valid indicator of functional status (Young, et al., 2009).

Fall Risk Assessments

As the older population grows, the number of falls and subsequent injuries will also increase (Scott, Votova, Scanlan & Close, 2007). Health care providers need fall risk assessment tools that reliably identify at-risk individuals and guide intervention. Aspects associated with risk of falling include: a history of prior falls, muscle weakness, poor gait or balance, visual impairment, and functional limitation (Scott, et al., 2007). Several standardized assessments are used to measure fall risk. One of these assessments is the Berg Balance Scale. Assessments such as the Berg Balance Scale are an important part of fall risk assessments as poor balance among older adults is a leading cause of falls.

The Berg Balance Scale was developed to assess balance during the performance of functional mobility tasks (Muir, Berg, Chesworth & Speechley, 2008). It is a 14-item scale designed to be used in clinical settings (Scott, et al., 2007). The assessment is completed by initially having the client perform fourteen tasks designed to test balance, such as sitting to standing, standing and sitting unsupported, standing to sitting, transfers standing with eyes closed and feet together, reaching forward with outstretched arm, retrieving object from floor, turning to look behind and 360 degrees, placing alternate feet on a stool, standing with one foot in front, and standing on one foot. The completion time is 15-20 minutes. A five-point scale, ranging from 0-4, with zero indicating lowest level of function and four being the highest level

of function, is utilized. The total score is fifty-six. The interpretation of this scale is 41-56 = low fall risk, 21-40 = medium fall risk and 0-20 = high fall risk. A change of eight points is required to reveal a genuine change in function between two assessments (Muir, et al., 2008). In a sample of 210 community-dwelling older adults, the Berg Balance scale was utilized to measure balance as part of a comprehensive geriatric assessment at baseline. This study concluded that the Berg Balance Scale has good discriminative ability to predict falls in community-dwelling elderly people (Muir, et al., 2008).

Another assessment utilized to assess mobility is the Fall Risk Assessment. This assessment tool has been validated and is utilized widely in skilled nursing facilities to analyze fall risk (Vassallo, Stockdale, Sharma, Briggs & Allen, 2005). The Fall Risk Assessment assesses eight clinical condition parameters: level of consciousness/mental status, history of falls, ambulation status, vision, gait/balance, systolic blood pressure, medications, and predisposing diseases (Vassallo, et al., 2005). There is a corresponding score assigned of 0, 2, and 4. The column numbers are added, and if the total score is ten or greater, the client should be considered at high risk potential for falls, meaning likely to fall with the next 24 hours (Vassallo, et al., 2005). The assessment then advises that if the score is ten or greater, a prevention protocol should be initiated immediately. A possible limitation to this assessment is that the performance of this assessment tool varies when used in different settings such as in a community setting (Vassallo, et al., 2005).

The Tinetti Performance Oriented Mobility Assessment (POMA) measures a client's gait on one assessment and balance on another. It is scored on the client's ability to perform specific tasks with regard to balance when sitting and arising, standing balance, with eyes closed, turning 360 degrees and sitting back down, and gait initiation, step length and height, step symmetry and

continuity, path, trunk and walking stance. A research study in Taiwan showed the test to have excellent test-retest reliability (Lin, Hwang, Hu, Wu, Wang & Huang, 2004). This same study found the Tinetti Assessment the most suitable performance measure for evaluating balance in community-dwelling older people when comparing the Timed Up and Go Assessment, One-Leg Stand Assessment, Functional Reach Assessment and the Tinetti Performance Oriented Mobility Assessment (Lin, et al., 2004).

The Timed Up and Go Test (TUG) is another assessment tool utilized to measure balance. It was found to be the second most suitable performance measure for evaluating balance in community-dwelling older people after the Tinetti Test by Lin et al., (2004). It involves timing a person as they arise from a chair, walk three meters, turn and return to the chair. It takes one-two minutes to complete and requires a chair and a stop watch to administer. Excellent inter-rater reliability has been reported for the TUG in three studies (Langley & Mackintosh, 2007).

The Home Hazard Screening Checklist is a twelve point checklist with questions regarding hazards in the home that the participant answers with either a “yes” or “no”. It is modified from the Westmead Home Safety Assessment (Clemson, Fitzgerald & Heard, 1999). Eleven of the twelve questions on the checklist directly relate to how areas in or around the home or potential hazards in or around the home could cause falls (Clemson, et al., 1999). The content validity of the Home Hazard Screening Checklist as an assessment tool to identify home fall hazards was researched as part of an overall study of The Westmead Home Safety Assessment. The research supported the Home Hazard Screening Checklist as having content validity as an assessment tool to help prevent falls (Clemson, et al., 1999). After any fall hazards are identified through the use of the Home Hazard Screening Checklist, therapists are then able to recommend fall prevention measures through home modification (Clemson, et al., 1999).

Cognitive Assessments

Assessments for mild cognitive impairment (MCI) are of greater importance as the number of older adults, age 60+ continues to rise (Smith, Gildeh, & Homes, 2007). The Montreal Cognitive Assessment (MoCA) is a brief cognitive screening tool with high sensitivity and specificity for detecting MCI in patients (Nasreddine, Phillips, Bedirian, Charbonneau, Whitehead, Collin, Cummings & Chertkow, 2005). The MoCA test is a one-page 30-point test administered in approximately ten minutes. It assesses short-term memory recall, visuospatial abilities, multiple aspects of executive function, attention, concentration and working memory, language and orientation to time and place (Nasreddine, et al., 2005). The validity of MoCA was supported in a study done in the UK and published in 2007 (Smith, et al., 2007). The MoCA was found to be a useful brief screening tool for the detection of mild dementia or MCI. The study also found that in patients already diagnosed with MCI, the MoCA helps identify those at risk of developing dementia (Smith, et al., 2007).

Another screening tool for MCI is the Saint Louis University Mental Status Examination (SLUMS). A study published in 2006 found that SLUMS appears to work better in identifying mild cognitive problems in the elderly than the commonly used Mini Mental Status Examination (Tariq, Tumosa, Chibnail, Perry & Morley, 2006). The SLUMS consists of eleven items and measures aspects of cognition that include: orientation, short term memory, calculations, naming of animals, clock drawing and recognition of geometric figures (Tariq, et al., 2006).

The Geriatric Depression Scale (GDS) is unique in that it was specifically developed for use with geriatric patients (Sharp & Lipsky, 2002). It is a fifteen item self-report assessment tool used to facilitate assessment of depression in the elderly. The questions on the GDS are answered either “yes” or “no”; and this simplicity enables the scale to be used with moderately

cognitively impaired individuals because it makes comprehension easier compared with the instruments that present four-choice answers (Sharp & Lipsky, 2002). The use of depression screening assessments in elderly patients varies with their cognitive status. Use of the GDS is limited to either cognitively intact or moderately impaired elderly patients (Sharp & Lipsky, 2002).

In a study testing the validity of the short form version of the GDS, it was found that the fifteen item GDS is a good screening instrument for depression as defined by the DSM-IV, and that the use of the short form GDS increases detection rates of depression among the elderly (Almeida & Almeida, 1999).

Older Driver Screening Programs

Driving cessation can result in social isolation and depressive symptoms in the elderly (Marottoli, Mendes deLeon, Glass, & Williams, 2000). In order to promote safe driving among older adults, the CarFit program was developed in 2007. CarFit is a screening for safe driving created by the American Society on Aging and developed in collaboration with the American Automobile Association (AAA), AARP, and the American Occupational Therapist Association (AOTA) (Stav, 2008). The program teaches drivers how to make changes to their car to encourage safer driving (American Automotive Association, 2007). Areas covered include: proper positioning of seats, steering wheels, car pedals, and head rests. Adjustments to these features improve visibility, safety and general driving control (American Automotive Association, 2007). During a CarFit event, current adaptations are assessed, and then recommendations are made for additional changes or adaptations that can help with driving.

Another older driver program is 55 Alive Driver Safety Program sponsored by AARP. This is an online refresher driving course for drivers age 50 and older that helps older adults to sharpen their defensive driving skills and remain safe on the roads (AARP, 2012).

Programs to Promote Healthy Aging

Many successful programs designed to improve the health-related quality of life for older adults in a variety of settings have been developed (Nunez, Armbruster, Phillips, & Gale, 2003). The following programs are examples of health and wellness initiatives that have benefitted older adults, including programs that focus on injury prevention, health education, and quality of life.

Park et al. (2010) developed a health education and exercise program for community-dwelling older adults with hypertension in South Korea called Healthy Aging and Happy Aging (HAHA). The program was twelve weeks in length and consisted of group health education once a week, individual counseling one time in the fourth week, and patient-tailored elastic band exercises two times per week. To examine the effectiveness of the program, the researchers used an experimental design, randomly assigning 45 participants into a control (n=23) or experimental group (n=22). The researchers hypothesized that the HAHA program would reveal a significant improvement in blood pressure control as well as improve self-care behavior, exercise self-efficacy, physical activity, and health-related quality of life (Park, et al., 2010).

To measure the outcomes of the effectiveness of the HAHA program, the researchers used a sixteen-item questionnaire for self-care behavior (five-point Likert type scale), an eight item questionnaire for self-efficacy for exercise (visual analogue scale from ten (not confident) – 100 (very confident), an international Physical Activity Questionnaire for physical activity, and the Short-Form 36 (SF-36) survey for health related quality of life. The results demonstrated that the

HAHA program was effective in control of blood pressure and improving self-efficacy for exercise and health-related quality of life (Park et al., 2010).

In Australia, a program entitled “Well for Life” focused on improving nutrition and increasing physical activity to promote healthy aging in the frail elderly. Improving nutrition and increasing physical activity has shown to have a significant impact on health at any age (Kruger, Thompson, McKenzie & Naccarella, 2007). The evaluation of the “Well for Life” program found that society tends to assume that older people are not capable of performing many activities. This may cause older adults to limit their own thinking about what they are capable of doing. The “Well for Life” program was among the first to address barriers to the older population caused by stereotypical attitudes and assumptions (Kruger, et al., 2007).

The impact of the “Well for Life” program was illustrated through a collection of stories that were designed to give a more personal and meaningful explanation of the benefits. One story was of a woman who participated in the program and was prone to falling. She had been participating in the “Well for Life” program exercises but still experienced another fall. The exercise program was not able to help prevent her from falling again. However, she was able to control how she fell, and was able to get back up, which she was not capable of doing before. In another incident, a man who had no motivation to walk or exercise after suffering from a stroke a few years prior and who was confined to a wheelchair made significant improvements after attending the program. After participating in the “Well for Life” program, he was able to use his exercise bike for eighteen kilometers in one session, and frequently requested to go walking with the staff. The man, who was known as quiet and shy, spoke proudly about his improvements and contribution to the “Well for Life” program. The program decreased his physical limitations and provided him with a sense of self worth and achievement (Kruger, et al., 2007).

The Senior Living Enhancement Program (SLEP) was an initiative that provided services to 740 seniors at 12 sites over a two-year period. The services the program provided were nursing and health promotion, social service coordination, and social and recreational opportunities. The goal of the program was to improve the health of seniors in ten areas called the “Ten Keys to Healthy Aging”. The ten keys were strategies that help reduce risk factors for poor health and increase quality of life. The ten keys were (1) be active, (2) regulate diabetes blood glucose < 110, (3) stop smoking, (4) maintain social contact, (5) participate in cancer screening, (6) get regular immunizations, (7) lower LDL cholesterol to < 130, (8) combat depression, (9) prevent bone loss and muscle weakness, (10) and control systolic blood pressure < 140 (Castle, 2008).

The SLEP program took place at twelve service enriched housing high-rises for the elderly. Service-enriched housing is defined as “living arrangements that provide health and/or social services in an accessible, supportive environment” (Castle, 2008). Nursing and health promotion was provided to each site one morning per week and consisted of blood pressure checks, blood sugar checks, coordination of care with primary care physicians, individual and group education on specific health topics, weight management, wellness counseling, and vaccination. Social service coordination was provided to each site one morning and afternoon per week and consisted of: assistance with homemaking, personal care, assistance with paperwork, counseling for family issues, food stamps, housing issues, health insurance, living will and advance directives, Meals on Wheels, mental health issues, Adult Protective Services, rent rebate, Social Security, taxes and transportation. Social and recreational opportunities were provided at each site at least weekly and consisted of outings, shopping trips, movie nights, bingo, and arts and crafts activities. Data were collected using a Wellness Health Screen and a record of participation in SLEP activities. The Wellness Health Screen used a face-to-face questionnaire

(developed for the SLEP program) consisting of 44 questions to obtain information about health, demographics, and the ten keys. The results showed significant improvements by SLEP participants in the majority (six) of the “ten keys” to healthy aging over the two-year span, suggesting the program was beneficial to participants. The “keys” that improved were: be active, participate in cancer screening, get regular immunizations, combat depression, control systolic blood pressure, and lower LDL cholesterol (Castle, 2008).

The Wilmington Senior Center in Delaware developed a three-year multidisciplinary health and wellness program called “The Time of Your Life: Growing Older, Staying Healthy” aimed at promoting healthy aging. Healthy aging was defined as physical, intellectual, emotional, social, vocational, and spiritual well-being. The program consisted of eleven 90-minute quarterly presentations on health-related topics, including nutrition and physical activity, over a three-year span. The goal of the program was to help increase knowledge about living healthy lifestyles, provide resources to help participants make informed decisions about health, and provide motivation to pursue or maintain a healthy lifestyle (Kuczmarski & Cotugna, 2009).

A survey questionnaire, focus groups, and the Center for Disease Control and Prevention (CDC) Healthy Days Measure were the instruments used for evaluation of the Wilmington, Delaware Senior Center Program. Results indicated that participants gained knowledge about healthy lifestyles and also adopted more healthy behaviors. The “Time of Your Life” program provided many options for topics, which allowed the participants to make choices, thus increasing participation rates. The topics that were of most interest to the participants were: money management, medications, and staying mentally and physically fit. Evaluations showed that long-term programming, such as the three year Wilmington Senior Center program, could be a successful format for senior health education (Kuczmarski & Cotugna, 2009).

Another program, “Designing a Life of Wellness Program” was an 18-month wellness program, for 65 older adults, which was held in three different apartment complexes. The program included six months of weekly one and a half hour educational classes taught by occupational therapists and occupational therapy students fulfilling their Level II fieldwork experience. The program’s focus was to teach the importance of participation in meaningful occupations for better quality of life and strategies to remove personal and environmental barriers that prevent participation. Topics that were covered in the program included transportation, aging, safety and fall prevention, stress, lifestyle balance and communication. Participants were also given assignments such as keeping track of daily routines, energy levels, and stressful events (Matuska, Giles-Heinz, Flinn, Neighbor, & Bass-Haugen, 2003).

The SF-36 Health Survey and the intake form were used for evaluating the participants in the wellness program. The measures were collected at the beginning of the program and at the end of the program six months later. Scores on the SF-36 increased after participation in the program. There was also an increase in participation in social and community activities. Components of the program rated the highest were those related to social relationships and active learning, such as relationships with the instructors and students, group discussion, and opportunities for socialization (Matuska, et al., 2003).

The Well Elderly program by Jackson, Carlson, Mandel, Zemke & Clark (1998) was an innovative preventative occupational therapy intervention program developed for older adults. The Well Elderly study had 361 participants aged 60 and older, randomly divided into three different groups for nine months. The participants were grouped in either preventive occupational therapy, non-professionally led social activities program, or were untreated. The occupational therapy intervention was found to be most beneficial and was deemed successful in

increasing physical and mental health, occupational functioning, and life satisfaction in participants. The participants in the social activities group fared no better or worse compared to those who were untreated (Jackson, Carlson, Mandel, Zemke, & Clark, 1998).

The Well Elderly program included two hours per week of group-based intervention, and one hour per month of one-on-one client-therapist interaction. There were eight content areas that were the focus of the program: (1) Introduction to the Power of Occupations, (2) Aging, Health and Occupations, (3) Transportation, (4) Safety, (5) Social Relationships, (6) Cultural Awareness, (7) Finances, and (8) Integrative Summary. The methods of program delivery were didactic presentation, peer exchange, direct experience, and personal exploration. Enhancing the way elders selected which occupations to perform, and the way elders experienced meaning in their occupations were the dynamic changes that contributed to the success of the program leading to beneficial health-related outcomes. The health-related outcomes as measured by pre and post assessments of the participants were enhanced physical health, improved mental health, superior occupational functioning, and increased life satisfaction (Jackson, et al., 1998). The Well Elderly Study suggests that occupational therapy programs can be effective in improving the health of older adults.

Most recently, the Well Elderly 2 assessed the Well Elderly 1 (now known as Lifestyle Redesign) intervention's effectiveness among ethnically diverse elders in community-based settings (Clark, et al., 2011). The two main goals of this study were to extend the results obtained from the Well Elderly 1 study and to determine which factors made the program successful. The study consisted of 460 male and female participants aged 60-95. The participants were randomly assigned to either an occupational therapy intervention group or no treatment control group over a six-month experimental phase. The intervention protocol followed that of the Well Elderly 1

(Lifestyle Redesign) study. The participants were assessed using a pre and posttest self reporting method to measure changes. The intervention and control group elicited no differences at baseline. The outcomes demonstrated that the participants who received occupational therapy intervention showed positive self reported measures in areas of physical and mental health. The areas that showed positive changes were bodily pain, vitality, social functioning, mental health, composite mental functioning, life satisfaction, and depressive symptomatology. Overall, the intervention had a more significant impact on mental health and well being than physical health and well-being (Clark, et al., 2011). The Well Elderly 2 study suggests that a lifestyle-oriented occupational therapy program can be beneficial to ethnically diverse older adults.

Dominican University of California Healthy Seniors Program

The Occupational Therapy Department at Dominican University of California located in San Rafael, California, conducts a health enhancement program for older adults entitled “Healthy Seniors”. It is a free service designed to serve older adults who may have chronic health conditions, but may not meet the income or health status criteria to qualify for government-subsidized, hospital-based or in-home support. The program locations are on the Dominican University campus in the Occupational Therapy Department and also at an off campus senior housing facility for eight weeks during each Fall and Spring semester. The sessions are conducted once a week for two hours per session. Second year occupational therapy students, supervised by faculty, work with seniors on skills to maintain independent community living. The Healthy Seniors program is the Community Practice Lab for the Occupation of Adults and Seniors II course.

Participants complete an initial intake form which includes contact information as well as an informed consent form. Demographic information is acquired using the Occupational

Therapy Assessment Form (see Appendix A). Then an initial assessment is made using a modified Functional Independence Measure (FIM) (see Appendix A). From that information, students determine which additional assessments are needed based on client diagnoses and FIM scores. This information is used to create an intervention plan for each client. The assessments currently being used are the Berg Balance Scale (see Appendix B-1), Home Hazard Screening Checklist (see Appendix B-2), Montreal Cognitive Assessment (MoCA) (see Appendix B-3), Saint Louis University Mental Status Examination (SLUMS) (see Appendix B-4), Tinetti Performance Oriented Mobility (Balance and/or Gait) Assessment (see Appendix B-5), Geriatric Depression Scale (see Appendix B-6), Fall Risk Assessment (see Appendix B-7), Timed Up and Go Test (TUG) (see Appendix B-8) and CarFit (see Appendix B-9).

After developing an intervention plan for the participant based on information gathered during assessments, students begin to develop interventions that are individualized to the client. Interventions include UE (upper extremity) strengthening exercises, instruction on the use of adaptive equipment and walkers, activities of daily living/instrumental activities of daily living training, money management, meal planning and nutrition, low vision compensation strategies, home safety evaluation and modification, energy conservation, balance and transfer training, fall prevention, and leisure and community engagement discussion and planning. A checklist of intervention categories are on the Occupational Assessment Form (see Appendix A).

Written “SOAP” (subjective, objective, assessment, plan) notes (see Appendix C) documenting participant progress towards short and long term goals are completed each week by students. The student records subjective statements of the client about personal concerns (S), student’s objective observations during treatment (O), an assessment utilizing clinical reasoning (A); and a plan for further treatment (P). Students also work in groups to create and facilitate

group protocols for the clients. Some examples of group protocols that have been developed are: a memory improvement group where participants created a memory book to help them reminisce and learn tips to improve cognition; a nutritional improvement and health quiz group; an energy conservation and walking tips group; Tai Chi, yoga or dance exercises for balance and strengthening group; a home safety and modifications group; and a pumpkin painting activity for participants with low vision.

Upon completion of the eight-week program, the participant is given a Satisfaction Survey (see Appendix D). The student prepares an individualized home program booklet that contains information utilized during the interventions that may assist the client in maintaining life-long health and wellness; and identifies appropriate resources that may assist the client with needs such as transportation, meal planning and nutrition, leisure activities, fall prevention, and home safety and exercises to maintain strength and balance. Students then use evaluation findings to complete a case study, including the client's occupational profile, analysis of occupational performance, theories, models and frames of reference utilized, client intervention plan, including short and long term goals, home program, summary of clinical reasoning skills used, and citation of an evidence-based research article. Confidentiality of all records is maintained.

Engaged and Experiential Learning

Another important component of the Dominican University of California Healthy Seniors program is engaging occupational therapy students in an experiential learning process. Experiential learning is the process of making meaning from direct experience. Aristotle once said, "For the things we have to learn before we can do them, we learn by doing them."

Benson & Hansen (2007) conducted a qualitative program evaluation of occupational therapy students engaging in clinical reasoning and the application of theory to intervention during a lab at Duquesne University Occupational Therapy Department. The students found the experience to be positive because it allowed the students to apply clinical reasoning with feedback from their peers and professionals. This experience also had a positive effect on the professional growth and development of the students and increased their clarity and understanding about disability (Benson & Hansen, 2007). Similarly, the “Healthy Seniors” program at Dominican University of California was designed to increase healthy aging and provide support for older adults living in our community. It also gives students the chance to increase clinical skills and apply classroom learning to a real-life situation” (S. Leblanc, personal communication, October 6, 2011). This supports growth and development of the occupational therapy student within a supportive environment.

Student engagement with actual clients enhances the learning experience of students by challenging them to apply clinical reasoning to both assessments and interventions in a safe and supportive environment with immediate feedback. The students are able to establish not only an academic understanding, but also a practical understanding of the clinical reasoning skills necessary to make correct assessments and interventions. Another benefit is increased confidence of students in their ability to apply academic knowledge to a practical situation (Benson & Hansen, 2007).

In a similar program utilizing a service learning approach in community-based adult day services, third year occupational therapy students from the University of Minnesota were assigned to six adult day service agencies that served community-dwelling elders (Schaber, 2010). Groups of three to four students were assigned to each service agency. At the initial

session they conducted an organizational and client needs assessment. In two subsequent sessions students implemented and evaluated the program module. The students conducted a process evaluation and made revisions to refine the module for the last session. The sessions were coordinated with course content to augment academic content and community experience (Schaber, 2010). Results showed that students were able to enhance their clinical reasoning by applying it to clients in a live setting with an opportunity for guidance from their instructor. From the students' perspective, they reported that their confidence increased significantly in assessing and carrying out interventions with the well elderly (Schaber, 2010). Faculty who were implementing these programs described the experience as “energizing the classroom” and bringing academic concepts and theories “to life” (Benson & Hansen, 2007). In addition, all three of these projects are meet the *Centennial Vision* of the American Occupational Therapy Association by embracing service learning, putting knowledge into practice, building self-efficacy, and providing community-based wellness programs. (Schaber, 2010).

Community-based wellness program help older adults live independently and increase their occupational performance and functional independence. For these programs to deliver optimal services, they must be evaluated in order to assess their effectiveness, impact on participants, and achievement of stated goals.

Statement of Purpose

The purpose of this study was to perform an evaluation of the Healthy Seniors program in the Occupational Therapy Department at Dominican University of California. The following aspects of the program were evaluated: participant demographics, standardized assessments and interventions used, pre and post FIM score changes, relationship between program variables and

FIM change and participant satisfaction with the program. The research was guided by the following questions:

- 1) What were the demographics of Healthy Seniors participants in spring and fall 2011?
- 2) What assessments and interventions were used in the Healthy Seniors Program in spring and fall 2011?
- 3) Did functional status of participants as measured by the Functional Independence Measure (FIM) change after completion of the Healthy Seniors Program?
- 4) Were there any significant relationships between participant demographics and functional status after participation in Healthy Seniors?
- 5) What were participants' experience of and overall satisfaction with the program?

Theoretical Framework

The Person-Environment-Occupation (PEO) model guides an occupational therapist to consider a person's skills and abilities, the tasks and activities that are meaningful to that person, and the environments in which engagement and participation in occupations occur. It serves as a model for examining the person-environment-occupation processes in the context of occupational therapy practice (Strong, Rigby, Stewart, Law, Letts & Cooper, 1999). According to this model, optimal occupational performance can be achieved by the client through modification and adaptation of the person, occupation and/or the environment. Occupational performance is defined as "The act of doing and accomplishing a selected activity or occupation that results from the dynamic transaction among the client, the context, and the activity" (Law, Cooper, Strong, Stewart, Rigby, & Letts, 1996). By adapting these three components, the PEO fit between them increases and therefore performance is improved (Law, et al., 1996). The PEO Model is effective for occupational therapists to use in client-therapist alliances to enable clients

to successfully engage in meaningful occupations in chosen environments. This model has been used in hospital, community, academic and research settings (Strong, et al., 1999). This research study will use the PEO Model to better evaluate how Healthy Seniors, a community-based wellness and prevention program for older adults (60+), has impacted the lives of the person (older adults participating in the program), their environment (their homes and community), and their occupations (any meaningful activity the participant engages in).

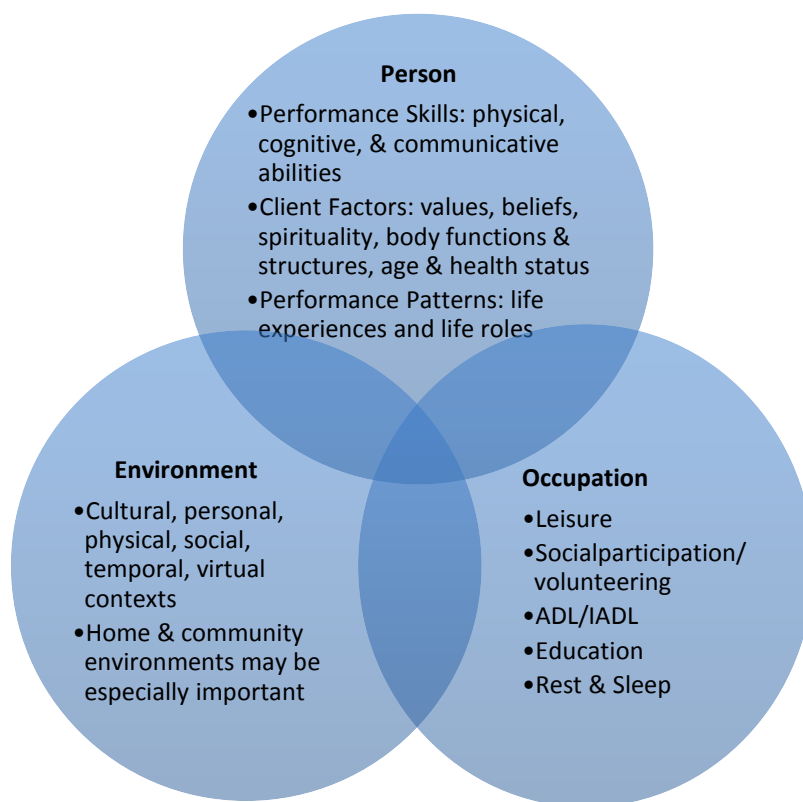


Figure 1: PEO Model based on a diagram by Law, Cooper, Strong, Rigby & Letts, 1996.

The PEO Model assists therapists in analyzing problems with a client's occupational performance. The goal of the Healthy Seniors program is to provide a community-based health program focusing on wellness promotion, and prevention for older adults (60+) with chronic health conditions who need support to maintain community living. The occupational therapy

students and the course instructors who conduct the Healthy Seniors program must consider the person, environment, and occupation factors that might be inhibiting occupational performance of participants.

The person element of PEO describes the person as a holistic being, a combination of body, mind and spirit. It includes participant's motor, cognitive, and sensory capabilities as well as general health (Law, Cooper, Strong, Stewart, Rigby, & Letts, 1996). Personal factors also include age, health status, and functional mobility. Many of the factors contained within the person element of PEO are assessed in the Dominican Healthy Seniors program through a series of individualized assessments for each participant. Some examples of these are the Modified Functional Independence Measure (FIM) initial and discharge assessments (Young, Fan, Hebel & Boulton, 2009), the Montreal Cognitive Assessment (MoCA) (Nasreddine, Phillips, Bedirian, Charbonneau, Whitehead, Collin, Cummings & Chertkow, 2005), Berg Balance Scale (Muir, Berg, Chesworth & Speechley, 2009), Tinetti Performance Oriented Mobility Assessment (POMA) (Langley & Mackintosh, 2007), Timed Up and Go Test (TUG) (Langley & Mackintosh, 2007), Geriatric Depression Scale (Sharp & Lipsky, 2002), the Saint Louis University Mental Status Examination (SLUMS) (Tariq, Tumosa, Chibnail, Perry & Morley, 2006), CarFit (American Automotive Association, 2007) and the Fall Risk Assessment (Vassallo, Stockdale, Sharma, Briggs & Allen, 2005).

After the assessments are completed, the students in conjunction with faculty, determine how to improve occupational performance through individualized interventions. Interventions may include upper extremity strengthening exercises, instruction on use of adaptive equipment and walkers, activities of daily living/instrumental activities of daily living training, low vision

compensation strategies, home environment safety evaluations and modifications, energy conservation, balance and transfer training, fall prevention, and driver safety and adaptation.

To assist in facilitating the optimal congruence between the person and occupation, it is imperative to understand the environment in which a person performs activities of daily living (Bruce & Borg, 2002). Environmental factors include an individual's living environment, access to transportation, community, and social involvement. For example, living environments and community surroundings can present safety hazards for older adults with poor balance and/or injuries requiring the use of walkers and wheelchairs. Older adults may be at greater risk for falls due to uneven pavement, loose rugs within the home, and poor lighting. The Healthy Seniors program helps educate participants on minimizing environmental risks and hazards by assessing the participant environment utilizing a Home Hazard Screening Checklist (Clemson, Fitzgerald & Heard, 1999). Transportation is another environmental concern for older adults who can no longer drive due to physical impairments and/or poor vision. Non-driving participants are provided with community transportation resources during the Healthy Seniors program if a lack of access to the community environment negatively impacts their occupational performance. The Healthy Seniors program has set up taxi services vouchers to transport participants to the Dominican University campus to help ensure that transportation is not a barrier to participation. The school reimburses the taxi company for their weekly services. Facilitating the Healthy Seniors program on site at The Redwoods, a senior living facility, ensures that transportation will not be an issue for participation.

The occupation component of PEO includes any meaningful activity that a person engages in throughout his or her lifespan. The goal of the Healthy Seniors program is to enable participants to remain active in occupations they find meaningful such as grocery shopping, pet

care, attending religious services, volunteering, taking educational courses, attending appointments, exercising or visiting friends and family. The program helps participants maintain physical and emotional function, prevent illness and injury, and increase social participation. Some examples of this are helping the clients to create “memory books” which allow them to reminisce on their past, and providing memory tips through the use of a tip sheet provided by students, with suggestions such as the use of transparent daily pill boxes for medications, utilizing one place to hang their keys, and setting a timer for things in the oven. Multiple areas of participants’ occupations, such as Instrumental Activities of Daily Living (home and financial management, community mobility, and meal preparation) are addressed during each week of the Healthy Seniors program. Therefore, the PEO model is appropriate to this research project because this study encompasses all of the components of this model.

In addition to the PEO Model, the research was guided using a Logic Model as a program evaluation tool for analyzing the effectiveness of the Healthy Seniors program at Dominican University of California. The Logic Model is a useful method for communicating what a program does and how successful it is in accomplishing its goals. It is a tool that has been used for more than twenty years by program evaluators to describe the effectiveness of their programs (McCawley, 2010). The model guided the study and provided insight into the structure, function, and effectiveness of the current Healthy Seniors program. This program evaluation method was selected for our study to systematically analyze the goals, processes, impacts and outcomes that the Healthy Seniors program produces. It helped to highlight the program’s strengths and weaknesses while guiding recommendations about future program planning. The Logic Model functions as a graphic representation that outlines the linear relationship between

program components including inputs/resources, activities, outputs, outcomes, impacts and overall program goals. The evaluation process using the Logic Model will help to promote Dominican University of California.

Inputs/Resources	Activities	Outputs	Outcomes	Impact(s)
<ul style="list-style-type: none"> • Grant funding • Dominican faculty, department chair, CPL students • Partnership/contract with The Redwoods • Designated classroom space to accommodate participants • Taxi services to provide transportation for non-drivers 	<ul style="list-style-type: none"> • Identify participant needs and develop intervention strategies to meet client goals • Weekly educational classes cover health, safety and wellness topics • Conduct individual assessments to target participant occupational challenges • Promote health, wellness and functional independence • Enhance social engagement through group facilitations 	<ul style="list-style-type: none"> • 44 participants served • 2 hour sessions for eight weeks (on hour of one-on-one intervention and one hour of groups) • Conduct educational activities that promote independent living for older adults living in the community 	<ul style="list-style-type: none"> • Short term: older adults have increased awareness of therapeutic interventions that promote health and safety for improved functional independence • Mid-term: older adults will prevent worsening of chronic health symptoms • Long-term: older adults will have increased occupational performance and participation in life roles 	<ul style="list-style-type: none"> • Older adults living in the community will have the skills they need to maximize occupational performance

Figure 2 Logic Model

Methodology

Design

The design of the study was a non-experimental mixed-methods program evaluation using secondary data analysis and information obtained from a focus group and phone interviews.

Program evaluation is defined as a method used to collect, analyze, and answer questions about

the effectiveness and efficiency of a program being implemented (McCawley, 2010). This data analysis method was appropriate because the data had previously been collected and used to create client intervention plans, but not analyzed in aggregate form. The quantitative portion of the evaluation came from data collected by occupational therapy students conducting the program at Dominican University and The Redwoods in the spring and fall of 2011. Descriptive and inferential analysis of the following data from the initial Occupational Assessment form was done: demographics (including gender, age, living status, and driving status (see Table 1)), intervention checklists (see Table 4), and pre and post FIM score results (see Table 5). The assessments administered by students were: the Montreal Cognitive Assessment, Saint Louis Mental Status Exam, Fall Risk Assessment, Berg Balance Scale, Geriatric Depression Scale, Timed Up and Go Test, CarFit and the Home Hazard Screening Checklist. Results are reported using descriptive statistics (see Table 3).

In addition to this quantitative data, qualitative data from satisfaction surveys and SOAP notes completed during the 2011 spring and fall semesters were also examined. Additional qualitative data were collected by researchers in the spring of 2012 via a single focus group and phone interviews with participants. The goal of this qualitative data collection was to obtain a deeper understanding of participant experiences in the Healthy Seniors program.

Subjects

The subjects were 63 older adults over the age of 60 residing in Marin County who participated in the Healthy Seniors program, either at Dominican University of California ($n=36$) or at The Redwoods Senior Living Community ($n=27$). Participants were recruited to the program through the local newspaper, the “Marin Independent Journal” (see Appendix E-1), flyers posted on community bulletin boards (see Appendix E-2), and flyers posted throughout the

Dominican University campus as well as by announcements to the community at The Redwoods. Participation in the program was voluntary and each participant signed a consent form before participating (see Appendix F). Participants for the focus group were recruited via phone calls asking if they would like to take part in a group to discuss their experience in Healthy Seniors. Participants signed a consent form to participate in the focus group (See Appendix G). Participants who were not able to attend the focus group were recruited for a phone interview via phone calls asking if they would like to answer the same seven questions that were asked at the focus group. Agreeing to answer the questions was considered implied consent. Participants in the Healthy Seniors program were also given a Satisfaction Survey at the conclusion of the eight week session.

Ethical and Legal Considerations

The co-investigators conducted this research guided by the Occupational Therapy Code of Ethics and Ethical Standards (2011), and the IRB (approval #9024) (see Appendix I) for PHS at DUC. The aim of this research was to identify the demographics of participants, assessments and interventions used, change in functional status after completion of Healthy Seniors and participant satisfaction with the Healthy Seniors program.

In adhering to the principles of anonymity and confidentiality found in the Occupational Therapy Code of Ethics and Ethical Standards, the co-investigators submitted an application to the Dominican University of California Institutional Review Board for the Protection of Human Subjects requesting approval to conduct this research, which was approved November 29, 2011 (approval #9024).

The researchers protected participants' anonymity and confidentiality, as defined by the Occupational Therapy Code of Ethics, by making copies of all data collected from two semesters

and storing the originals in a locked box. The copies were anonymized by blacking out the names of participants and coding them by number for inputting data into Excel. Original records with client names were returned to the Program Director after copies were made and are stored in a locked file cabinet. Participants for the focus group signed a consent form, and participants in the phone interviews were told that the conversation was confidential and would only be used in aggregate form for research purposes of this thesis if they wished to participate.

Data Collection Procedures

The Healthy Seniors program data that were analyzed were collected from the Healthy Seniors programs conducted at Dominican University of California and at The Redwoods Senior Living Community in Mill Valley, California in the spring and fall 2011 academic semesters. This program was led by faculty and students from the DUC Department of Occupational Therapy. The initial data collection instrument utilized was the Occupational Therapy Assessment Form (see Appendix A), which includes demographic information, a modified version of the FIM and an interventions checklist. Additional data collection instruments utilized included standardized assessments administered, SOAP notes (see Appendix C), and a Satisfaction Survey (see Appendix D).

Information obtained from the focus group and telephone interviews was recorded and transcribed for analysis. The focus group and telephone interview questions were: (1) What made you decide to participate in the Healthy Seniors Program? (2) What did you hope to get out of the Healthy Seniors Program? (3) Have your expectations been met? Why or why not? (4) How do you define functional independence? (5) How do you believe the Healthy Seniors program has helped you achieve more functional independence? (6) How will you know if/when

you have achieved functional independence? (7) Is there anything else you would like to ask or tell us about your participation in Healthy Seniors?

We chose the focus group as our method of data collection because it allowed us to collect more in-depth information on perceptions, attitudes, beliefs and experiences of the participants in Healthy Seniors (Rennekamp & Nall, 2004). Focus groups are particularly useful for program evaluation. They provide interpretations of data collected through quantitative methods and thereby increase the validity of the evaluation (Rennekamp & Nall, 2004).

Data Analysis

An online web-survey tool, Survey Monkey (see Appendix J), was utilized to tally the information from each Occupational Therapy Assessment Form. After the data were tallied, they were entered into Excel to obtain descriptive statistics. Descriptive statistics for demographics of gender, age, driving status and living situation of participants were obtained. Descriptive statistics were also used to tally type and number of assessments and interventions utilized as well as FIM score changes in participant functional status at the completion of the Healthy Seniors Program. Inferential statistics were used to identify if findings' were significant. SOAP notes, satisfaction surveys, a focus group and phone interviews were evaluated qualitatively and reported in narrative form using quotes to illustrate key points. The "Subjective" portion of SOAP notes ($n=378$, students completed 7 notes for the HS session with each client) was also analyzed for content. This portion of the SOAP note contains subjective information obtained from the client, giving their own perspective for reasons why they were attending Healthy Seniors. In the S section, the OTS records the client's report of limitations, concerns, and problems, as well as what the client said that was relevant to treatment such as expressions, of

feelings, attitudes, concerns, goals and plans. The phone interviews ($n=14$) and focus group data ($n=5$) were merged because the questions asked for both were the same.

Satisfaction surveys ($n=49$) were also analyzed for themes. These satisfaction surveys were given to participants at the end of the eight week program at both DUC and The Redwoods. Participants completed the survey, which included these five questions: 1) Describe your experience with the Healthy Seniors program. 2) What did you accomplish that you had hoped? 3) What was your least favorite thing about your experience? 4) What was your favorite thing about your experience? 5) Do you have any feedback for us? The themes that emerged after analysis of the responses were compiled and reported in narrative form in the Results section of this thesis.

Results

Data were analyzed using descriptive and inferential statistics for research questions one through four. Qualitative data were analyzed using a content analysis format for question five. The descriptive and inferential statistics are reported in table format; and the qualitative themes are reported in narrative format.

Research Question #1: Participant Demographics

Demographic information was obtained through the Healthy Seniors intake assessment form. The forms were completed with each participant on the first day of the program. The participant demographics collected were gender, age, driving status and living status. Results indicated the overall majority of participants were female (73%) and each site and session contained more females than males. Forty three percent of participants were between ages 75-85 and 40% were over 85 (Table 1). The average age of the 36 Dominican participants was 79.4; while the average age of the 27 participants at the Redwoods was 85.4. There is a statistically significant

six year age difference between the Dominican University of California and The Redwoods participants (see Table 2). Driving status results indicated 38% of participants were licensed drivers whereas 62% did not currently have an active driver's license. Participants' living status revealed that the percentage of participants who live with others was 71% and those who live by themselves was 29%.

Table 1

Gender and Ages of Participants

	Dominican <i>n</i> =36		The Redwoods <i>n</i> =27		Total <i>n</i> =63	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Male	13	(36)	4	(15)	17	(27)
Female	23	(64)	23	(85)	46	(73)
Age						
<65	2	(6)	1	(4)	3	(5)
65-74	7	(19)	1	(4)	8	(12)
75-85	15	(42)	12	(44)	27	(43)
>85	12	(33)	13	(48)	25	(40)
Licensed Driver	21	(58)	3	(11)	24	(38)
Not Licensed Driver	15	(42)	24	(89)	39	(62)
Lives with Others	24	(67)	21	(78)	45	(71)
Lives Alone	12	(33)	6	(22)	18	(29)

Table 2

Independent Sample t-Test for Age Difference between Dominican and The Redwoods

	M	SD	t(56.9)	p	95% CI
<i>n</i> =63 Independent Samples t-test for Age Difference	6.046	2.32	2.61	0.012	[1.4, 10.692]
<i>n</i> =36 Dominican	79.36	9.243			
<i>n</i> =27 The Redwoods	85.41	9.014			

Note: Equal variances not assumed; CI= confidence interval; LL=lower limit; UL=upper limit; * $p < 0.05$, 2-tailed

Research Question # 2: Assessments and Interventions Used

Students completed different numbers of assessments based on each participant's personal needs during the program. Students conducted 1-3 assessments with their participant. Researchers wanted to observe assessments used in the spring and fall to track their use over time rather than site. The Berg Balance Scale was the most commonly used assessment in the fall semester as well as overall in the 2011 academic semesters, as indicated by its use for evaluation in 41% of total participants. The Tinetti Balance Assessment was used the most in the spring and performed with 27% of participants over the 2011 academic semesters (Table 3). TUG, Tinetti Gait Assessment and Fall Risk Assessment were used the least of the balance assessments. The MoCA and SLUMS cognitive assessments were each used for 22% of participants. The CarFit Assessment, Home Hazard Screening Checklist and Geriatric Depressions Scale were used to evaluate 13%, 11% and 10% of participants, respectively (Table 3). A checklist of interventions was indicated on the Occupational Therapy Assessment Form. Multiple interventions may have been performed throughout the program by each client; and the frequency of their use is shown in Table 4. Therapeutic exercises and balance activities were the

two categories of interventions used the most over both academic semesters. They were used with 76% and 68% of participants, respectively, over the 2011 academic semesters.

Endurance/energy conservation, cognitive skills and therapeutic activities were used with 60%, 56% and 56% of participants, respectively. Interventions used by 20-50% of participants included: home safety, functional mobility, body mechanics, assistive devices, posture, social skills, activities of daily living, joint protection and positioning. Interventions that were used with fewer than 20% of participants included: symptom management, ergonomics, disease process, and caregiver/assistant training (Table 4).

Table 3

Assessments Used

	Spring 2011 <i>n</i> =38		Fall 2011 <i>n</i> =25		Total <i>n</i> =63	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Berg Balance Scale	8	(21)	18	(72)	26	(41)
Tinetti Balance Assessment	15	(39)	2	(8)	17	(27)
MoCA	8	(21)	6	(24)	14	(22)
SLUMS Exam	8	(21)	6	(24)	14	(22)
CARFIT Assessment	7	(18)	1	(4)	8	(13)
Home Hazard Checklist	7	(18)	0	(0)	7	(11)
Geriatric Depression	5	(13)	1	(4)	6	(10)
Fall Risk Assessment	4	(11)	0	(0)	4	(6)
Tinetti Gait Assessment	2	(5)	1	(0)	3	(5)
TUG Test	0	(0)	0	(0)	0	(0)

Note: Spring and Fall represent consecutive 2011 academic semesters according to DUC calendar and assessments were divided by total numbers of participants in the semesters and overall.

Table 4

Interventions Used

	Spring2011 <i>n</i> =38		Fall 2011 <i>n</i> =25		Total <i>n</i> =63	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Therapeutic Exercises	26	(68)	22	(58)	48	(76)
Balance	21	(55)	22	(58)	43	(68)
Endurance/Energy Conservation	18	(47)	20	(53)	38	(60)
Cognitive Skills	20	(53)	15	(39)	35	(56)
Therapeutic Activities	17	(45)	18	(47)	35	(56)
Home Safety	18	(47)	10	(26)	28	(44)
Functional Mobility	13	(34)	15	(39)	28	(44)
Body Mechanics	14	(37)	9	(24)	23	(37)
Assistive Devices	11	(29)	13	(34)	24	(38)
Posture	7	(18)	14	(37)	21	(33)
Social Skills	12	(32)	6	(16)	18	(29)
Activities of Daily Living	9	(24)	6	(16)	15	(24)
Joint Protection	6	(16)	7	(18)	13	(21)
Positioning	5	(13)	8	(21)	13	(21)
Symptom Management	2	(5)	8	(21)	10	(16)
Ergonomics	4	(11)	2	(5)	6	(10)
Disease Process	1	(3)	2	(5)	3	(5)
Caregiver/Assistant Training	1	(3)	1	(3)	2	(3)

Research Question #3 Functional Status Change (Measured by FIM)

Fifty-nine of the 63 participants had measurable average FIM score change because they had forms with completed initial and discharge scores in at least one category. Of these, 28 participants showed no improvement and 31 showed improvement (Table 5). Cognitive functioning categories, specifically memory, problem-solving, visual-perception-cognition and executive function such as initiating and planning, showed the greatest improvements in FIM. They had a FIM score improvement of at least .21, which changed for more than 15% of participants. Balance/posture, strength and general transfers also showed FIM improvements of .21, .12 and .16, respectively, for more than 10% of participants. Home management showed the largest FIM score improvement of .35 for 12% of participants. Other FIM categories that

changed for 10% or more of participants and had an average change of .10 or more were: cognitive function-problem solving, vision-perception-cognition skills, executive functioning-initiating and planning sequencing, cognitive function-social interaction, strength, home management, general transfers, and executive functioning-mental flexibility (Table 6). Results showed a functional improvement in Healthy Seniors participants as evidenced by a statistically significant change in pre and post intervention FIM scores of 0.0726 ($t=5.469$, $df = 59$, $p < 0.005$) (Table 7).

Table 5

Progress Measured by FIM

		FIM Score Change <i>n</i> =59		Total Change
Min	Max	Count	Percent	No Average Change in FIM
-0.01	-0.05	1	(2)	<i>n</i> =28
-0.05	0.00	27	(46)	48% of participants
0.00	0.05	8	(14)	Average Change in FIM
0.05	0.10	6	(10)	<i>n</i> =31
0.10	0.15	4	(7)	52% of participants
0.15	0.20	6	(10)	
0.20	0.25	3	(5)	
0.25	0.30	1	(2)	
0.30	0.35	2	(3)	
0.35	0.40	1	(2)	

Note: -0.10 to -0.05 signifies deterioration; -0.05 to 0.00 signifies no improvement and 0.00 to 0.40 signifies improvement; percent represents the percent of clients (with at least one pair of before and after FIM scores) who had an average FIM score change between the two values listed or between the Min and Max scores

Table 6
Progress Measured In Specific Categories by FIM

	Average FIM Score Improvement	# FIM Scores Changed	% of FIM Scores Changed
Cognitive Functioning – Memory	0.19	14	24%
Balance/Posture	0.21	13	22%
Cognitive Functioning - Problem Solving	0.28	11	19%
Vision-Perception-Cognition Skills	0.21	11	19%
Executive Functioning - Initiation & Planning Sequencing	0.23	10	17%
Cognitive Functioning - Social Interaction	0.08	9	15%
Strength	0.12	8	14%
Home Management	0.35	7	12%
General Transfer (chair/ wheelchair)	0.16	7	12%
Executive Functioning - Mental Flexibility	0.11	6	10%
Executive Functioning - Insight/Judgment	0.10	5	8%
Range of Motion	0.10	5	8%
Executive Functioning - Abstraction & concept formation	0.13	4	7%
Dressing - Lower Body	0.08	4	7%
Bathing - Lower Body	0.07	4	7%
Shower/Tub Transfer	0.06	3	5%
Toilet Transfer	0.06	3	5%
Ambulation/ Wheelchair Mobility	0.06	3	5%
Functional Communication – Expression	0.05	3	5%
Coordination – Etc	0.02	3	5%
Visual Spatial Processing - Track/Scan	0.07	2	3%
Ambulation Distance	0.06	2	3%
Dressing - Upper Body	0.04	2	3%
Hygiene/Grooming	0.04	2	3%
Sensation – Etc	0.04	2	3%
Sensation – Pressure	0.04	2	3%
Sensation – Stereognosis	0.04	2	3%
Sensation – Temperature	0.04	2	3%
Functional Communication – Comprehension	0.04	2	3%
Bed Mobility	0	2	3%
Visual Spatial Processing - Body Awareness	0.02	1	2%
Visual Spatial Processing - Spatial Integration	0.02	1	2%
Visual Spatial Processing - Visual acuity	0.02	1	2%
Self-Feeding	0.02	1	2%
Toileting - Bladder Hygiene	0	0	0%
Toileting - Bowel Hygiene	0	0	0%
Visual Spatial Processing - R/L Discrimination	0	0	0%

Table 7

Change in FIM Scores

<i>n</i> =59	M	SD	t(59)	p	95% CI
One Sample t-test for FIM mean	0.0726	0.102	5.469	0.0046	[0.046,0.0992]

Note: M= mean; SD = standard deviation; CI = confidence interval; ++ $p < 0.01$, one-tailed

Research Question #4: Significant Relationships between Participant Demographics and Functional Status

When exploring possible relationships for the FIM's average increase of 0.0726, we tested multiple categorizations of the clients either by comparing means or by looking for correlations at a 95% confidence interval. We compared over 20 different categories, including: gender, site location, justification for treatment categories, level of reported independence, driving status, and types of interventions used. Of these, only one was found to have a significant relationship to the FIM score change. The two-tailed Pearson Correlation ($n=8$, $r=0.798$, $p=0.018$) showed the only category with a positive relationship to change in FIM was the CarFit assessment.

Research Question #5: Participants' overall satisfaction with the Healthy Seniors program

Through the analysis of SOAP notes, focus groups, telephone interviews and satisfaction surveys, several key themes emerged. The central themes were the desire to remain active and improve health, enjoyment of working with the occupational therapy students, and the Healthy Seniors program was too short in length. The themes are illustrated through the use of personal quotes.

The first theme was, "remaining active and improving health". This theme emerged from both the SOAP notes and the focus groups. In the SOAP notes S portion, participants described their concerns regarding cognition, balance issues and energy conservation. Many participants stated, "I want to work

on balance because I am concerned about falling”. Several participants also reported that their goal in the Healthy Seniors program was “to get information on how to live healthier” and to “improve physical ability to complete tasks such as managing a household, driving, and walking to the store”.

The second theme was “enjoyment of working with the occupational therapy students”. This theme emerged in all of the qualitative data collected. Several participants discussed positive benefits of the education provided by the occupational therapy students. One participant stated, “I learned new information regarding exercise, nutrition and managing my emotions due to my student teacher”. One participant stated, “Keep doing your good work with the seniors”.

The third theme was “The Healthy Seniors program was too short in length”. This theme emerged in both the telephone interviews and satisfaction surveys. In the telephone interviews, one participant stated, “I don’t feel I’ve been in the program long enough, so I don’t feel any change”. In the satisfaction surveys, another participant stated that his least favorite thing about the program was that it was too short.

Discussion and Limitations

Discussion

The qualitative and quantitative results helped identify the demographics of the people who attended the Healthy Seniors program in 2011, what assessments and interventions were utilized, amount and number of changes in functional status, program variables and functional change, and participant satisfaction. There was a notable difference between the age of participants at The Redwoods Seniors Living community and DUC. The Dominican seniors were six years younger than The Redwoods seniors on average. This older age of participants at The Redwoods might be accounted for by the fact that those participants live at an assisted living setting and may have chosen to live there because they are older and therefore require occasional assistance. The overall majority of participants at both sites of the Healthy Senior program were female (73%), and each session contained more females than males. These findings suggest that the

Healthy Seniors program should be more widely advertised in both locations in Marin County, and some strategies could be implemented to engage more male participants in places such as senior centers, gyms, golf courses, coffee shops, grocery stores and local shopping centers. Because 89% of the Redwoods participants do not drive, increased emphasis on community mobility and aging in place should be considered in most intervention plans. Many of the participants live with others (71%). This finding can be used to facilitate pairing those with higher functioning status with those with a lower functioning status, or a “buddy system” within residences. The 29% who live alone were found at both sites, so extra attention to community resources to decrease social isolation may be needed for those participants. In general, participants receive balance and cognitive assessments and interventions. This finding may indicate the general wellness needs of older adults lie in these areas.

Analysis of initial and discharge FIM scores showed that of the 59 clients for whom progress was measurable, meaning both initial and discharge FIM scores were available in at least one category, 31 showed improvement in functional status, which is the majority of the participants. The other 28 participants did not decline in FIM scores, which means they stabilized. This suggests that for the 28 who did not improve, the eight week duration of the Healthy Seniors program may not have been long enough for them to see improvement in functional status. Qualitative analysis of the satisfaction surveys, focus group and phone interviews revealed participants benefitted from other parts of the program that were not detectable through FIM scores, such as receiving information about how to improve balance, prevent falls and conserve energy as well as the enjoyment of social participation in this community activity.

The majority of participants were very satisfied with the Healthy Seniors program. Participants found working with their occupational therapy student very enjoyable. These results

indicate that the Healthy Seniors program as designed is meeting the needs of participants. Upon analyses of SOAP notes, the focus group, phone interviews and satisfaction surveys, there were very few negative responses. One participant was unhappy when her student was absent during Healthy Seniors. However, these few negative responses demonstrated that some participants may have unreasonably high expectations that the Healthy Seniors program will “fix” all underlying problems, which suggests that further explanation of the program may be needed before participants engage in the program. One participant experience with a student being absent highlights the importance of all students practicing professionalism, maintaining good attendance and communication within the Healthy Seniors program.

Limitations

Several limitations exist for this research. The Healthy Seniors program is primarily a service program to the community and a component of the Occupation of Adults and Seniors curriculum at DUC and was not designed as a research study. This primary purpose accounts for several uncontrolled variables in the data, such as varied participation rates and incomplete data (see n =number of usable data on page 40).

The second limitation is that some of the assessments from the spring of 2011 were replaced by other assessments in the fall of 2011, such as the Fall Risk Assessment. By providing a consistent set of assessments and striving for full return of forms in the future, analysis could be more thorough. Consistency in faculty was a third limitation as there was a change from fall to spring 2011. Different styles of program leadership may have influenced results.

A fourth limitation is that with the exception of the Functional Independence Measure, the rest of the assessments were conducted for each participant only once during the program, but not again on discharge. More assessment data at participant completion in the future could help

determine whether improvements to the assessed areas have been made by individual clients. Furthermore, expanding the types of assessments used to evaluate client function and exploring alternatives to the FIM assessment may yield more significant results for clients participating in a community program. Also, looking at a combination of program factors in future research studies such as the impact of CarFit combined with some other program variables may yield results that are less likely to be found by chance. Program changes that have been made since this study include the use of the HELP assessment (Health Enhancement Lifestyle Profile) and requirement for completing pre and post assessment scores with one cognitive and one falls assessment may yield results that are more reliable and consistent with our participant needs in the future.

Implications for Occupational Therapy

There are several occupational therapy implications related to this program evaluation. This study validates that the Healthy Seniors program impacted the lives of the participants by providing interventions and home programs to enhance their meaningful activities of daily living and improve their environment by providing safety checklists and fall prevention tools. The findings suggest that improved health, as well as remaining independent for as long as possible are primary concerns of the participants. Occupational therapists and occupational therapy students are well qualified to assess functional performance, plan interventions, and educate older adults to facilitate improved health and independence. The result of the interventions by the occupational therapy students in the Healthy Seniors Program was an increase in functional status (as measured by the FIM) in the majority of the participants, indicating that this community-based occupational therapy program had a positive impact on the lives of the majority of the participants.

Summary, Conclusion, and Recommendations

The purpose of this study was to complete a comprehensive program evaluation of the Healthy Seniors program at Dominican University of California. The design of the study was a non-experimental mixed-methods program evaluation using secondary data analysis and information obtained from a focus group, phone interviews, and satisfaction surveys. The subjects were 63 older adults over the age of 60 residing in Marin County who participated in the Healthy Seniors program either at Dominican University of California or The Redwoods Senior Living Community.

Program evaluation results indicate that the majority of participants were women between the ages of 75-85. Balance and cognition are two of the main target areas for assessment and intervention for the participants. The majority of the participants improved in functional status by the end of the program, as measured using the FIM. Satisfaction with the program was expressed by a majority of the participants. Possible changes to the program should include recruiting more participants, especially men, through a wider range of advertising at suggested venues; performing all assessments upon intake and discharge; using consistent assessment forms for all semesters within the program; and giving a more thorough explanation to all incoming participants regarding the program so that participants do not have unreasonably high expectations.

Future research can expand upon the current research by obtaining data from future Healthy Seniors programs on student's engaged and experiential learning within Healthy Seniors, their knowledge and comfort level both before and after participating in Healthy Seniors, and their satisfaction with the overall experience. Additionally, research could be done on other therapeutic components that could be added to the program such as aqua therapy at the

Conlan pool, or at a community garden. Another component of future research would be to follow up with participants after six months to see whether their functional status has improved, stayed the same or declined, and whether they have adhered to their individualized home program that was created by the students. Use of multidimensional assessment tools such as the SF-36 Quality of Life Assessment can also be used to globally assess participants health-related quality of life change after the program.

Research has shown that community-based wellness programs reduce falls, decrease institutionalization, and increase social engagement in older adults (Matuska, Giles-Heinz, Flinn, Neighbor & Bass-Haugen, 2003). This full program review of the Dominican Healthy Seniors community-based wellness program provides support not only to the validity of community-based wellness programs, but also specifically to this program as a valid and much needed service to the community of participants.

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Occupational Therapy Assessment

Client History

Name:	DOB:	Sex:	Date of Initial Assessment:	Date of Discharge:
-------	------	------	-----------------------------	--------------------

Justification for Treatment:

Precautions:

Social/History

Activities of Daily Living

- ☐ Independent
☐ Requires Assist (Personal Assistant, Assistive Device):

Functional Mobility

- ☐ Independent
☐ Requires Assist (Personal Assistant, Assistive Device):

Social/Living Situation (family, personal assistant, social network, etc):

Home environment (type of housing, access, barriers):

Driving Status (active drivers license):

☐ Yes ☐ No

Comments:

Barriers to Progress/Goal Achievement:

- ☐ None ☐ Social/Cultural
☐ Physical ☐ Other:
☐ Cognitive/Communication:
☐ Emotional/Behavioral

Preferred Method of Learning:

- ☐ Visual
☐ Auditory
☐ Kinesthetic
☐ Other:

Functional Status

- 7 = Complete Independence
 6 = Modified Independence (device, timely, safety)
 5 = Supervision/Setup (cueing, coaxing)
 4 = Minimal Assistance (Client does 75%)

- 3 = Moderate Assistance (Client does 50-74%)
 2 = Maximal Assistance (Client does 25-49%)
 1 = Total Assistance (Client does less than 25%)
 0 = Activity does not occur

	Initial FIM Score (add comments)	Discharge FIM Score (add comments)
Functional Communication Comprehension Expression		
Cognitive Functioning Social Interaction Problem Solving Memory		
Self-Feeding		
Hygiene/Grooming		
Bathing Upper Body Lower Body		
Dressing Upper Body Lower Body		
Toileting Bowel Hygiene Bladder Hygiene		

Bed Mobility		
General Transfer (chair/ wheelchair)		
Toilet Transfer		
Shower/Tub Transfer		
Ambulation/ Wheelchair Mobility(include distance traveled)		
Home Management		

Upper Extremity Status

	Initial	Discharge
Range of Motion:		
Strength:		
Sensation: (Pressure, temperature, Stereognosis, etc.)		
Coordination: Gross Motor, Fine Motor, Ataxia, Dysmetria, etc.)		
Balance/Posture		

Vision-Perception-Cognition Skills

	Initial	Discharge
Cognitive Functioning: Attention/Concentration Memory/Learning		
Visual Spatial Processing: Visual acuity Track/Scan R/L Discrimination Body Awareness Spatial Integration		
Executive Functioning: Initiation & Planning Sequencing Abstraction & concept formation Insight/Judgement Mental Flexibility		

Treatment Plan (to be entirely completed on first day)

Initial Assessment:

Plan/Education Provided (Please write date(s) completed)

- | | |
|--|--|
| <input type="checkbox"/> Therapeutic Activities: | <input type="checkbox"/> Balance: |
| <input type="checkbox"/> Therapeutic Exercises: | <input type="checkbox"/> Endurance/Energy Conservation: |
| <input type="checkbox"/> Activities of Daily Living: | <input type="checkbox"/> Cognitive Skills: |
| <input type="checkbox"/> Home Safety: | <input type="checkbox"/> Social Skills: |
| <input type="checkbox"/> Assistive Devices: | <input type="checkbox"/> Caregiver/Personal Assistant Education: |
| <input type="checkbox"/> Joint Protection: | <input type="checkbox"/> Body Mechanics: |
| <input type="checkbox"/> Positioning: | <input type="checkbox"/> Disease Process: |
| <input type="checkbox"/> Posture: | <input type="checkbox"/> Ergonomics: |
| <input type="checkbox"/> Symptom Management: | <input type="checkbox"/> Functional Mobility: |

Client/Family informed & approved RX plan: ☐ Yes ☐ No:

Rehab Potential: Frequency & Duration:

Goals (to be entirely completed on first day)

Client's Personal Goals (short-term):

Discharge Summary and Recommendations (to be entirely completed on last day of treatment)

Assessment:

Client's Long-Term Goals:

Home Safety Recommendations:

Equipment:

Other:

Signature:Date:

Appendix B-1

Berg Balance Scale

The Berg Balance Scale (BBS) was developed to measure balance among older people with impairment in balance function by assessing the performance of functional tasks. It is a valid instrument used for evaluation of the effectiveness of interventions and for quantitative descriptions of function in clinical practice and research. The BBS has been evaluated in several reliability studies. A recent study of the BBS, which was completed in Finland, indicates that a change of eight (8) BBS points is required to reveal a genuine change in function between two assessments among older people who are dependent in ADL and living in residential care facilities.

Description:

14-item scale designed to measure balance of the older adult in a clinical setting.

Equipment needed: Ruler, two standard chairs (one with arm rests, one without), footstool or step, stopwatch or wristwatch, 15 ft walkway

Completion:

Time: 15-20 minutes

Scoring: A five-point scale, ranging from 0-4. "0" indicates the lowest level of function and "4" the highest level of function. Total Score = 56

Interpretation:

- 41-56 = low fall risk
- 21-40 = medium fall risk
- 0-20 = high fall risk

A change of 8 points is required to reveal a genuine change in function between 2 assessments.

Berg Balance Scale

Name: _____ Date: _____

Location: _____ Rater: _____

ITEM DESCRIPTION	SCORE (0-4)
Sitting to standing	_____
Standing unsupported	_____
Sitting unsupported	_____
Standing to sitting	_____
Transfers	_____
Standing with eyes closed	_____
Standing with feet together	_____
Reaching forward with outstretched arm	_____
Retrieving object from floor	_____
Turning to look behind	_____
Turning 360 degrees	_____
Placing alternate foot on stool	_____
Standing with one foot in front	_____
Standing on one foot	_____

Total _____

GENERAL INSTRUCTIONS

Please document each task and/or give instructions as written. When scoring, please record the lowest response category that applies for each item.

In most items, the subject is asked to maintain a given position for a specific time. Progressively more points are deducted if:

- the time or distance requirements are not met
- the subject's performance warrants supervision
- the subject touches an external support or receives assistance from the examiner

Subject should understand that they must maintain their balance while attempting the tasks. The choices of which leg to stand on or how far to reach are left to the subject. Poor judgment will adversely influence the performance and the scoring.

Equipment required for testing is a stopwatch or watch with a second hand, and a ruler or other indicator of 2, 5, and 10 inches. Chairs used during testing should be a reasonable height. Either a step or a stool of average step height may be used for item # 12.

Berg Balance Scale

SITTING TO STANDING

INSTRUCTIONS: Please stand up. Try not to use your hand for support.

- () 4 able to stand without using hands and stabilize independently
- () 3 able to stand independently using hands
- () 2 able to stand using hands after several tries
- () 1 needs minimal aid to stand or stabilize
- () 0 needs moderate or maximal assist to stand

STANDING UNSUPPORTED

INSTRUCTIONS: Please stand for two minutes without holding on.

- () 4 able to stand safely for 2 minutes
- () 3 able to stand 2 minutes with supervision
- () 2 able to stand 30 seconds unsupported
- () 1 needs several tries to stand 30 seconds unsupported
- () 0 unable to stand 30 seconds unsupported

If a subject is able to stand 2 minutes unsupported, score full points for sitting unsupported. Proceed to item #4.

SITTING WITH BACK UNSUPPORTED BUT FEET SUPPORTED ON FLOOR OR ON A STOOL

INSTRUCTIONS: Please sit with arms folded for 2 minutes.

- () 4 able to sit safely and securely for 2 minutes
- () 3 able to sit 2 minutes under supervision
- () 2 able to sit 30 seconds
- () 1 able to sit 10 seconds
- () 0 unable to sit without support 10 seconds

STANDING TO SITTING

INSTRUCTIONS: Please sit down.

- () 4 sits safely with minimal use of hands
- () 3 controls descent by using hands
- () 2 uses back of legs against chair to control descent
- () 1 sits independently but has uncontrolled descent
- () 0 needs assist to sit

TRANSFERS

INSTRUCTIONS: Arrange chair(s) for pivot transfer. Ask subject to transfer one way toward a seat with armrests and one way toward a seat without armrests. You may use two chairs (one with and one without armrests) or a bed and a chair.

- () 4 able to transfer safely with minor use of hands
- () 3 able to transfer safely definite need of hands
- () 2 able to transfer with verbal cuing and/or supervision
- () 1 needs one person to assist
- () 0 needs two people to assist or supervise to be safe

STANDING UNSUPPORTED WITH EYES CLOSED

INSTRUCTIONS: Please close your eyes and stand still for 10 seconds.

- () 4 able to stand 10 seconds safely
- () 3 able to stand 10 seconds with supervision
- () 2 able to stand 3 seconds
- () 1 unable to keep eyes closed 3 seconds but stays safely
- () 0 needs help to keep from falling

STANDING UNSUPPORTED WITH FEET TOGETHER

INSTRUCTIONS: Place your feet together and stand without holding on.

- () 4 able to place feet together independently and stand 1 minute safely
- () 3 able to place feet together independently and stand 1 minute with supervision
- () 2 able to place feet together independently but unable to hold for 30 seconds
- () 1 needs help to attain position but able to stand 15 seconds feet together
- () 0 needs help to attain position and unable to hold for 15 seconds

Berg Balance Scale continued...

REACHING FORWARD WITH OUTSTRETCHED ARM WHILE STANDING

INSTRUCTIONS: Lift arm to 90 degrees. Stretch out your fingers and reach forward as far as you can. (Examiner places a ruler at the end of fingertips when arm is at 90 degrees. Fingers should not touch the ruler while reaching forward. The recorded measure is the distance forward that the fingers reach while the subject is in the most forward lean position. When possible, ask subject to use both arms when reaching to avoid rotation of the trunk.)

- () 4 can reach forward confidently 25 cm (10 inches)
- () 3 can reach forward 12 cm (5 inches)
- () 2 can reach forward 5 cm (2 inches)
- () 1 reaches forward but needs supervision
- () 0 loses balance while trying/requires external support

PICK UP OBJECT FROM THE FLOOR FROM A STANDING POSITION

INSTRUCTIONS: Pick up the shoe/slipper, which is in front of your feet.

- () 4 able to pick up slipper safely and easily
- () 3 able to pick up slipper but needs supervision
- () 2 unable to pick up but reaches 2-5 cm (1-2 inches) from slipper and keeps balance independently
- () 1 unable to pick up and needs supervision while trying
- () 0 unable to try/needs assist to keep from losing balance or falling

TURNING TO LOOK BEHIND OVER LEFT AND RIGHT SHOULDERS WHILE STANDING

INSTRUCTIONS: Turn to look directly behind you over toward the left shoulder. Repeat to the right. (Examiner may pick an object to look at directly behind the subject to encourage a better twist turn.)

- () 4 looks behind from both sides and weight shifts well
- () 3 looks behind one side only other side shows less weight shift
- () 2 turns sideways only but maintains balance
- () 1 needs supervision when turning
- () 0 needs assist to keep from losing balance or falling

TURN 360 DEGREES

INSTRUCTIONS: Turn completely around in a full circle. Pause. Then turn a full circle in the other direction.

- () 4 able to turn 360 degrees safely in 4 seconds or less
- () 3 able to turn 360 degrees safely one side only 4 seconds or less
- () 2 able to turn 360 degrees safely but slowly
- () 1 needs close supervision or verbal cuing
- () 0 needs assistance while turning

PLACE ALTERNATE FOOT ON STEP OR STOOL WHILE STANDING UNSUPPORTED

INSTRUCTIONS: Place each foot alternately on the step/stool. Continue until each foot has touched the step/stool four times.

- () 4 able to stand independently and safely and complete 8 steps in 20 seconds
- () 3 able to stand independently and complete 8 steps in > 20 seconds
- () 2 able to complete 4 steps without aid with supervision
- () 1 able to complete > 2 steps needs minimal assist
- () 0 needs assistance to keep from falling/unable to try

STANDING UNSUPPORTED ONE FOOT IN FRONT

INSTRUCTIONS: (DEMONSTRATE TO SUBJECT) Place one foot directly in front of the other. If you feel that you cannot place your foot directly in front, try to step far enough ahead that the heel of your forward foot is ahead of the toes of the other foot. (To score 3 points, the length of the step should exceed the length of the other foot and the width of the stance should approximate the subject's normal stride width.)

- () 4 able to place foot tandem independently and hold 30 seconds
- () 3 able to place foot ahead independently and hold 30 seconds
- () 2 able to take small step independently and hold 30 seconds
- () 1 needs help to step but can hold 15 seconds
- () 0 loses balance while stepping or standing

STANDING ON ONE LEG

INSTRUCTIONS: Stand on one leg as long as you can without holding on.

- () 4 able to lift leg independently and hold > 10 seconds
- () 3 able to lift leg independently and hold 5-10 seconds
- () 2 able to lift leg independently and hold ≥ 3 seconds
- () 1 tries to lift leg unable to hold 3 seconds but remains standing independently.
- () 0 unable to try or needs assist to prevent fall

() TOTAL SCORE (Maximum = 56)

SESSION THREE HANDOUT

Home Hazard Screening Checklist			
Question	Yes	No	Comments
1. Are there any floors that are slippery when wet or dry?			
2. Are there any obstacles in trafficways indoors, on stairs, in areas of access to the home, or on outside pathways?			
3. Is the lighting dim, poorly lit or shadowy in living areas, trafficways, access areas and stairwells?			
4. Are steps and stairs slippery, do they lack contrast, have worn coverings or lack a grab rail?			
5. Are floor mats slippery, loose or do they have curled edges?			
6. Are floor coverings worn or loose?			
7. Is the person unsafe with reaching or climbing or do they use unstable furniture or equipment when climbing?			
8. Does footwear fit poorly, have poor fastenings, have slippery soles, high heels, or no room for the toes?			
9. Are the outdoor pathways uneven, broken, loose or mossy?			
10. Are there cords on the floor?			
11. Are there spills on the floor? Is cleaning equipment inaccessible or difficult to use?			
12. Are medications difficult to open, poorly remembered or do they have instructions that are difficult to read and understand?			

Home hazard screening checklist (modified from the Westmead Home Safety Assessment, Clemson, 1997). Source: Hill K, Clemson L, Vratsidis F. Preventing falls — a key to maintaining independence. In: Mackey H, Nancarrow S, Editors. *Enabling Independence — a guide for rehabilitation workers*. London: Blackwell; 2006. p 182–202.

Appendix B-3

Montreal Cognitive Assessment (MoCA)

Administration and Scoring Instructions

The Montreal Cognitive Assessment (MoCA) was designed as a rapid screening instrument for mild cognitive dysfunction. It assesses different cognitive domains: attention and concentration, executive functions, memory, language, visuoconstructional skills, conceptual thinking, calculations, and orientation. Time to administer the MoCA is approximately 10 minutes. The total possible score is 30 points; a score of 26 or above is considered normal.

1. Alternating Trail Making:

Administration: The examiner instructs the subject: *"Please draw a line, going from a number to a letter in ascending order. Begin here [point to (1)] and draw a line from 1 then to A then to 2 and so on. End here [point to (E)]."*

Scoring: Allocate one point if the subject successfully draws the following pattern:
1 -A- 2- B- 3- C- 4- D- 5- E, without drawing any lines that cross. Any error that is not immediately self-corrected earns a score of 0.

2. Visuoconstructional Skills (Cube):

Administration: The examiner gives the following instructions, pointing to the cube: *"Copy this drawing as accurately as you can, in the space below".*

Scoring: One point is allocated for a correctly executed drawing.

- Drawing must be three-dimensional
- All lines are drawn
- No line is added
- Lines are relatively parallel and their length is similar (rectangular prisms are accepted)

A point is not assigned if any of the above-criteria are not met.

3. Visuoconstructional Skills (Clock):

Administration: Indicate the right third of the space and give the following instructions: *"Draw a clock. Put in all the numbers and set the time to 10 past 11".*

Scoring: One point is allocated for each of the following three criteria:

- Contour (1 pt.): the clock face must be a circle with only minor distortion acceptable (e.g., slight imperfection on closing the circle);
- Numbers (1 pt.): all clock numbers must be present with no additional numbers; numbers must be in the correct order and placed in the approximate quadrants on the clock face; Roman numerals are acceptable; numbers can be placed outside the circle contour;
- Hands (1 pt.): there must be two hands jointly indicating the correct time; the hour hand must be clearly shorter than the minute hand; hands must be centred within the clock face with their junction close to the clock centre.

A point is not assigned for a given element if any of the above-criteria are not met.

4. **Naming:**

Administration: Beginning on the left, point to each figure and say: *"Tell me the name of this animal"*.

Scoring: One point each is given for the following responses: (1) camel or dromedary, (2) lion, (3) rhinoceros or rhino.

5. **Memory:**

Administration: The examiner reads a list of 5 words at a rate of one per second, giving the following instructions: *"This is a memory test. I am going to read a list of words that you will have to remember now and later on. Listen carefully. When I am through, tell me as many words as you can remember. It doesn't matter in what order you say them"*. Mark a check in the allocated space for each word the subject produces on this first trial. When the subject indicates that (s)he has finished (has recalled all words), or can recall no more words, read the list a second time with the following instructions: *"I am going to read the same list for a second time. Try to remember and tell me as many words as you can, including words you said the first time."* Put a check in the allocated space for each word the subject recalls after the second trial.

At the end of the second trial, inform the subject that (s)he will be asked to recall these words again by saying, *"I will ask you to recall those words again at the end of the test."*

Scoring: No points are given for Trials One and Two.

6. **Attention:**

Forward Digit Span: Administration: Give the following instruction: *"I am going to say some numbers and when I am through, repeat them to me exactly as I said them"*. Read the five number sequence at a rate of one digit per second.

Backward Digit Span: Administration: Give the following instruction: *"Now I am going to say some more numbers, but when I am through you must repeat them to me in the backwards order."* Read the three number sequence at a rate of one digit per second.

Scoring: Allocate one point for each sequence correctly repeated, (*N.B.*: the correct response for the backwards trial is 2-4-7).

Vigilance: Administration: The examiner reads the list of letters at a rate of one per second, after giving the following instruction: *"I am going to read a sequence of letters. Every time I say the letter A, tap your hand once. If I say a different letter, do not tap your hand"*.

Scoring: Give one point if there is zero to one errors (an error is a tap on a wrong letter or a failure to tap on letter A).

Serial 7s: Administration: The examiner gives the following instruction: "Now, I will ask you to count by subtracting seven from 100, and then, keep subtracting seven from your answer until I tell you to stop." Give this instruction twice if necessary.

Scoring: This item is scored out of 3 points. Give no (0) points for no correct subtractions, 1 point for one correct subtraction, 2 points for two-to-three correct subtractions, and 3 points if the participant successfully makes four or five correct subtractions. Count each correct subtraction of 7 beginning at 100. Each subtraction is evaluated independently; that is, if the participant responds with an incorrect number but continues to correctly subtract 7 from it, give a point for each correct subtraction. For example, a participant may respond "92 – 85 – 78 – 71 – 64" where the "92" is incorrect, but all subsequent numbers are subtracted correctly. This is one error and the item would be given a score of 3.

7. **Sentence repetition:**

Administration: The examiner gives the following instructions: "I am going to read you a sentence. Repeat it after me, exactly as I say it [pause]: *I only know that John is the one to help today.*" Following the response, say: "Now I am going to read you another sentence. Repeat it after me, exactly as I say it [pause]: *The cat always hid under the couch when dogs were in the room.*"

Scoring: Allocate 1 point for each sentence correctly repeated. Repetition must be exact. Be alert for errors that are omissions (e.g., omitting "only", "always") and substitutions/additions (e.g., "John is the one who helped today;" substituting "hides" for "hid", altering plurals, etc.).

8. **Verbal fluency:**

Administration: The examiner gives the following instruction: "Tell me as many words as you can think of that begin with a certain letter of the alphabet that I will tell you in a moment. You can say any kind of word you want, except for proper nouns (like Bob or Boston), numbers, or words that begin with the same sound but have a different suffix, for example, love, lover, loving. I will tell you to stop after one minute. Are you ready? [Pause] Now, tell me as many words as you can think of that begin with the letter F. [time for 60 sec]. Stop."

Scoring: Allocate one point if the subject generates 11 words or more in 60 sec. Record the subject's response in the bottom or side margins.

9. **Abstraction:**

Administration: The examiner asks the subject to explain what each pair of words has in common, starting with the example: "Tell me how an orange and a banana are alike". If the subject answers in a concrete manner, then say only one additional time: "Tell me another way in which those items are alike". If the subject does not give the appropriate response (fruit), say, "Yes, and they are also both fruit." Do not give any additional instructions or clarification.

After the practice trial, say: "Now, tell me how a train and a bicycle are alike". Following the response, administer the second trial, saying: "Now tell me how a ruler and a watch are alike". Do not give any additional instructions or prompts.

Scoring: Only the last two item pairs are scored. Give 1 point to each item pair correctly answered. The following responses are acceptable:

Train-bicycle = means of transportation, means of travelling, you take trips in both;

Ruler-watch = measuring instruments, used to measure.

The following responses are **not** acceptable: Train-bicycle = they have wheels; Ruler-watch = they have numbers.

10. Delayed recall:

Administration: The examiner gives the following instruction: *"I read some words to you earlier, which I asked you to remember. Tell me as many of those words as you can remember. Make a check mark (✓) for each of the words correctly recalled spontaneously without any cues, in the allocated space."*

Scoring: Allocate 1 point for each word recalled freely without any cues.

Optional:

Following the delayed free recall trial, prompt the subject with the semantic category cue provided below for any word not recalled. Make a check mark (✓) in the allocated space if the subject remembered the word with the help of a category or multiple-choice cue. Prompt all non-recalled words in this manner. If the subject does not recall the word after the category cue, give him/her a multiple choice trial, using the following example instruction, *"Which of the following words do you think it was, NOSE, FACE, or HAND?"*

Use the following category and/or multiple-choice cues for each word, when appropriate:

FACE:	<u>category cue:</u> part of the body	<u>multiple choice:</u> nose, face, hand
VELVET:	<u>category cue:</u> type of fabric	<u>multiple choice:</u> denim, cotton, velvet
CHURCH:	<u>category cue:</u> type of building	<u>multiple choice:</u> church, school, hospital
DAISY:	<u>category cue:</u> type of flower	<u>multiple choice:</u> rose, daisy, tulip
RED:	<u>category cue:</u> a colour	<u>multiple choice:</u> red, blue, green

Scoring: No points are allocated for words recalled with a cue. A cue is used for clinical information purposes only and can give the test interpreter additional information about the type of memory disorder. For memory deficits due to retrieval failures, performance can be improved with a cue. For memory deficits due to encoding failures, performance does not improve with a cue.

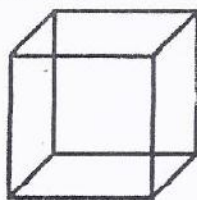
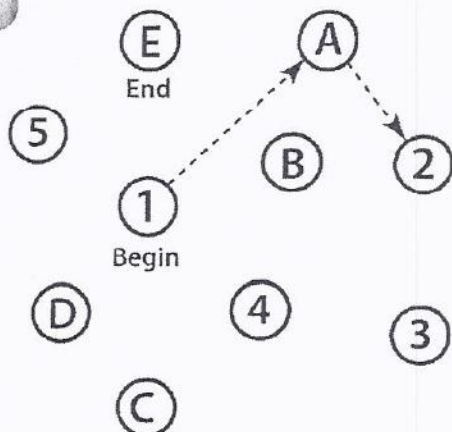
11. Orientation:

Administration: The examiner gives the following instructions: *"Tell me the date today"*. If the subject does not give a complete answer, then prompt accordingly by saying: *"Tell me the [year, month, exact date, and day of the week]."* Then say: *"Now, tell me the name of this place, and which city it is in."*

Scoring: Give one point for each item correctly answered. The subject must tell the exact date and the exact place (name of hospital, clinic, office). No points are allocated if subject makes an error of one day for the day and date.

TOTAL SCORE: Sum all subscores listed on the right-hand side. Add one point for an individual who has 12 years or fewer of formal education, for a possible maximum of 30 points. A final total score of 26 and above is considered normal.

VISUOSPATIAL / EXECUTIVE



Copy
cube

Draw CLOCK (Ten past eleven)
(3 points)

POINTS

[]

[]

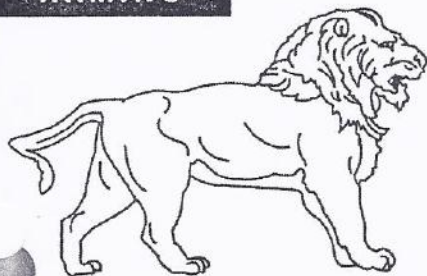
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Contour

[]
Numbers

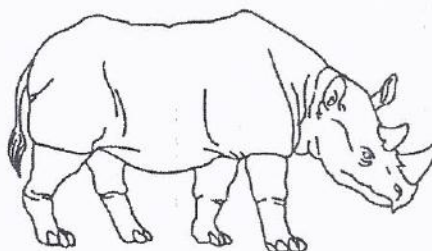
[]
Hands

___/5

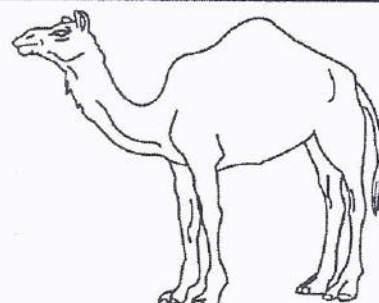
NAMING



[]



[]



[]

___/3

MEMORY

Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.

	FACE	VELVET	CHURCH	DAISY	RED
1st trial					
2nd trial					

No
points

ATTENTION

Read list of digits (1 digit/ sec.).

Subject has to repeat them in the forward order

[] 2 1 8 5 4

Subject has to repeat them in the backward order

[] 7 4 2

___/2

Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors

[] FBACMNAAJKLBAFAKDEAAAJAMOF AAB

___/1

Serial 7 subtraction starting at 100

[] 93

[] 86

[] 79

[] 72

[] 65

4 or 5 correct subtractions: 3 pts, 2 or 3 correct: 2 pts, 1 correct: 1 pt, 0 correct: 0 pt

___/3

LANGUAGE

Repeat : I only know that John is the one to help today. []

The cat always hid under the couch when dogs were in the room. []

___/2

Fluency / Name maximum number of words in one minute that begin with the letter F

[] _____ (N ≥ 11 words)

___/1

ABSTRACTION

Similarity between e.g. banana - orange = fruit

[] train - bicycle [] watch - ruler

___/2

DELAYED RECALL

Has to recall words
WITH NO CUE

FACE
[]

VELVET
[]

CHURCH
[]

DAISY
[]

RED
[]

Points for
UNCUED
recall only

___/5

Optional

Category cue

Multiple choice cue

ORIENTATION

[] Date

[] Month

[] Year

[] Day

[] Place

[] City

___/6

VAMC Saint Louis University Mental Status Examination Form Details

Who Can Complete the Form: Social Services, Reflections/Passages Program Coordinators, Licensed Nurses, MDs, NPs, OTs, PTs, Residence Supervisors and Other Qualified Healthcare Professional who have been trained (and retrained annually) by viewing the VA-produced DVD (available upon request to tumosan@slu.edu).

Purpose of the Form: To screen individuals to look for the presence of cognitive deficits, and to identify changes in cognition over time.

Instructions for Use:

1. Complete resident demographics at the top of the page.
2. We recommend that you put the date and the name of the evaluator on the bottom of the page as well (see #19).
3. Administration should be conducted privately and in the examinee's primary language. Be prepared with the items you need to complete the exam. You will need a watch with a second hand on it.
4. Record the number of years the patient attended school. If the patient obtained an Associates, Bachelor's, Master's or Doctorate degree, note the degree achieved instead of actual years of school attended.
5. Determine if the patient is alert. Do not answer "yes" or "no", but indicate level of alertness. Alert indicates that the individual is fully awake and able to focus. Other descriptors include: drowsy, confused, distractible, inattentive, preoccupied.
6. Begin by asking the patient the following:
"Do you have any trouble with your memory?" "May I ask you some questions about your memory?"
 Then proceed with the exam questions.
7. Read the questions aloud clearly and slowly to the examinee. It is not usually necessary to speak loudly but it is necessary to speak slowly.
8. Begin by asking the patient something similar to the following:
"Do you have any trouble with your memory?" "May I ask you some questions about your memory?"
"I'd like to see how good your memory is by asking you some questions." You may need to reassure patients by telling them that this is not a test that they can fail but merely a tool much like a thermometer that takes temperature is a tool. What this does is checks for the amount of memory they have.
 Then begin to administer the exam questions.
9. Score the questions as indicated on the examination.
10. On question #4, read the statement as listed on the exam. Ask the patient to repeat each of the five objects (Apple, Pen, Tie, House, Car) that you recite to make sure that the patient heard and understood what you said. Repeat them as many times as it takes for the patient to repeat them back to you correctly.

VAMC Saint Louis University Mental Status Examination Form Details

11. On question #5, make sure the patient is focused on you prior to reciting the information. Obtain an answer for the first part of the question ("How much did you spend") before moving on to part two ("How much do you have left?"). Do not prompt or give hints, but do give ample time to the patient to answer the questions. If the patient asks you to repeat the question you may do so once.
12. Redirect the patient's attention if necessary back to you to answer question #6. Give them one minute to complete the question. Be sure to time them.
13. Continue with the exam questions in the order that they are listed.
14. On question #8, state each number by its individual name. 87 is pronounced eight, seven; 649 is pronounced six, four, nine; 8537 is pronounced eight, five, three, seven.
15. On question #9, either draw a large circle on the back of the examination form or provide the patient with a separate piece of paper with a larger circle printed on it and attach it to the original examination form. When scoring, give full credit for either all 12 numbers or all 12 ticks. If the patient puts only 4 ticks on the circle, prompt them once to put numbers next to those ticks (12, 3, 6, and 9) for full credit. When scoring the correct time, make sure the hour hand is shorter than the minute hand and that the minute hand points at the 10 and the hour hand points at the 11.
16. You may also provide a separate sheet with larger examples of the forms listed on question #10 for those with vision impairment. This sheet should be created by enlarging the figures on the examination form and can also be attached to the original form.
17. Read question #11 as written, and provide ample time to answer each question. Do not repeat the story but do make sure they are paying attention the first time you read it to them. Do not prompt or give hints. The answer of Chicago as the state she lives in gets no credit but you may prompt them once by repeating the question.
18. Score the examination as listed at the bottom of the page, circling the level based on the score.
19. Sign and date the form.
20. **Upon Completion of the Form:**
 - ☒ Record the score in the patient's record and comment on any indicated changes
 - ☒ Depending upon office protocols, either put the sheet in the patient's record, place it in a separate identified location, or destroy the worksheet once the score is recorded in the patient record (Specify based on Office Center Policy)
21. **Form Status: (Varies by office)**

Mandatory for (e.g., patients with diagnoses or indicators of cognitive loss

Mandatory for _____

VAMC SLUMS EXAMINATION

Questions about this assessment tool? E-mail aging@slu.edu

Name _____ Age _____

Is the patient alert? _____ Level of education _____

/1

1 1. What day of the week is it?

/1

1 2. What is the year?

/1

1 3. What state are we in?

4. Please remember these five objects. I will ask you what they are later.

Apple

Pen

Tie

House

Car

5. You have \$100 and you go to the store and buy a dozen apples for \$3 and a tricycle for \$20.

/3

1 How much did you spend?

2 How much do you have left?

/3

6. Please name as many animals as you can in one minute.

0 0-4 animals

1 5-9 animals

2 10-14 animals

3 15+ animals

/5

7. What were the five objects I asked you to remember? 1 point for each one correct.

8. I am going to give you a series of numbers and I would like you to give them to me backwards. For example, if I say 42, you would say 24.

/2

0 87

1 649

1 8537

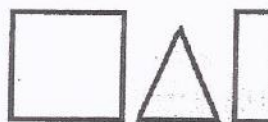
9. This is a clock face. Please put in the hour markers and the time at ten minutes to eleven o'clock.

/4

2 Hour markers okay

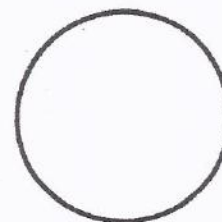
2 Time correct

1 10. Please place an X in the triangle.



/2

1 Which of the above figures is largest?



11. I am going to tell you a story. Please listen carefully because afterwards, I'm going to ask you some questions about it.

Jill was a very successful stockbroker. She made a lot of money on the stock market. She then met Jack, a devastatingly handsome man. She married him and had three children. They lived in Chicago. She then stopped work and stayed at home to bring up her children. When they were teenagers, she went back to work. She and Jack lived happily ever after.

/8

2 What was the female's name?

2 What work did she do?

2 When did she go back to work?

2 What state did she live in?

TOTAL SCORE

SCORING

HIGH SCHOOL EDUCATION

27-30

21-26

1-20

NORMAL

MILD NEUROCOGNITIVE DISORDER

DEMENCIA

LESS THAN HIGH SCHOOL EDUCATION

25-30

20-24

1-19

CLINICIAN'S SIGNATURE

DATE

TIME

Administration of the Tinetti Gait & Balance Instrument

The Tinetti Gait and Balance Instrument is designed to determine an elders risk for falls within the next year. It takes about 8-10 minutes to complete. The evaluator should review the questions prior to evaluation of the patient and ask any questions regarding the Instrument prior to beginning. The patient is asked to complete the gait portion first with the evaluator walking close behind the elder and evaluating gait steppage and drift. The patient is then asked to complete the balance portion with the evaluator again standing close by the patient (towards the right and in front). The patient is then asked to sit and the score is then totaled.

Scoring— The higher the score, the better the performance. Scoring is done on a three point scale with a range on each item of 0-2 with 0 representing the most impairment. Individual scores are then combined to form three scales: a Gait Scale, a Balance Scale and then an overall Gait and Balance score. The maximum score for gait is 12 points while the maximum for Balance is 16 points with a total maximum for the overall Tinetti Instrument of 28 points.

Score Interpretation

<19 High Risk for Falls
19-24 Risk for Falls

Not Clear on What Steppage Is?—Evaluators usually have the most questions about steppage. For a complete tutorial on gait analysis click below.

[Gait Analysis Tutorial](#)

Tinetti Assessment Tool: Description

Population:	Adult population, elderly patients
Description:	The Tinetti Assessment Tool is a simple, easily administered test that measures a patient's gait and balance. The test is scored on the patient's ability to perform specific tasks.
Mode of Administration:	The Tinetti Assessment Tool is a task performance exam.
Time to Complete:	10 to 15 minutes
Time to Score:	Time to score is included in time to complete
Scoring:	Scoring of the Tinetti Assessment Tool is done on a three point ordinal scale with a range of 0 to 2. A score of 0 represents the most impairment, while a 2 would represent independence of the patient. The individual scores are then combined to form three measures; an overall gait assessment score, an overall balance assessment score, and a gait and balance score.
Interpretation:	The maximum score for the gait component is 12 points. The maximum score for the balance component is 16 points. The maximum total score is 28 points. In general, patients who score below 19 are at a high risk for falls. Patients who score in the range of 19-24 indicate that the patient has a risk for falls.
Reliability:	Interrater reliability was measured in a study of 15 patients by having a physician and a nurse test the patients at the same time. Agreement was found on over 85% of the items and the items that differed never did so by more than 10%. These results indicate that the Tinetti Assessment Tool has good interrater reliability.
Validity:	Not reported
References:	<p>Lewis C. Balance, Gait Test Proves Simple Yet useful. <i>P.T. Bulletin</i> 1993; 2/10:9 & 40.</p> <p>Tinetti ME. Performance-Oriented Assessment of Mobility Problems in Elderly Patients. <i>JAGS</i> 1986; 34:119-126.</p>

Tinetti Performance Oriented Mobility Assessment (POMA)

- Balance Tests -

Initial instructions: Subject is seated in hard, armless chair. The following maneuvers are tested.

1. Sitting Balance

Leans or slides in chair	=0	
Steady, safe	=1	_____
2. Arises

Unable without help	=0	
Able, uses arms to help	=1	
Able without using arms	=2	_____
3. Attempts to Arise

Unable without help	=0	
Able, requires > 1 attempt	=1	
Able to rise, 1 attempt	=2	_____
4. Immediate Standing Balance (first 5 seconds)

Unsteady (swaggers, moves feet, trunk sway)	=0	
Steady but uses walker or other support	=1	
Steady without walker or other support	=2	_____
5. Standing Balance

Unsteady	=0	
Steady but wide stance(medial heels > 4 inches apart) and uses cane or other support	=1	
Narrow stance without support	=2	_____
6. Nudged (subject at maximum position with feet as close together as possible, examiner pushes lightly on subject's sternum with palm of hand 3 times)

Begins to fall	=0	
Staggers, grabs, catches self	=1	
Steady	=2	_____
7. Eyes Closed (at maximum position of item 6)

Unsteady	=0	
Steady	=1	_____
8. Turing 360 Degrees

Discontinuous steps	=0	
Continuous steps	=1	_____
Unsteady (grabs, staggers)	=0	
Steady	=1	_____
9. Sitting Down

Unsafe (misjudged distance, falls into chair)	=0	
Uses arms or not a smooth motion	=1	
Safe, smooth motion	=2	_____

BALANCE SCORE: _____/16

Tinetti Assessment Tool: Balance

Patient's Name: _____

Date: _____

Location: _____

Rater: _____

Initial Instructions: Subject is seated in a hard, armless chair. The following maneuvers are tested.

Task	Description of Balance	Possible	Score
1. Sitting Balance	Leans or slides in chair Steady, safe	= 0 = 1	
2. Arises	Unable without help Able, uses arms to help Able without using arms	= 0 = 1 = 2	
3. Attempts to arise	Unable without help Able, requires > 1 attempt Able to rise, 1 attempt	= 0 = 1 = 2	
4. Immediate standing balance (first 5 seconds)	Unsteady (swaggers, moves feet, trunk sway) Steady but uses walker or other support Steady without walker or other support	= 0 = 1 = 2	
5. Standing Balance	Unsteady Steady but wide stance (medial heels > 4 inches apart) and uses cane or other support Narrow stance without support	= 0 = 1 = 2	
6. Nudged (subject at max position with feet as close together as possible, examiner pushes lightly on subject's sternum with palm of hand 3 times.	Begins to fall Staggers, grabs, catches self Steady	= 0 = 1 = 2	
7. Eyes closed (at maximum position #6)	Unsteady Steady	= 0 = 1	
8. Turning 360 degrees	Discontinuous steps Continuous steps Unsteady (grabs, swaggers) Steady	= 0 = 1 = 0 = 1	
9. Sitting Down	Unsafe (misjudged distance, falls into chair) Uses arms or not a smooth motion Safe, smooth motion	= 0 = 1 = 2	
Balance Score:			

Tinetti Performance Oriented Mobility Assessment (POMA)

- Gait Tests -

Initial Instructions: Subject stands with examiner, walks down hallway or across room, first at "usual" pace, then back at "rapid, but safe" pace (using usual walking aids)

10. Initiation of Gait (immediately after told to "go")
 Any hesitancy or multiple attempts to start =0
 No hesitancy =1 _____
11. Step Length and Height
 Right swing foot
 Does not pass left stance foot with step =0
 Passes left stance foot =1 _____
 Right foot does not clear floor completely
 With step =0
 Right foot completely clears floor =1 _____
- Left swing foot
 Does not pass right stance foot with step =0
 Passes right stance foot =1 _____
 Left foot does not clear floor completely
 With step =0
 Left foot completely clears floor =1 _____
12. Step Symmetry
 Right and left step length not equal (estimate) =0
 Right and left step length appear equal =1 _____
13. Step Continuity
 Stopping or discontinuity between steps =0
 Steps appear continuous =1 _____
14. Path (estimated in relation to floor tiles, 12-inch diameter; observe excursion of 1 foot over about 10 ft. of the course)
 Marked deviation =0
 Mild/moderate deviation or uses walking aid =1
 Straight without walking aid =2 _____
15. Trunk
 Marked sway or uses walking aid =0
 No sway but flexion of knees or back or
 Spreads arms out while walking =1
 No sway, no flexion, no use of arms, and no
 Use of walking aid =2 _____
16. Walking Stance
 Heels apart =0
 Heels almost touching while walking =1 _____

BALANCE SCORE = _____/16

GAIT SCORE = _____/12

TOTAL SCORE (Gait + Balance) = _____/28

{ < 19 high fall risk. 19-24 medium fall risk. 25-28 low fall risk }

Tinetti Assessment Tool: Gait

Patient's Name: _____

Date: _____

Location: _____

Rater: _____

Initial Instructions: Subject stands with examiner, walks down hallway or across the room, first at "usual" pace, then back at "rapid, but safe" pace (using usual walking aids).

Task	Description of Gait	Possible	Score
10. Initiation of gait (immediately after told to "go")	Any hesitancy or multiple attempts to start No hesitancy	= 0 = 1	
11. Step length and height	a. Right swing foot does not pass left stance foot with step b. Right foot passes left stance foot c. Right foot does not clear floor completely with step d. Right foot completely clears floor e. Left swing foot does not pass right stance foot with step f. Left foot passes right stance foot g. Left foot does not clear floor completely with step h. Left foot completely clears floor	= 0 = 1 = 0 = 1 = 0 = 1 = 0 = 1	
12. Step Symmetry	Right and left step length not equal (estimate) Right and left step appear equal	= 0 = 1	
13. Step Continuity	Stopping or discontinuity between steps Steps appear continuous	= 0 = 1	
14. Path (estimated in relation to floor tiles, 12-inch diameter; observe excursion of 1 foot over about 10 feet of the course).	Marked deviation Mild/moderate deviation or uses walking aid Straight without walking aid	= 0 = 1 = 2	
15. Trunk	Marked sway or uses walking aid No sway but flexion of knees or back, or spreads arms out while walking No sway, no flexion, no use of arms, and no use of walking aid	= 0 = 1 = 2	
16. Walking Stance	Heels apart Heels almost touching while walking	= 0 = 1	
Gait Score:			
Balance + Gait Score:			

Appendix B-6

Geriatric Depression Scale (GDS)

Scoring Instructions

Instructions: Score 1 point for each bolded answer. A score of 5 or more suggests depression.

- | | | |
|---|------------|-----------|
| 1. Are you basically satisfied with your life? | yes | no |
| 2. Have you dropped many of your activities and interests? | yes | no |
| 3. Do you feel that your life is empty? | yes | no |
| 4. Do you often get bored? | yes | no |
| 5. Are you in good spirits most of the time? | yes | no |
| 6. Are you afraid that something bad is going to happen to you? | yes | no |
| 7. Do you feel happy most of the time? | yes | no |
| 8. Do you often feel helpless? | yes | no |
| 9. Do you prefer to stay at home, rather than going out and doing things? | yes | no |
| 10. Do you feel that you have more problems with memory than most? | yes | no |
| 11. Do you think it is wonderful to be alive now? | yes | no |
| 12. Do you feel worthless the way you are now? | yes | no |
| 13. Do you feel full of energy? | yes | no |
| 14. Do you feel that your situation is hopeless? | yes | no |
| 15. Do you think that most people are better off than you are? | yes | no |

A score of ≥ 5 suggests depression

Total Score _____

Ref. Yes average: The use of Rating Depression Series in the Elderly, in Poon (ed.): Clinical Memory Assessment of Older Adults, American Psychological Association, 1986

Geriatric Depression Scale (short form)

Instructions: Circle the answer that best describes how you felt over the past week.

- | | | |
|---|-----|----|
| 1. Are you basically satisfied with your life? | yes | no |
| 2. Have you dropped many of your activities and interests? | yes | no |
| 3. Do you feel that your life is empty? | yes | no |
| 4. Do you often get bored? | yes | no |
| 5. Are you in good spirits most of the time? | yes | no |
| 6. Are you afraid that something bad is going to happen to you? | yes | no |
| 7. Do you feel happy most of the time? | yes | no |
| 8. Do you often feel helpless? | yes | no |
| 9. Do you prefer to stay at home, rather than going out and doing things? | yes | no |
| 10. Do you feel that you have more problems with memory than most? | yes | no |
| 11. Do you think it is wonderful to be alive now? | yes | no |
| 12. Do you feel worthless the way you are now? | yes | no |
| 13. Do you feel full of energy? | yes | no |
| 14. Do you feel that your situation is hopeless? | yes | no |
| 15. Do you think that most people are better off than you are? | yes | no |

Total Score _____

FALL RISK ASSESSMENT

INSTRUCTIONS: Upon admission and quarterly (at a minimum) thereafter, assess the resident status in the eight clinical condition parameters listed below (A-H) by assigning the corresponding score which best describes the resident in the appropriate assessment column. Add the column of numbers to obtain the Total Score. If the total score is 10 or greater, the resident should be considered at HIGH RISK for potential falls. A prevention protocol should be initiated immediately and documented on the care plan.

			ASSESSMENT DATE: _____			
PARAMETER	SCORE	RESIDENT STATUS/CONDITION	1	2	3	4
A. LEVEL OF CONSCIOUSNESS/ MENTAL STATUS	0	ALERT -- (oriented x 3) OR COMATOSE				
	2	DISORIENTED x 3 at all times				
	4	INTERMITTENT CONFUSION				
B. HISTORY OF FALLS (Past 3 months)	0	NO FALLS in past 3 months				
	2	1 - 2 FALLS in past 3 months				
	4	3 OR MORE FALLS in past 3 months				
C. AMBULATION/ ELIMINATION STATUS	0	AMBULATORY/CONTINENT				
	2	CHAIR BOUND - Requires restraints and assist with elimination				
	4	AMBULATORY/INCONTINENT				
D. VISION STATUS	0	ADEQUATE (with or without glasses)				
	2	POOR (with or without glasses)				
	4	LEGALLY BLIND				
E. GAIT/BALANCE	To assess the resident's Gait/Balance, have him/her stand on both feet without holding onto anything; walk straight forward; walk through a doorway; and make a turn.					
	0	Gait/Balance normal				
	1	Balance problem while standing				
	1	Balance problem while walking				
	1	Decreased muscular coordination				
	1	Change in gait pattern when walking through doorway				
	1	Jerking or unstable when making turns				
	1	Requires use of assistive devices (i.e., cane, w/c, walker, furniture)				
	2	N/A - not able to perform function				
F. SYSTOLIC BLOOD PRESSURE	0	NO NOTED DROP between lying and standing				
	2	Drop LESS THAN 20 mm Hg between lying and standing				
	4	Drop MORE THAN 20 mm Hg between lying and standing				
G. MEDICATIONS	Respond below based on the following types of medications: Anesthetics, Antihistamines, Antihypertensives, Antiseizure, Benzodiazepines, Cathartics, Diuretics, Hypoglycemics, Narcotics, Psychotropics, Sedatives/Hypnotics.					
	0	NONE of these medications taken currently or within last 7 days				
	2	TAKES 1 - 2 of these medications currently and/or within last 7 days				
	4	TAKES 3 - 4 of these medications currently and/or within last 7 days				
	1	If resident has had a change in medication and/or change in dosage in the past 5 days = score 1 additional point.				
H. PREDISPOSING DISEASES	Respond below based on the following predisposing conditions: Hypotension, Vertigo, CVA, Parkinson's disease, Loss of limb(s), Seizures, Arthritis, Osteoporosis, Fractures.					
	0	NONE PRESENT				
	2	1 - 2 PRESENT				
	4	3 OR MORE PRESENT				
TOTAL SCORE		Total score of 10 or above represents HIGH RISK				
SIGNATURE: _____ DATE: _____		SIGNATURE: _____ DATE: _____				
1		3				
2		4				

NAME-Last

First

Middle

Attending Physician

Record No.

Room/Bed

Appendix B-8

Timed Up and Go (TUG) Test

Name: _____

MR: _____

Date: _____

1. Equipment: arm chair, tape measure, tape, stop watch.
2. Begin the test with the subject sitting correctly (hips all of the way to the back of the seat) in a chair with arm rests. The chair should be stable and positioned such that it will not move when the subject moves from sit to stand. The subject is allowed to use the arm rests during the sit – stand and stand – sit movements.
3. Place a piece of tape or other marker on the floor 3 meters away from the chair so that it is easily seen by the subject.
4. Instructions: "On the word GO you will stand up, walk to the line on the floor, turn around and walk back to the chair and sit down. Walk at your regular pace.
5. Start timing on the word "GO" and stop timing when the subject is seated again correctly in the chair with their back resting on the back of the chair.
6. The subject wears their regular footwear, may use any gait aid that they normally use during ambulation, but may not be assisted by another person. There is no time limit. They may stop and rest (but not sit down) if they need to.
7. Normal healthy elderly usually complete the task in ten seconds or less. Very frail or weak elderly with poor mobility may take 2 minutes or more.
8. The subject should be given a practice trial that is not timed before testing.
9. Results correlate with gait speed, balance, functional level, the ability to go out, and can follow change over time.

Normative Reference Values by Age

Age Group	Time in Seconds (95% Confidence Interval)	
60 – 69 years	8.1	(7.1 – 9.0)
70 – 79 years	9.2	(8.2 – 10.2)
80 – 99 years	11.3	(10.0 – 12.7)

Cut-off Values Predictive of Falls by

Group	Time in Seconds
Community Dwelling Frail Older Adults	> 14 associated with high fall risk
Post-op hip fracture patients at time of discharge ³	> 24 predictive of falls within 6 months after hip fracture
Frail older adults	≥ 30 predictive of requiring assistive device for ambulation and being dependent in ADLs

Date	Time	Date	Time	Date	Time	Date	Time

Appendix B-9

CarFit

Helping Mature Drivers Find Their Perfect Fit

DATE	PARTICIPANT #	VEHICLE MAKE, MODEL+YEAR



1. "Are you the only driver?"	YES	NO
If no, has the spouse been scheduled to go through the CarFit program today? If no, suggest the driver go through the CarFit items with the spouse at home.		
2. Is the driver using the vehicle's seat belt?	YES	NO
Does the driver use it all the time? If no, why?		
Is the belt being used correctly?	YES	NO
Is driver able to unbuckle/buckle and reach for the belt without problems?	YES	NO
Is driver is able to use the belt without discomfort?	YES	NO
3. Steering Wheel Tilt/Head Restraint	YES	NO
Can the driver view the speedometer?		
Is the steering wheel tilted up or down too much?	YES	NO
Does the driver know how to adjust the steering wheel?	YES	NO
Were verbal instructions given on the steering wheel tilt?	YES	NO
Is the head restraint properly adjusted to the center of the driver's head?	YES	NO
Does the driver know how to adjust the head restraint?	YES	NO
Were verbal instructions given on the head restraint?	YES	NO
4. Distance between chest and steering wheel (minimum 10")	Approx. _____ inches	
Can the concern be resolved via a seat adjustment?	YES	NO
5. Line of sight above steering wheel (should be 23")	Approx. _____ inches	
Can driver adjust seat with proper controls?	YES	NO
Were verbal instructions given on seat adjustment?	YES	NO
After ideal seat adjustment, has driver obtained 23" line of sight above steering wheel?	YES	NO
6. Positioning To Gas Pedal	GOOD	POOR
Is the driver able to reach and completely depress the gas pedal without reaching with his/her toes?	YES	NO
If the vehicle has a clutch, watch the left foot movement to and from this pedal. Ask the driver to depress the clutch completely. Note any problems.		
7. Positioning To Brake Pedal	YES	NO
Is the driver able to reach and completely depress the brake pedal without reaching with his/her toes?	YES	NO
Ask the driver to move foot between gas/brake pedals several times (without depressing the pedals).	YES	NO
Was the driver's foot placement adequate?	YES	NO
8. Mirror Use (Prior to changing mirror settings)	YES	NO
Can driver identify object in rear view mirror?	YES	NO
Can driver identify object in left outside mirror?	YES	NO
Can driver identify object in right outside mirror?	YES	NO

Were verbal instructions given on mirror adjustments?		YES	NO	
(IF APPLICABLE) After mirror adjustments, driver is able to obtain appropriate views through mirror(s).		YES	NO	<input checked="" type="checkbox"/>
9.	Neck Mobility For Blind Spot Check			
	Can driver identify object over left shoulder?	YES	NO	<input checked="" type="checkbox"/>
	Can driver identify object over right shoulder?	YES	NO	<input checked="" type="checkbox"/>
10.	Ignition Key: Driver is able to remove the key, place the key into the ignition and start the engine. (PLEASE ASK THE DRIVER TO SET THE IGNITION TO THE AUXILIARY POSITION; DO NOT TURN ENGINE FULLY ON.)	YES	NO	<input checked="" type="checkbox"/>
11.	Operation Of Vehicle Controls			
	Driver is able to reach/operate the right turn signal?	YES	NO	<input checked="" type="checkbox"/>
	Driver is able to reach/operate the left turn signal?	YES	NO	<input checked="" type="checkbox"/>
	Driver is able to reach/operate the emergency flashers?	YES	NO	<input checked="" type="checkbox"/>
	Driver is able to reach/operate the headlights?	YES	NO	<input checked="" type="checkbox"/>
	Driver is able to reach/operate the high/low beam headlights?	YES	NO	<input checked="" type="checkbox"/>
	Parking Brake: Driver is able to apply and release the parking brake. (ASK THE DRIVER TO REAPPLY THE PARKING BRAKE AND TO START THE ENGINE, LEAVING VEHICLE IN THE "NEUTRAL" POSITION)	YES	NO	<input checked="" type="checkbox"/>
	Driver is able to rotate steering wheel to far right?	YES	NO	<input checked="" type="checkbox"/>
	Driver is able to rotate steering wheel to far left?	YES	NO	<input checked="" type="checkbox"/>
	Driver is able to sound the vehicle's horn?	YES	NO	<input checked="" type="checkbox"/>
** At this point, please ask driver to start vehicle and drive slowly to checkout location for OT to conduct vehicle walk around and checkout.				
12.	Vehicle Walk Around			
	Ask the driver to get out and walk around the vehicle with you.			
	Driver is able to get in/out of vehicle with ease.	YES	NO	<input checked="" type="checkbox"/>
	Driver appears to have an adequate sense of balance.	YES	NO	<input checked="" type="checkbox"/>
	Driver is able to walk without difficulty.	YES	NO	<input checked="" type="checkbox"/>
	Driver appears to have adequate physical endurance.	YES	NO	<input checked="" type="checkbox"/>
	Driver uses an assistive device. Description:	YES	NO	
	Vehicle has scratches and/or dents.	YES	NO	
	Cause given:	YES	NO	
General Notes and Comments:		Seat belt Use:		
		<input type="checkbox"/> Seat belt not buckled <input type="checkbox"/> Shoulder strap is behind the driver's back <input type="checkbox"/> Shoulder strap is under the driver's arm <input type="checkbox"/> Seat belt is used correctly <input type="checkbox"/> Other:		

***Responses marked by a ☒ should be brought to the attention of the occupational therapist or driver rehabilitation specialist for a final check out.

CarFit is an educational program created by the American Society of Aging and developed in collaboration with AAA (American Automobile Association), AARP and the American Occupational Therapy Association.

D13576 (807)

Appendix C

**Dominican University of California
Department of Occupational Therapy****Healthy Seniors Program:** _____**Client's Name:** _____**SOAP Note Documentation Sheet****Date:****Duration:****S:****O:****A:****P:****Student's Signature:** _____**Instructor's Initials:** _____

Appendix D

Healthy Seniors Satisfaction Survey

Thank you for attending Healthy Seniors. Would you please take a few moments to answer the questions to help us provide better service? Your feedback is very valuable to us. Thank you!

Name of Client: _____

Name of Student: _____

Date: _____

Describe your experience with the Healthy Seniors Program.

What did you accomplish that you had hoped?

What was your least favorite thing about your experience?

What was your most favorite thing about your experience?

Do you have any feedback for us?



Healthy Seniors 2011 at Dominican University!

- Are you 60 years or older and interested in ways to stay healthy?
- Looking for ideas on how to live better with a chronic condition?
- Need a little extra help to recover after a recent injury or illness?

If you answered yes to any of the above, please consider attending a Health and Wellness Program, sponsored by the Dominican University of California Department of Occupational Therapy.

- ✓ The program will run for eight weeks, from September 22 to November 10 on Thursday afternoons, from 1:30-3:30 pm.
 - September 22, 29
 - October 6, 13, 20, 27
 - November 3, 10
- ✓ Participants will work individually with graduate occupational therapy students under the supervision of **Susan LeBlanc, MS, OTR/L** from the department of occupational therapy.
- ✓ Participants will be offered weekly groups on varied topics specific to your needs.

Issues and topics addressed will be individualized, and may include:

- Improving range of motion and muscle strength
- Recovering from cumulative trauma
- Coping with chronic physical conditions
- Fall prevention and home safety*
- Safe driving and community mobility
- Improving flexibility and endurance
- Nutrition, exercise and wellness
- Use of adaptive equipment

To enroll in the program, or for more information,
call Susan LeBlanc (415) 257-1374 ext. 2 or
email healthyseniors@dominican.edu

Appendix E-2

Contact: Dave Albee
Associate Director of Public Relations
Dominican University of California
(415) 257-1308
david.albee@dominican.edu

Dominican's Healthy Seniors program returns

(San Rafael, CA) The Department of Occupational Therapy at Dominican University of California is once again accepting seniors age 60 & over into its 2011 Healthy Seniors program.

In its second year, the eight-week health and wellness program, which starts September 22, will be held every Thursday through November 10 in the OT Department at Meadowlands Hall on the Dominican campus, as well as The Redwoods Retirement Community in Mill Valley. The Thursday clinics will be at The Redwoods from 10 a.m to noon and at Dominican from 1:30-3:30 p.m.

The program is designed to help seniors maintain their health, live better with chronic conditions and assist in recovery from recent injuries or illnesses.

Under the supervision of Susan LeBlanc, MS, OTR/L, from Dominican's OT Department, senior citizens will learn to improve their range of motion, flexibility and endurance, recover from cumulative trauma and cope with chronic physical conditions. Other issues and topics that will be individualized are learning fall prevention and home safety techniques, better nutrition, exercise wellness habits and safe driving and community mobility.

To enroll or for more information, contact Susan LeBlanc in Dominican's OT Department by calling 415-257-1374, Extension 2 or emailing healthyseniors@dominican.edu.

Appendix F

Dominican University of California
Department of Occupational Therapy
Healthy Seniors Program: Consent to Participate Form

I (name) _____, consent voluntarily to participate in the Healthy Seniors Program. I further certify that I am physically able to participate, and that I release Dominican University of California from liability for any incidents that may occur during my participation in the Healthy Seniors program. I understand that all my information will be confidential and only used in anonymous aggregate form for education or research purposes.

Signature _____

Date signed _____

Student Signature _____

Faculty Signature _____

Appendix G

Dominican University of California**Department of Occupational Therapy****Healthy Seniors Program Thesis Focus Group:
Consent to Participate Form**

I (name) _____, consent

voluntarily to participate in the Healthy Seniors

Program Thesis Focus Group. I release Dominican

University from liability for any incidents that may

occur during my participation in this Focus Group. I

understand that all my information will be confidential

and only used in anonymous aggregate form for

education or research purposes.

Signature _____

Date signed _____

Student Signature _____

Appendix H



November 29, 2011

Andrea Maffei
33 Windsor Avenue
San Rafael, CA 94901

Dear Andrea:

I have reviewed your proposal submitted to the Dominican University Institutional Review Board for the Protection of Human Subjects (IRBPHS Application, #9024). I am approving it as having met the requirements for an expedited review.

In your final report or paper please indicate that your project was approved by the IRBPHS and indicate the identification number.

I wish you well in your very interesting research effort.

Sincerely,

Sherry Volk, Ph.D.
Chair, IRBPHS

cc: Dr. Ruth Ramsey

Healthy Seniors Program Evaluation

[Exit this survey](#)

Appendix I

***1. Client Number**

Survey Monkey Sample

2. Site☐ Dominican☐ Redwoods☐ Other (please specify)**3. Sex**☐ Female☐ Male**4. Dates**

MM DD YYYY

DOB

 / /

Initial Assessment

 / /

Discharge

 / / **5. Justification for Treatment**☐ Mental Health Needs☐ Progressive Neurological Disorder (includes Alzheimer's, Multiple Sclerosis, Parkinson's, Huntington's)☐ Joint Replacement (hip, knee, or back)☐ Arthritis☐ Low Vision or Hearing Impairment☐ Cardiac or Pulmonary Condition☐ General Improvement of Health and Wellness☐ Other (please specify)**6. Activities of Daily Living**

Independent

Requires Assistance

(Not Stated)

Next

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Healthy Seniors Program Evaluation

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Daily Activity Assistance

7. Type of Daily Living Activity assistance required:

Requires Personal Assistant

Requires Assistive Device

Other (please specify)

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10. Social/Living Situation

lives with family, friends or home aide

lives in residential or assisted living community (includes convent)

lives alone

Other (please specify)

11. Driving Status (active drivers license)

Yes

No

12. Barriers to Progress/Goal Achievement

None

Emotional/Behavioral

Physical:

Social/Cultural

Cognitive/Communication:

Other (please specify)

13. Preferred Method of Learning

Visual

Auditory

Kinesthetic

Other (please specify)

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14. Functional Status

	Initial FIM (1-7)	Discharge FIM (1-7)
Functional	<input type="text"/>	<input type="text"/>
Communication - Comprehension	<input type="text"/>	<input type="text"/>
Functional	<input type="text"/>	<input type="text"/>
Communication - Expression	<input type="text"/>	<input type="text"/>
Cognitive Functioning - Social Interaction	<input type="text"/>	<input type="text"/>
Cognitive Functioning - Problem Solving	<input type="text"/>	<input type="text"/>
Cognitive Functioning - Memory	<input type="text"/>	<input type="text"/>
Self-Feeding	<input type="text"/>	<input type="text"/>
Hygiene/Grooming	<input type="text"/>	<input type="text"/>
Bathing - Upper Body	<input type="text"/>	<input type="text"/>
Bathing - Lower Body	<input type="text"/>	<input type="text"/>
Dressing - Upper Body	<input type="text"/>	<input type="text"/>
Dressing - Lower Body	<input type="text"/>	<input type="text"/>
Toileting - Bowel Hygiene	<input type="text"/>	<input type="text"/>
Toileting - Bladder Hygiene	<input type="text"/>	<input type="text"/>
Bed Mobility	<input type="text"/>	<input type="text"/>
General Transfer (chair/ wheelchair)	<input type="text"/>	<input type="text"/>
Toilet Transfer	<input type="text"/>	<input type="text"/>
Shower/Tub Transfer	<input type="text"/>	<input type="text"/>
Ambulation/ Wheelchair Mobility	<input type="text"/>	<input type="text"/>
Ambulation Distance	<input type="text"/>	<input type="text"/>
Home Management	<input type="text"/>	<input type="text"/>

Healthy Seniors Program Evaluation

Exit this survey

Occupational Therapy Assessment - Page 2

15. Upper Extremity Status

	Initial (0-360)	Final (0-360)
Range of Motion (Degrees)	<div></div>	<div></div>

16. Upper Extremity Status

	Initial (WFL, Not WFL)	Initial FIM (1-7)	Discharge (WFL, Not WFL)	Discharge FIM (1-7)
Range of Motion	<div></div>	<div></div>	<div></div>	<div></div>
Strength	<div></div>	<div></div>	<div></div>	<div></div>
Sensation - Pressure	<div></div>	<div></div>	<div></div>	<div></div>
Sensation - Temperature	<div></div>	<div></div>	<div></div>	<div></div>
Sensation - Stereognosis	<div></div>	<div></div>	<div></div>	<div></div>
Sensation - Etc	<div></div>	<div></div>	<div></div>	<div></div>
Coordination - Gross Motor	<div></div>	<div></div>	<div></div>	<div></div>
Coordination - Fine Motor	<div></div>	<div></div>	<div></div>	<div></div>
Coordination - Ataxia	<div></div>	<div></div>	<div></div>	<div></div>
Coordination - Dysmetria	<div></div>	<div></div>	<div></div>	<div></div>
Coordination - Etc	<div></div>	<div></div>	<div></div>	<div></div>
Balance/Posture	<div></div>	<div></div>	<div></div>	<div></div>

Explain Sensation &/or Coordination "Etc"

17. Vision-Perception-Cognition Skills

	Initial FIM (1-7)	Discharge FIM (1-7)
Cognitive Functioning - Attention/Concentration	<div></div>	<div></div>

Healthy Seniors Program Evaluation

[Exit this survey](#)

Occupational Therapy Assessment - Page 3

18. Plan/Education Provided

Completed

Therapeutic

Activities:

Therapeutic

Exercises:

Activities of Daily

Living:

Home Safety:

Assistive Devices:

Joint Protection:

Positioning:

Posture:

Symptom

Management

Balance:

Endurance/Energy

Conservation:

Cognitive Skills:

Social Skills:

Caregiver/Personal

Assistant Education:

Body Mechanics:

Disease Process:

Ergonomics:

Functional Mobility

19. Client's Personal Goals

Number Stated (0-10)

Number Met (0-Number Stated)

Healthy Seniors Program Evaluation Survey

3/11/12

Cognitive Functioning -
Memory/Learning

Visual Spatial
Processing - Visual
acuity

Visual Spatial
Processing -
Track/Scan

Visual Spatial
Processing - R/L
Discrimination

Visual Spatial
Processing - Body
Awareness

Visual Spatial
Processing - Spatial
Integration

Executive Functioning -
Initiation & Planning
Sequencing

Executive Functioning -
Abstraction & concept
formation

Executive Functioning -
Insight/Judgement

Executive Functioning -
Mental Flexibility

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Healthy Seniors Program Evaluation

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Assessment Scores

20. Score Totals

Score (see limits below left)

MoCA (1-30)

SLUMS (1-30)

Geriatric Depression
Scale (0-15)

Fall Risk
Assessment (0-32)

Berg Balance Scale
(0-56)

TUG Test (1-120)

Tinetti Gait
Assessment (0-12)

Tinetti Balance
Assessment (0-16)

Home Hazard
Screening Checklist

CARFIT (0-46)

Prev

Done

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