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*School of Occupational Therapy*

Increasing Quality of Life and Occupational Participation in Individuals with Dementia

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A capstone project submitted in partial fulfillment for the requirements of the Doctor of Occupational Therapy degree from the University of Indianapolis, School of Occupational Therapy.

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# A Capstone Project Entitled

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Submitted to the School of Occupational Therapy at University of Indianapolis in partial fulfillment for the requirements of the Doctor of Occupational Therapy degree.

By

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## Abstract

At a long-term care facility in mid-western Ohio, a secured memory care unit was created to provide structure, routine, and activities for individuals with early to late stages of dementia. There has been a lack of education and programming resulting in minimal organization of the unit and has put the residents at a higher risk for functional and cognitive decline as well as having the potential for behaviors that are associated with dementia. The approach of this Doctoral Capstone Experience (DCE) was three-fold: 1) establish and implement a Functional Maintenance Program (FMP) utilizing components from The Forget Me Not program (Warchol, 2004) and the Tailored Activity Program (Gitlin et al., 2009), 2) educate the therapy staff on the habilitative approach to intervention and the implementation of the FMP, and 3) educate nursing staff on the importance of structured activities and how to tailor activities to specific cognitive levels. The DCE student established the FMP by utilizing an “activity prescription” (Warchol, 2004) through the use of skilled occupational therapy services to relay pertinent information of the resident, as well as provided educational in-services to the nursing and therapy staff. All participants of the in-services reported understanding of the purpose and implementation of the FMP and were “satisfied” with the information presented. Nine residents had an activity prescription established and no changes in current functioning were observed. The FMP deems effective; however, it is recommended that the program continues to be evaluated and improved to increase staff carryover.

## **Background**

Dementia has been defined by Alzheimer's Disease International (n.d.), as a communal name for progressive brain conditions that affect a person's memory, thinking processes, behaviors, and emotions, and is the leading cause of dependency and disability upon the older adult population. It has been estimated that there are over 9.9 million new diagnoses of dementia each year worldwide with approximately 46.8 million people living with a form of dementia in 2015 (Alzheimer's Disease International, n.d.). Research suggested that as much as three quarters of people throughout the world who are living with dementia have not received a true diagnosis (Alzheimer's Disease International, n.d.). By the year 2029, all the baby boomers will be at and above 65 years of age (Colby & Ortman, 2014). With the baby boom generation currently approaching old age, it could be expected that the number of people with dementia will increase within the upcoming years as well as having increased risks for functional limitations (Palgi, Shrira, & Zaslavsky, 2015) and eventually lead to dependency. There is currently no cure for dementia; however, there is an abundant availability of support and treatment options for associated symptoms (Alzheimer's Disease International, n.d.).

Occupational therapy (OT) has a broad scope of practice and has been involved in providing interventions to individuals with dementia. Interventions include non-pharmacological and systematic approaches that are designed to improve or maximize functional abilities and independence within their environment (Ojagbemi & Owolabi, 2017). Furthermore, OT-based interventions can be tailored to address both cognitive and non-cognitive symptoms in persons with dementia (Ojagbemi & Owolabi, 2017). The goal of an occupational therapist is to achieve health and well-being through the participation of occupations or activities which will ultimately

promote, facilitate, and maintain health (American Occupational Therapy Association [AOTA], 2014). The World Health Organization (2006) defined health as “a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity” (p. 1).

Occupations are activities that involve daily living (ADLs), instrumental activities of daily living (IADLs), rest and sleep, education, work, play, leisure, and social participation (AOTA, 2014).

Through participation in occupations or activities, a person’s health and quality of life (QoL) can be enhanced thus reducing functional decline in older adults (Palgi et al., 2015) and persons with dementia (Gitlin et al., 2009).

Dementia has been perceived to lead to the decline of independence and identity in individuals and is linked to decreased QoL (Brod, Stewart, Sands, & Walton, 1999). The balance between an individual’s self-esteem, happiness, belongingness, and enjoyment are factors that impact QoL (Brod et al., 1999). However, measuring a person’s QoL is based primarily on subjective factors, and cognitive impairments may also affect their interpretation, specifically in persons with severe stages of dementia (Ojagbemi & Owolabi, 2017). A caregiver, of an individual with dementia may perceive a high or low QoL based on the level of dependency that the individual needs (Hoe, Hancock, Livingston, & Orrell, 2006). Research suggested that the main reason for decreased QoL is an individual’s functional independence (Steultjens et al., 2004) and that a higher QoL lessens the rate of functional decline (Palgi et al., 2015).

It has been proposed that the use of purposeful and meaningful activities enhances QoL in nursing home residents (Kolanowski & Buettner, 2008) and more specifically, individuals with dementia (Gitlin et al., 2009). Activities may help fill void, reduce behaviors, and maintain social roles in persons with cognitive impairments (Kolanowski, Buettner, Costa, & Litaker,

2001). Certain activities that are individualized are meant to maximize engagement and compensate for the cognitive deficits that are associated with different levels of cognition (Malone & Camp, 2007). Gitlin and colleagues (2009) advised that activities should be individualized and tailored to specific factors that are impacting a person with dementia. Occupational therapists can offer a non-pharmacological approach to treatment and have the knowledge to conduct assessments to determine the best activities for an individual (Gitlin et al., 2009) to maximize their best ability to function in all daily tasks and occupations.

In a study by Olsen and colleagues (2016), it was determined that persons with dementia residing in nursing facilities had significantly lower QoL, social support, and social contact as compared to individuals living at home with their dementia. One aim for this project is to enhance the QoL of individuals with lower cognitive levels that reside in a nursing facility by providing skilled OT services to maximize and maintain their best ability to function through establishment of a functional maintenance program (FMP) (Warchol, 2004). A secondary aim is to disseminate the implementation of the FMP to the therapy staff, consisting of occupational, physical, and speech therapists, as well as educate them on different approaches to skilled intervention. A third aim is to educate nursing staff on the importance of activities, how to utilize activities and the FMP to maximize quality of life and reduce risk for functional and cognitive decline. Research suggested that the main reason for a lower QoL is losing functional independence in persons with dementia (Steultjens et al., 2004); likewise, having a higher QoL reduces the progression of functional decline throughout late adulthood (Palgi et al., 2015). Based on each person's functional abilities, providing structured activities can be enjoyable experiences as well as promote physical health, reduce occurrence of negative behaviors, and

provide cognitive and social stimulation, thus potentially improve QoL in these individuals (Hindt, Morris, Sohre, & Buchanan, 2018). Occupational therapists (OTs) have the knowledge set to use functional and cognitive assessments to determine an individual's best ability to function based on the cognitive level and provide interventions to maximize and maintain those functional abilities. A potential limitation may be that nursing staff needs to assist with the carry-over of activities and allowing the individuals to participate at their highest functional level. Occupational therapists can include staff education in their plan of care for an individual with dementia; furthermore, it takes a team to provide adequate activities to maintain their functional abilities and maximize QoL. Positive staff interactions have proven to encourage well-being in those with dementia and has played a large impact in the engagement of daily activities (Eastham & Cox, 2017). Therefore, to maximize QoL in residents with dementia, OTs can use their skill set to determine the appropriate activities and modifications for the individual and can educate nursing staff on the patient's cognitive level including their abilities and limitations, and how to use activities as a way to not only increase participation but prevent and minimize negative behaviors (Fraker, Kales, Blazek, Kavanaugh, & Gitlin, 2014).

According to Bonnel and Smith (2018), choosing a framework helps to guide patterns of thinking as well as assists professionals to recognize the theoretical foundations within their practice. The Allen's Cognitive Levels (ACL) frame of reference, designed and created by OT, Claudia Allen, "focuses on the role of cognition (a process skill), the role of habits and routines, the effect of physical and social contexts, and the analysis of activity demand" (Cole & Tufano, 2008, p. 185). More specifically, the Allen's Cognitive Disability Model is comprised of six cognitive levels, ranging from zero to six and include corresponding abilities or limitations that

can be used to determine an individual's functioning to perform and participate in familiar activities (David & Riley, 1990) such as ADLs, for example. The term "functional cognition" has been used to describe the interactions between a person's cognitive abilities and the structure of an activity to create adequate performance (Earhart, 2013). With the use of therapeutic activities, disability can be compensated by allowing the individual to use their remaining abilities to complete meaningful activities (Allen, 1987) by providing them with activity modification and adaptations. By assessing and determining the Allen's cognitive levels (ACL) through a battery of functional and cognitive assessments, OTs have a measure on what a person can do (Allen, Blue, & Earhart, 1995). Occupational therapists can then select activities and interventions to maximize an individual's preserved capabilities and ultimately increase their participation to reduce risk for functional and cognitive decline and maximize their QoL.

It is important for OTs to focus on and improve an individual's best ability to function and not merely by the impairments that they have, particularly in older adults (Allen, Blue, & Earhart, 1995). More specifically, it is necessary to determine their abilities and select treatment and methods to maximize their functional abilities (Allen et al., 1995). In order to assess and determine a person's ACL, a battery of cognitive assessments should be used because cognition is the primary determinant of how a person functions in everyday activities at their full potential (Dementia Care Specialists, 2016). The ACL can measure what an individual can do and give a framework on what to expect from the abilities of a mentally impaired adult (Allen et al., 1995). All six of the ACL defines an individual's remaining abilities (Dementia Care Specialists, 2016). To determine specific cognitive levels, assessments, such as the Allen's Cognitive Level Screen (ACLS), Allen's Diagnostic Manual (ADM), and, for lower levels of cognition, the Routine Task



Inventory (RTI), can be administered and interpreted by an OT (Fraker et al., 2014). These assessments assist in answering the following questions: What can they do, what will they do, and what may they do? (Allen et al., 1995). Explicitly, what are their abilities, interests, and possibilities at each cognitive level? (Dementia Care Specialists, 2016). Treatment and interventions are then focused on the opportunity for an individual to use the best of their abilities to participate in daily occupations and activities (Allen et al., 1995).

What an individual may do can be best determined by the influence of their social support system (Allen et al., 1995). Within nursing home facilities, it is common to see the staff assisting with the residents' functional tasks when, essentially, the patient may not need the amount of assistance that is provided based on their abilities. Not allowing a resident to perform at their maximum potential may hinder their occupational participation potentially leading to decline in functional abilities, cognition, and overall QoL. When nursing staff can understand the specific dementia stages of their residents, within a nursing facility, they now have a roadmap to care for their remaining abilities which become the main focus (Fraizer & Moore, 2010). Having the knowledge to promote function of their residents' abilities, offers hope for the individuals resulting in increased compassion and caring for them (Fraizer & Moore, 2010). Occupational therapists can provide the nursing staff with education of the functional abilities at each cognitive level as well as how to tailor activities and ADLs to an individual. Once a program is established and education is provided, therapists and nursing staff can enable the residents to perform at their best ability to function (Fraizer & Moore, 2010). Ultimately, with the knowledge of the cognitive levels and finding the individual's best ability to function with activities and ADLs, the staff can reduce excess disability and promote well-being (Fraizer & Moore, 2010).

With the aging population increasing, it is possible that the number of people diagnosed with dementia will also increase in the upcoming years (Alzheimer's Disease International, n.d.). It is critical that therapists and nursing facilities recognize that in order to maximize the QoL of persons with dementia, activities that facilitate engagement, attention, and alertness should be provided to reduce the rate of decline (Kolanowski, Litaker, Buettner, Moeller, & Costa, 2011) and potentially maintain cognitive and functional abilities. The Diffusion of Innovations Theory can be utilized to communicate or diffusing an idea or practice (innovation) to others to help promote change through the channel of adopters (Scaffa, Reitz, & Pizzi, 2010). The channel of adopters ranges from their openness to adopt an idea (Scaffa et al., 2010); that is, if an idea or program deems itself positive and influential to the population. Occupational therapists can provide interventions and education to maximize participation in activities, tailored to the person's cognitive level, such as partaking in self-care tasks, leisure activities, or social participation, to name a few. If OTs can administer a battery of cognitive assessments, to determine the person's cognitive level, and obtain some of their interests and routines, then research will provide a guide to determine their ACL and their best ability to function. Thus, nursing staff can be educated to continue to provide appropriate activities to ultimately enhance the QoL of individuals with dementia. It is important for the research and theory to be disseminated in order for therapists and nursing facilities to provide best practice for people with dementia to maximize their best abilities and increase QoL.

### **Screening & Evaluation**

A needs assessment is completed in order to better understand the problems or apertures associated with different situations and provide a baseline for pursuing improvement (Bonnel &

Smith, 2018). At a skilled nursing and long-term care (LTC) facility in mid-western Ohio, as part of the Doctoral Capstone Experience (DCE), the DCE student completed a needs assessment that utilized skilled observations, interviews, and the use of a strengths/weaknesses/opportunities/threats (SWOT) analysis to document situations within the memory care unit at the facility and the therapy department relating to dementia care. According to Bonnel and Smith (2018), a SWOT analysis provides the opportunity to look at the four concepts (strengths, weaknesses, opportunities, and threats) to better understand an issue and ultimately create a plan to make improvements where needed. When a need is identified, it is important to research the literature to find evidence-based strategies on how to improve a problem or area (Bonnel & Smith, 2018). The following includes the data collected from the needs assessment in both the memory care unit and the therapy department, specifically with OT, as well as the need and an opportunity for the facility related to dementia care. The SWOT analyses are documented in Figures 1 and 2.

### **Memory Care Unit**

At the LTC facility, a secured memory care unit was designed for individuals with early and middle stage dementia. The purpose of the secured unit is to establish an area where individuals can interact safely with their environment and provide structure and routine to their daily lives through the use of activities. Because the unit is very new, the daily self-care routines and activity schedules have not yet been accustomed to and finalized. Within the unit, there are a variety of activities available to the residents and one-on-one assistance if needed for ADL tasks and participation with leisure activities. The nursing staff and aides are to provide out-of-bed

activities and encourage participation in order to establish engagement and structure to the day; however, there are multiple deficits impacting the current organization of the unit.

The nursing staff at the facility reported that the residents are wanting to stay in bed and sleep frequently throughout the day, as correspondingly described in research that residents spend less than 13% of the day performing activities (Bradshaw, Playford, & Riazi, 2012) and are unoccupied for the majority of the day (Smit, de Lange, Willemse, Twisk, & Pot, 2015). Research suggested that positive staff interaction with the residents will aide in the daily participation in activities (Eastham & Cox, 2017); however, it has been observed that the nursing staff is not encouraging the residents to participate in daily activities. Nursing staff reported that they are unsure how to tailor and grade activities to the group or an individual resulting in lack of participation. Researchers have discovered that residents with dementia avoid participating in activities by nursing staff because they were not tailored to their interests or cognitive levels such as an activity being too simplistic (Palacios-Ceña et al., 2016). Occupational therapists have the knowledge to select activities based on individual capabilities and not strain on their impairments such as cognition (Gitlin et al., 2009).

### **Therapy Department: Occupational Therapy**

Occupational therapists clearly have a role in providing skilled interventions and recommendations to individuals with dementia as well as their caregivers within a home-based setting (Gitlin et al., 2009). Because dementia is associated with the aging population as seen in LTC facilities, the whole therapy staff at the facility had received training on dementia capable care in 2016. The purpose of the course was to understand the different cognitive levels and stages of dementia and how to facilitate approaches to care, specifically with behaviors that may

be associated with dementia (Dementia Care Specialists, 2016). At this LTC facility, the OTs are required to use the ACL screenings on each patient in order to determine their cognitive level which, as reported, gives a reference on their ability to discharge back to home and how much assistance may be required at home or at the facility. Allen and colleagues (1995) reported that the ACL should be used as a method to discharge planning but also used to determine the individual's remaining abilities.

The OTs at the facility have expressed difficulties in providing effective and meaningful activities for patients in the middle to late stages of dementia, similar to that seen in research by Gately and Trudeau (2017). Interventions have often been directed towards wheelchair positioning or for a decline in functional status at this LTC facility with the dementia population. Commonly, the OTs have been assessing limitations and deficits of occupational performance rather than using a strengths-based approach for evaluation, intervention, and goal planning, as recommended by Gately and Trudeau (2017). Hindt and colleagues (2018) reported that short term memory as well as new learning is compromised in individuals with dementia; therefore, using a strengths-based approach for these individuals can help discover their preserved capabilities so that they can continue to require the least amount of assistance with their abilities and maintain those abilities (Gately & Trudeau, 2017). The OTs at the facility have been unsure how to write goals and provide interventions for the maintenance of abilities in order for services to be reimbursable through Medicare Part B, for example. Gitlin and colleagues (2009) suggested that services may be reimbursable when there is a physician's order and concern for safety, functional decline, or behaviors that may impact daily functioning.

### **Opportunities and Threats**

Because the memory care unit is in ample need for structure to maximize the QoL of persons with dementia, OT can facilitate participation in activities to reduce risk for functional and cognitive decline. Gitlin and colleagues (2009) created a Tailored Activity Program (TAP) in a home-based setting to not only reduce the behavioral symptoms associated with dementia but to also preserve their QoL. The program utilizes OTs for completing a variety of assessments, such as the ACL, to determine the individual's capabilities and interests, and then creates an "activity prescription" that includes specifics on their abilities, precise activities and goals, as well as techniques to implement the activities tailored to the individual (Gitlin et al., 2009). At this facility, the OTs have the knowledge to administer the cognitive assessments and determine the individual's best ability to function as well as their likes and interests. Interventions cannot focus on the maintenance of abilities due to most reimbursement policies; therefore, nursing staff needs to be educated to follow through with specific skills to maintain function. An activity prescription can be created to pass on to nursing staff within the memory care unit to better provide meaningful activities to the resident to reduce their risk for functional and cognitive decline and ultimately maximize their QoL. Both the nursing staff and the therapy department required education on the activity prescription as well as the importance of activities to reduce risk for decline in these individuals. Even though dementia is a progressive disease that impacts function, research has shown that purposeful activity can enhance the QoL of these individuals (Kolanowski & Buettner, 2008).

### **Implementation**

With the results of the needs assessment, a program was established within the memory care unit as part of the DCE. The purpose of a FMP is for the entire team, consisting of therapists, nursing staff, and aides, to come together to enable the resident to maintain the highest functional level that was achieved in therapy (Warchol, 2004). It can also help to give a measure to the functional and cognitive status of the individual so that nursing staff can report a change in status after discharge from therapy. When a new resident is admitted to the secured memory care unit at the facility, skilled OT services are warranted in order to determine the individual's cognitive level and their best ability to function in ADLs. Therapists can then facilitate intervention to maximize the patient's independence in self-care tasks and participation in out-of-bed activity and ultimately establish the FMP. The following contains the process the DCE student took to complete the evaluations and interventions within the memory care unit, how the FMP was established and maintained, educational in-services that were provided, as well as the components of leadership that were needed in order to make the program successful at the facility.

### **Evaluation and Interventions**

Based upon the traditional practices of OT and throughout the literature, the DCE student created a process for evaluation, intervention, and establishment of a FMP, to increase the QoL of the residents within the memory care unit at the facility. Upon evaluation, the OT DCE student completed a chart review of the patient's medical status and prior level of functioning, followed by collecting a brief occupational profile from the patient and family, if applicable, that includes their history and past experiences as well as patterns of daily living, as similarly described by AOTA (2014). The evaluation process progressed to assess their performance in

occupations (AOTA, 2014), such as with self-care tasks and functional transfers, and utilizes skilled observation to determine the patient's strengths and limitations. The evaluation of a person with dementia also included a battery of cognitive assessments in order to determine the patient's cognitive level or ACL that gives an insight into what the individual can do, will do, or may do (Allen et al., 1995) specifically with self-care tasks.

As components of the Allen's cognitive screens, the DCE student administered the ACLS leather lacing to determine the individual's cognitive level, if their level was greater than or equal to 3.2 (Allen et al., 1995). If the patient was unable to complete the ACLS potentially from a pivotal deficit, the DCE student administered the ADM placemat to evaluate the individual's general ability to function (Allen et al., 1995). These two measures are solely screens and need to be validated by another means (Allen et al., 1995). The book by Allen, Blue, and Earhart (1995), *Understanding Cognitive Performance Modes*, provided the modes of performance at different ACL scores and was used to help verify the score obtained from the screen. When using the modes of performance, the DCE student utilized clinical reasoning and judgement to determine the accurate ACL score for the patient. The modes of performance are helpful to determining goals to work towards in order to maximize performance in occupations (Allen et al., 1995). For example, if a patient has an ACL score of 4.4, a goal was written to maximize their best ability to function to match that ACL score with dressing, bathing, and toileting by utilizing the RTI and modes of performance as a means of interpreting results.

If the patient is participating at their best ability to function with ADL tasks, skilled OT services are still warranted to create and implement the FMP for the individual in order to maintain the current and maximum functional level. In other words, OTs can utilize the



habilitative approach to therapy focusing on maintaining their abilities and reducing the risk for further decline (Gately & Trudeau, 2017). According to the newsletter written by Raia and Koenig-Coste (1996), AOTA defined habilitation services as a method to assist an individual in improving, maintaining, or reducing the risk for decline in functioning throughout participation in occupations or activities. The newsletter continues to say that performance and participation would decrease without interventions focusing on continued maintenance (Raia & Koenig-Coste, 1996). When taking this approach to OT services, the DCE student created goals to be directed towards minimizing further decline, as recommended by Gately and Trudeau (2017), such as establishing a daily routine, increasing familiarity within the new environment, and maximize participation in out-of-bed activities to reduce the rate of functional and cognitive decline and enhance QoL. Warchol (2004) suggested to plan intervention to be of a short duration, approximately two weeks, in order to establish the FMP for carryover of the individual's maximum functional abilities.

After the initial evaluation had been completed, the DCE student and OT assistants (OTA) utilized the acquired information and goals to direct the interventions. If taking on a rehabilitative approach to treatment, the OT interventions focused on maximizing the patient's functional abilities to participate in ADLs while documenting the mode of performance or RTI for each task. A self-care goal was met once the individual was at their maximum ability to participate in a task centered on comparable scores of the ACL and modes of performance. When utilizing the habilitative approach to OT services, the DCE student focused interventions on determining the patient's likes and interests through an Interest Checklist, maximizing their participation in out-of-bed activities, and increasing familiarity within the environment such as

locating their room. Warchol (2004) suggested that activities were most important to supporting the function and well-being of individuals with dementia. The ACL score provided the DCE student with an insight on what type of activity modifications are required to amplify participation in activities. Research suggests that simple repetitive actions or sensory stimulation are activities that are affective for participation of individuals with lower cognitive levels whereas goal directed and multi-stepped activities are affective for individuals with higher cognitive levels (Gitlin et al., 2009). The ultimate goal when utilizing the habilitative approach within the memory care unit was to determine the patient's likes and interests, their best ability to function with ADLs, cues and assistance required to maximize their participation, and environmental modifications, which was all information communicated within the activity prescription.

### **Establishment of the Functional Maintenance Plan**

The design and establishment of the FMP at this LTC facility stemmed from two previously-established programs found in the literature: The Forget Me Not program (Warchol, 2004) and TAP (Gitlin et al., 2009). The Forget Me Not program was designed by an OT that designed her program around using the cognitive assessment tools to determine an individual's level of functioning and focuses on encouraging maximum functioning in occupations through the use of social and leisure activities within a LTC facility (Warchol, 2004). Within this program, the OT provides education to the nursing and activity staff on the individual's cognitive levels, abilities, and appropriate activities for the individual to participate in (Warchol, 2004). The Forget Me Not program takes on an interdisciplinary approach as it involves not only OTs but also physical and speech therapists (Warchol, 2004). As a team, the common goal is to allow

the individual to attain their maximum functioning and safety with ADLs, transfers, and functional mobility, as well as to increase their well-being (Warchol, 2004).

The TAP was developed by Gitlin and colleagues (2009) as a home-based OT intervention to reduce behaviors associated with dementia, increase their participation in activities, and improve caregiver well-being. The OT uses a combination of cognitive functioning tools, an interest questionnaire, and interviews to conduct an initial assessment. The program then uses an activity prescription to convey the individual's abilities, methods to implement a target activity, as well as a goal to strive for (Gitlin et al., 2009). Education is then provided to the caregiver that includes cueing, environmental set up, and communication, to name a few (Gitlin et al., 2009).

Taking components of the two aforementioned programs, the DCE student established an activity prescription, as part of a FMP, for this facility within the memory care unit. Components were comprised of the assessment results, strengths and abilities, interests, activity recommendations and goals, and instructions and modifications. The assessment results section included the ACL scores along with a brief synopsis of their current functioning with the modes of performance such as with dressing, toileting, bathing, and grooming tasks. These scores gave a measure of the individual's abilities so that nursing staff can determine if therapy needs to be consulted again for a potential decline or change in functioning. The strengths and abilities section of the activity prescription included the ADL performance and task analysis of the individual. More specifically, it included how much assistance and cues were needed to perform self-care tasks, how long an individual attends to an activity, level of communication, and their ability to problem solve, to name a few examples. The interest section provided a list of activities

and prior occupations and roles that were determined throughout the occupational profile, interest checklist, and implementation of activities throughout treatment. Activity recommendations and goals was the next section of the activity prescription and contained a list of activities to maximize participation and maintain functioning. For example, the section entailed the individual's routine recommendations, types of activities that they would benefit from, and goals to strive for after discharge. One of the most common goals that was applied is that the patient will participate in 100% of their daily ADL routine with set-up assist and 50% of out-of-bed leisure activities. The last section, instructions and modifications, involved information to enhance their participation and communication, and how to simplify the activities and setting. Examples of this section included the environmental set-up, types of cues needed, and allowing for choice. Occupational therapists, physical therapists, and speech therapists were all permitted to adding to the activity prescription to relay pertinent information; however, the OT DCE student took the leadership role in implementing the FMP for each resident.

Once discharge from OT services was approaching, the activity prescription was completed as a collaborative unit among all treating therapists for that specific patient. The DCE student was then responsible for educating the nursing and activity staff on the activity prescription and acquired their signature on the document indicating that they have reviewed and been educated on it. The activity prescription was copied, for therapy's records, and placed in the FMP binder that is located at the nursing station on the unit for future reference as needed. A screen, involving consultation with nursing staff and aides, was completed approximately two to three weeks after initial discharge from therapy, and will be screened again quarterly, to assure

the FMP is being implemented and to determine if the client is continuing to function at the best of their ability that was established at discharge.

### **Staff Development**

In order for the FMP to be effective, all team members must come together and be committed to the program and the care of the residents (Warchol, 2004) on the secured memory care unit. If one single team member does not have the commitment, desire, or patience, the program will not succeed (Warchol, 2004). Additionally, some or the majority of the nursing staff and aides may not have the knowledge to grade activities to the varying cognitive levels of each patient (Warchol, 2004) or know how to engage multiple residents in a particular group activity. Warchol (2004) suggested that as dementia progresses, the individual has more difficulty initiating and attending to activities and can result in deterioration of communication and occurrence of behaviors, thus leading to decline in participation in ADLs and leisure activities (Warchol, 2004). As an emerging area of practice, OTs have the knowledge and resources to provide education to the staff on the ACL and adaptations to activities in order to maximize participation (Chabot, 2013; Warchol, 2004).

The DCE student provided an in-service to the majority of nursing staff and aides within the facility. The DCE student provided a PowerPoint presentation on a variety of factors including the role of each team member within the unit, research behind the importance of activities and the implementation the FMP, components of the ACL, activity analysis descriptions and adaptations, as well as activity recommendations per cognitive level. A pre- and post-test was administered to the nursing staff with 100% of the group “satisfied” or “very satisfied” with the presentation and all members communicating an understanding of the FMP.

One-on-one consultation and education continued to occur throughout the DCE in order to enhance the understanding of the ACL scores and the activity adaptations associated with each cognitive level and individual's interests. The DCE student created a binder that included the PowerPoint presentation, information on the ACL scores, and the research behind the implementation of the FMP. Multiple copies were made and the binders were distributed within the unit, the therapy department, and to the activity director for future reference.

The DCE student provided one-on-one education and collaboration to the OTs and OTAs as well as an additional in-service to the complete therapy staff on the implementation of the FMP and how to continue with the established program. Occupational, physical, and speech therapists were educated on the research behind the establishment of the FMP as well as components of the activity prescription. The DCE student provided a handout that included examples for each section of the activity prescription as a reference for cohesion of the program. The therapists were also educated on how to notify and instruct the nursing staff and aides once the activity prescription is completed for the individual residents. A pre- and post-test was administered and all therapy staff members reported to have a general understanding of the FMP and its components including the research behind the establishment. One-hundred percent of the therapy group indicated that they were "satisfied" to "exceptionally satisfied" with the information provided through the in-service.

### **Leadership**

When implementing and educating staff on the development of a new program, having the skills of a leader truly helped the process. As the past president of AOTA, Gilfoyle (1989) gives several qualities of a good leader. She described a leader as a person who directs change,

builds confidence and empowers others, defines goals and visible directions, as well as performs actions that are related to their beliefs (Gilfoyle, 1989). Leadership is also personally defined as leading, guiding, and mentoring others and holding individuals accountable. The skills of a leader were required when implementing a new program however it was difficult to ensure the trust and support of others as a leadership role was taken.

In order to acquire a leadership role, the DCE student needed to gain rapport and trust with the staff at the facility and with the patients. The DCE student gained this rapport and trust by getting to know each of individuals and demonstrating the passion and desire that is embedded in order to make the program succeed. The DCE student shared knowledge from the research in order to show the potential for leadership and for success with the FMP. Displaying to others the opportunities for change by implementing tailored activities made them excited for the development of the FMP in order to increase the QoL of individuals residing in the memory care unit by maximizing their participation in activities. Once the research was presented and initial implementation was underway, the DCE student gained confidence and it empowered others to make a change. Staff was able to see the change in the residents and how the FMP impacted their QoL through participation in activities. The DCE student established visible directions and goals during one-on-one sessions with the nursing staff, aides, and therapists, as well as through the in-services that relayed the specific guidelines to implementation. As a team, the nursing and therapy staff were holding each other accountable for following the components of the activity prescriptions to the best of their ability for the residents. Ultimately, the DCE student has established and implemented a FMP with success from the whole team at the facility.

### **Discontinuation**

As referenced in Figure 1, the FMP within the memory care unit has limitations that can affect the program's continuation and success. The main concern is for staff carryover. Warchol (2004) reported that a program will not be successful if a single team member does not have the desire and commitment to make it succeed. The DCE student provided educational in-services as part of the implementation phase; however, there are additional strategies that can promote positive outcomes for the future.

Quality improvement not only focuses on gaining or improving the quality products or processes but also has a means of maintenance (Bonnell & Smith, 2018). To meet the second goal for the DCE, the DCE student established and distributed multiple documents to the therapy staff in a binder in order to continue with the program as it was initially developed. Some of those items include copies of previous PowerPoints from the in-services, examples for the activity prescription, a list of potential activity goals for the evaluation phase of skilled treatment, a created document of appropriate activities based on research from the ACL, as well as evidence-based articles that were used to create the program. The DCE student created an FMP binder to hold the completed and signed activity prescriptions as well as the interest checklists and two- to three-week screens. The DCE student created a log that was used to keep a trajectory of the patients discharged within the memory care unit and to designate approximate dates for the screens in order to assure staff carryover and determine if there has been a decline in functioning or participation. With the documents that are established, it is possible to continue with the implementation of the FMP to maximize the QoL of individuals with dementia; thus, goal two has been met. Future therapy students or current therapy staff can now have the resources to look



deeper into the structure of the program and continue to develop and improve it into something more such as implementing the program throughout the entire LTC facility.

In order to continue with the current maintenance of the program, the DCE student set up a couple procedures with staff at the facility. First, the PowerPoint, that was initially presented to nursing staff, was created into a paper-based one-on-one presentation that is to be reviewed with each “new hire” working within the memory care unit. Once educated, the “new hire” will sign their name on the created log indicating that they have been educated and has reviewed and understands the content within the PowerPoint such as the purpose of the FMP, the importance of activities and commitment to the program, as well as a review of the levels of dementia and activity adaptations per cognitive level. The DCE student’s mentor agreed that an additional in-service will be held yearly for all nursing staff as a review of the previous content. Finally, the family of the resident received a copy of their family member’s completed activity prescription as a tactic to hold the nursing staff and aides accountable for the activity recommendations and adaptations that was established by the DCE student.

Throughout the past several weeks at the facility, the FMP has been implemented with nine residents within the secured memory care unit and is currently in the process with an additional two residents that are still receiving skilled therapy services. The DCE student completed three-week post-screens on three residents indicating that there has not been any changes in current ADL functioning; however, out-of-bed activity participation has greatly decreased in one resident since discharge from both physical and occupational therapy. Potential reasoning for the decrease in activity could be due to staff carryover, reduced one-on-one activity intervention, or from the large increase in census since the resident’s discharge from therapy.

Kolanowski and colleagues (2011) suggested that residents may expect the activities that provide them with daily stimulation and may undergo poor consequences when the activities are no longer provided routinely, such as discharge from therapy. The DCE student provided the nursing staff with education on additional strategies to promote participation in activities based on the resident's cognitive level as well as a review of the importance of activities to reduce the risk for functional and cognitive decline and ultimately increase QoL; therefore, goal three has been met throughout this DCE. There is a need for continued improvement within the program however the FMP is responding to the society needs within the facility.

One of society's needs is to reduce the impact that dementia has on an individual's functioning and independence (Poulos et al, 2017). As a person ages, they gain a higher risk for disability and functional limitations (Palgi et al., 2015). Occupational therapy can provide a non-pharmacological approach to treatment (Ojagbemi & Owolabi, 2017) and have the knowledge to tailor activities to the individual (Gitlin et al., 2009). The process created by the DCE student will continue to be carried out by the OTs within the facility. An OT will complete an assessment to determine the individual's functional limitations as well as their functional abilities that remain. Occupational therapists can then use their knowledge to provide skilled intervention to maximize those abilities and promote participation in ADLs and leisure activities to reduce the risk for decline. The activity prescription is completed as an additional method to communicate the individual's abilities and how to maximize their participation in activities through their likes and interests as well as activity adaptations to allow them to participate at the best of their ability based on their cognitive level. Additional research suggested that the approach for treatment of these individuals should focus on maintaining their functional abilities, regaining the skills that

have been lost, and adapting the activity to maximize participation (Poulos et al., 2017). The DCE student created the FMP as a system to do just that; thus, meeting goal number one of this experience.

All humans need activity (Kolanowski et al., 2011). Personalized activities provides increased engagement and may help reduce the rate of cognitive and physical decline that is typically associated with dementia (Kowanowski et al., 2011). Throughout the OT process and establishment of the activity prescription for an individual, the DCE student utilized the person's interests and abilities to create and implement activities as a part of skilled intervention. The purpose of these activities was to not only promote strength, activity tolerance, and standing balance, for example, but also maximize their participation in out-of-bed activities to reduce excess disability (Fraizer & Moore, 2010) and potential for physical and cognitive decline (Kolanowski et al, 2011). Research suggest that individuals residing in a nursing home tend to be unoccupied for the majority of the day (Smit et al, 2015). The DCE student created the FMP to included engaging the individuals in daily group activities tailored to the cognitive levels, as stated on the activity prescription, in order to maintain client factors and reduce decline.

As suggested by Palgi and colleagues (2015), individuals who have a high QoL have a reduced risk for functional decline in the later years. By providing activities on memory care units, the QoL may improve by providing enjoyable activities (Hindt et al., 2018) and that staying active and involved in activities contributes to a higher QoL (Morhardt, 2004). Steultjens and colleagues (2004) suggest that OT-based interventions can help improve QoL by improving the individual's functional abilities. The DCE student designed the FMP to evaluate the functional abilities of the individual as well as their interests and provide interventions to

maximize their best ability to function with varying occupations based on their cognitive level.

The development of the activity prescription included strategies to allow the person to participate at their highest functional level and provided ideas to maximize their participation in daily activities. The ultimate goal of the FMP is for all team members to allow the resident to achieve a high QoL and maintain it (Warchol, 2004).

### **Overall Learning**

The DCE student has gained a great increase in general knowledge about how to foster a professional role and be a leader to organizing a FMP for the LTC facility throughout this experience of program development. The DCE student reviewed literature on multiple areas to gain a better understanding of the dementia population and the need for structured programming and activities in order to increase the QoL of these individuals residing on the memory care unit. Prior research in dementia-care programming has guided the DCE student in the creation of the FMP at the facility. Multiple pieces of literature expressed OT's role in dementia care and how they have the knowledge to tailor activities to the individual based on varying cognitive levels. The ACL provided a framework on assessing an individual's cognitive level and provided a guide on how to tailor activities to them in order to maximize the participation in functional and leisure activities (Allen et al, 1995). Throughout this experience, the DCE student learned how to utilize the therapeutic use of self to communicate with each of the residents as well as families and staff at the facility in a professional manner.

The DCE student has determined that communication is a large aspect of making a program successful. By this experience, the DCE student learned that in order for a program to become effective and successful, other members of the team need to understand the purpose and

the components of the program. Written documents and educational sessions, both through in-services and through one-on-one consultation, were needed in order to create a buy-in for the staff by communicating a need for the program and how to make the FMP successful.

Collaboration with additional therapists, nursing staff, and aides was required from the DCE student to master the whole impression of each resident within the memory care unit to understand their likes and interests as well as their best ability to function with self-care tasks and through daily activities. Once the activity prescription had been completed, the DCE student educated the nursing staff and aides on the components as well as the individual's family, if applicable. The DCE student learned that taking on a professional role required assertiveness, motivating others, and demonstrating excitement for what the program has to offer.

The DCE student also provided advocacy for the role of OT as well as the need of the FMP throughout the experience at the facility. The nursing staff had a general understanding of the purpose of OT however required increased education on how OT can promote engagement in activities and increase overall QoL of these individuals by utilizing a habilitative approach to intervention. The DCE student provided additional explanation of OT's role to family members of the residents within the unit. Several families reported that their family member does not need therapy services however, when the DCE student explained the purpose of OT in the creation of the FMP, family members were very willing and were engaged throughout the establishment of the activity prescription for their loved one. One family member in particular volunteered her time to implement an activity group approximately one time per week in order to increase the activity participation of others within the unit. By the end of this experience, families, nursing

staff and aides, as well as the additional therapists understood the importance of activities for these individuals and had a respect for the OT profession specifically with dementia care.

Taking on a leadership role throughout the experience required a lot of patience, time, hard work, and confidence. Once the DCE student initially established the FMP, it was important to continue to communicate with each team member in order to make the program successful. The DCE student has educated the therapy staff on how to continue with the implementation of the activity prescription and how to assure the FMP will continue to be successful. Throughout this experience, additional OTs and OTAs have begun to taking the lead, through mentorship by the DCE student, on providing skilled interventions to the individuals on the memory care unit and has done a great job with implementing the activity prescription and educating staff and family on the document. The DCE student has demonstrated confidence throughout the entire process of implementation of the program.

### **Conclusion**

The DCE student has created a successful FMP as well as provided education to the nursing staff on the importance of structured activities, how to tailor activities to the residents' cognitive levels, and how to implement the activity prescription to maximize the individual's participation in ADLs and out-of-bed activities. The DCE student has also provided education and multiple documents to the therapy staff on how to utilize the habilitative approach to intervention, complete of the activity prescription, and continue with the sustainment of the FMP. By the DCE student providing the facility with education and documents, the success of the FMP is expected to continue.

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Figure 1. SWOT Analysis for the Memory Care Unit



*Figure 1.* Strengths/weaknesses/opportunities/threats analysis of the memory care unit at the SNF. Established through observation and interviews during the doctoral capstone experience.

Figure 2. SWOT analysis for the Therapy Department



*Figure 2.* Strengths/weaknesses/opportunities/threats analysis of the therapy department, specifically OT, at the SNF. Established through observation and interviews during the doctoral capstone experience.