

**CONNEKT: Developing a Framework to Improve Engagement Between Residents with
Dementia and Their Families**

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Introduction

Background

Dementia is a growing problem globally, with prevalence rates increasing by around 10 million cases per year (World Health Organization [WHO], 2025). Out of the approximately 62 million older adults living in the United States, roughly 6.9 million have been diagnosed with Alzheimer's dementia, the most common form of dementia (Alzheimer's Association, 2024; Schaeffer, 2024; WHO, 2025). Additionally, the number of new U.S. dementia cases per year is predicted to climb from 514,000 in 2020 to 1 million in 2060 (Fang et al., 2025). The term "dementia" is used to describe a group of conditions that impacts cognition and performance of daily occupations (WHO, 2025). Despite the introduction of the new term, "major neurocognitive disorders," in place of dementia by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR), an updated version of the DSM-5, the term "dementia" is still used in the literature and in healthcare settings (American Psychiatric Association, 2022). This disease encompasses three general stages (mild, moderate, and severe), with the person with dementia progressing through the stages as their condition and abilities worsen (Cleveland Clinic, 2025). With the increase in yearly dementia cases and the progressive decline in independence the disease causes, more caregivers and healthcare staff will be needed to care for individuals with dementia.

Currently, over 11 million individuals have become informal (unpaid) caregivers to individuals with dementia, many of whom are family members and friends (Alzheimer's Association, 2024; WHO, 2025). Care provided by these individuals frequently involves assisting in the person's daily occupations including feeding, bathing, dressing, grooming, toileting, mobility, meal preparation, driving, community mobility, financial management, and

shopping (Alzheimer's Association, 2024; American Occupational Therapy Association [AOTA], 2020). Due to providing this level of assistance, informal caregivers experience challenges, including burden and stress (Alzheimer's Association, 2024; Huelat & Pochron, 2020). These challenges frequently lead to individuals with dementia requiring care in a long-term care setting, such as a skilled nursing facility (or a nursing home). While numbers vary, in general, approximately 46% of skilled nursing facility residents have dementia (Alzheimer's Association, 2024; National Center for Health Statistics, 2023).

Problem Statement

Because residents with dementia comprise a large portion of the skilled nursing facility population, it is important to understand their experiences and needs. One such experience is decreased engagement in meaningful (or purposeful) activities, which has been frequently observed by researchers and reported by residents (Adlbrecht et al., 2022; Davison et al., 2019; den Ouden et al., 2015; Gebhard & Frank, 2024; Tak et al., 2015). Additionally, families of these residents experience challenges interacting with them due to dementia-related declines in cognition, behavior, communication, emotion, and physical abilities (Denning, 2021; van Corven et al., 2022; WHO, 2025). Further, activities completed by families during visits often involve talking, walking, and completing care-related activities with the residents, with some leisure activities, such as crafts or sports, being completed less frequently (Cohen et al., 2014; Hartmann et al., 2017; van Corven et al., 2022).

Purpose Statement

To address these challenges, activity kits have been developed for individuals with dementia and their families and have demonstrated positive results (Cohen-Mansfield & Cohen, 2026; Crispi & Heitner, 2002). Thus, the purpose of this project was to develop the CONNEcting

individuals with dementia and families KiT (CONNEKT) and determine its effectiveness at improving engagement during meaningful activities between skilled nursing facility residents with dementia and their families.

Significance Statement

Because a meaningful activity is one that is “...enjoyable, suited to the individual’s interests and abilities, related to a personally relevant goal, [and] engaging and reinforces or expresses an aspect of an individual’s identity,” these activities can include a broad range of occupations (Tierney & Beattie, 2020, p. 9). As such, occupational therapists are primary members of the skilled nursing facility team to understand and improve engagement in these activities. Additionally, occupational therapists are equipped to aid families and residents with dementia in overcoming challenges to engage in activities by adapting the activities, modifying the environment, and using activity analysis to break down the activities into specific steps (AOTA, 2020). Further, because dementia causes declines in multiple areas of a person’s health (e.g., physical, cognitive, social, etc.), it is within the profession’s scope to assist families and residents in overcoming these challenges to engage in meaningful activities together (AOTA, 2020).

Literature Review

Resident Activity Engagement

Typical Daily Engagement

Skilled nursing facility residents are often not engaged in meaningful activities during their typical day. Although research indicates that residents with dementia spend varying amounts of daily time participating in meaningful activities, most studies found this engagement occurs in approximately half of their day or less (Adlbrecht et al., 2022; den Ouden et al., 2015;

Gebhard & Frank, 2024). For example, den Ouden et al. (2015) completed a cross-sectional observational study of 723 residents living in 30 wards in seven nursing homes in the Netherlands. All residents in each ward were observed for one minute, and the observers noted residents' activity engagement and positioning during the activity. The authors found that residents were most often observed to be inactive (i.e., sleeping, watching television, or doing nothing) and were mainly observed in sitting or lying positions. Residents were engaged in activities of daily living (e.g., mobility, dressing, bathing, etc.), instrumental activities of daily living (i.e., domestic activities and food/drink preparation), and communication and hobbies in the other observations, though instrumental activities of daily living and hobbies were observed far less than inactivity (den Ouden et al., 2015).

Conversely, Gebhard and Frank (2024) observed 46 residents with mild to moderate dementia living in five long-term care facilities in Germany and completed qualitative interviews with 17 of these residents to understand boredom. Residents were observed for one minute, and the authors found that roughly half of the time, the residents were inactive. In the other half of the observations, the residents engaged in some activities of daily living (i.e., eating/drinking and care activities), leisure activities, and walking (Gebhard & Frank, 2024). Similarly, Adlbrecht et al., (2022) completed an observational study with 87 residents with (primarily) moderate dementia living in traditional nursing homes or dementia special care units in three nursing homes in Austria. Residents were observed for one minute, and the authors observed engagement in purposeful activities in nearly half of the observations (Adlbrecht et al., 2022). In the other portion of the observations, the authors observed the residents sleeping/resting or completing passive/purposeless activities (e.g., sitting, wandering, rubbing their hands, etc.). In this study, Adlbrecht et al. (2022) listed watching television as a purposeful activity, which is unlike Ouden

et al. (2015) which categorized watching television as inactivity. Similar to Adlbrecht et al. (2022), Gebhard and Frank (2024) also categorized watching television as a leisure (purposeful) activity. The inclusion of watching television as a purposeful activity may be a reason for Adlbrecht et al. (2022) and Gebhard and Frank (2024) observing a higher amount of resident engagement in purposeful activities compared to Ouden et al. (2015).

Engagement in Meaningful Activities

Though skilled nursing facility residents with dementia are often not engaged in meaningful activities, they desire this type of engagement. Participating in activities that are meaningful and allow them to make contributions is often linked to residents' better quality of life (Davison et al., 2019; Ripley et al., 2024; Tak et al., 2015). For example, Ripley et al. (2024) completed semi-structured interviews with and observations of residents with moderate to severe dementia living in long-term care homes. The authors also conducted semi-structured interviews with family members of the residents and staff working in the long-term care homes to understand their views on rehabilitation goals. Ripley et al. (2024) identified the primary theme of rehabilitation goals to include function, mobility, and quality of life, and participants referenced the ability to engage in preferred activities when discussing this theme. Interviewees frequently linked social connections (especially with family members and friends) with the quality of life of the residents (Ripley et al., 2024). Similarly, Tak et al. (2015) completed semi-structured interviews with 31 residents with mild to moderate dementia living in nursing homes in the United States. Unlike Ripley et al. (2024), Tak et al. (2015) aimed to understand residents' experiences with engagement in general (i.e., not related to rehabilitation goals). The residents discussed their interest in engaging in meaningful activities but reported decreased opportunities

to participate in activities in the facilities and their lack of interest in participating in some of the activities offered by the facilities (Tak et al., 2015).

Additionally, Davison et al. (2019) completed interviews with 12 residents with dementia living among 10 resident aged care facilities (including nursing and long-term care homes) in Australia. The authors sought to understand how the residents adjusted to their admission into the facilities. Similar to Ripley et al. (2024), Davison et al. (2019) also completed interviews with family members and staff. Davison et al. (2019) found that participants reported the importance of residents being able to engage in meaningful activities. Residents also discussed feeling separated from their past lives and the activities in which they previously engaged due to their admission into the facilities. Similar to the findings of Tak et al. (2015), the participants in Davison et al. (2019) also described having decreased opportunities to participate in activities at the facilities. While these qualitative studies identified similar concepts regarding resident engagement, the studies included participants with differing dementia stages, with no one study including participants among all three stages of dementia.

Setting Limitations Impacting Engagement

One limitation of skilled nursing facilities that impacts dementia residents' daily engagement in meaningful activities is staff availability and staffing challenges. A survey of 759 nursing homes in the United States completed in 2022 demonstrated staffing shortages for 87% of these facilities (American Health Care Association [AHCA], 2022). This survey also identified difficulty obtaining new staff for 98% of these nursing homes. However, data from an updated American Health Care Association (2026) report demonstrates some improvements among nursing homes in the United States, including better workforce numbers and situations and declining nursing staff turnover rates. However, according to a skilled nursing facility

workforce report from MissionCare Collective (2025), on average, skilled nursing facilities experience an 82% turnover rate. This turnover rate is often impacted by factors including low wages, decreased benefits, and a burdensome workload. The report cites a 1:13 certified nursing assistant to resident ratio among these facilities (MissionCare Collective, 2025). These components, in turn, affect the type and quality of care that is provided to residents, with decreased retention rates leading to new staff having to take time to learn about residents and their needs. The number of care staff members and the quality of their work environment impact the care provided to residents by these individuals, further affecting the daily engagement of residents with dementia.

Another limitation of skilled nursing facilities that impacts dementia residents' daily engagement in meaningful activities is the design/organization of the facilities. When observing residents in dementia special care units and in traditional nursing homes (e.g., skilled nursing facilities), Adlbrecht et al. (2022) found that in the afternoon, residents with dementia in special care units were more often engaged in purposeful activities and social interactions compared to residents with dementia living in traditional nursing homes. Special care units may offer a more home-like environment in the communal areas, which could be a reason these residents spend more time there compared to residents in traditional nursing homes (Adlbrecht et al., 2022). Special care units also provide their staff with frequent education and trainings so that staff can directly engage residents with dementia in individualized activities (e.g., cooking, reading, etc.) which are offered over the course of the day. Further, the home itself provides an improved environment for individuals with dementia. For example, Olsen et al. (2016) completed a cross-sectional study to compare the quality of life (and some aspects of physical health) between 78 nursing home residents with dementia and 115 individuals with dementia living at home in

Norway. The authors found that those still living at home had better quality of life, were more active throughout the day, required fewer assistive mobility devices, and obtained better sleep. The authors also found that although around half of the individuals residing at home lived alone, they socialized more with their family members and friends compared to the nursing home residents. The percentages of residents with mild, moderate, and severe dementia included in the study were 9%, 43.6%, and 47.4%, respectively (Olsen et al., 2016). The percentages of home-dwelling individuals with mild, moderate, and severe dementia included in the study were 43.5%, 47%, and 4.3%, respectively. The increased percentage of home-dwelling persons with mild dementia compared to residents with mild dementia could be a cause for the authors' findings of better quality of life and health for home-dwelling people with dementia compared to the residents with dementia.

Further, a systematic review of qualitative studies identified aspects of the home environment that facilitated better quality care and life for persons with dementia (Soilemezi et al., 2019). This included aspects such as the ability for the home environment to be adapted to the person's individual needs, the families' ability to improvise and identify helpful strategies, and the ability to maintain routines and familiarity within the home space. Continuing familiar routines for as long as possible is important, as many individuals with dementia fear that they will no longer be in control of their routines, and ultimately, their independence (The Center for Brain/Mind Medicine, n.d.). Allowing home-dwelling individuals with dementia to continue making decisions for themselves and keep up their routines can reduce their anxiety and agitation. Family members are key in assisting individuals with dementia in continuing to live safe and healthy lives at home. Similarly, families also greatly contribute to the health and functioning of their loved ones after they have been admitted into skilled nursing facilities.

Engagement Between Residents and Family

Family Visits

As their loved one declines with the progression of dementia, family members may experience difficulty interacting and engaging with the resident with dementia when visiting them in a skilled nursing facility (Davison et al., 2019; van Corven et al., 2022). Dementia-related decline often includes apathy, becoming distracted, not remembering family or friends, difficulties with problem-solving and maintaining conversations, aggressive behaviors and changes in personality, and declining mobility (Denning, 2021; WHO, 2025). In a longitudinal qualitative study aimed to understand the relationships and connections between nursing home residents with dementia and their families, van Corven et al. (2022) completed interviews with 31 family members of residents living in psychogeriatric units among five nursing homes in the Netherlands. First, participants discussed residents' decline in communication skills, which included decreases in cognition, recognition of family members, and initiation of conversations as well as behavioral changes. Second, participants described the changed quality of their relationship. This included the ability of some families to maintain continued strong connections with the residents, with some families attributing this to their already strong bond with them. Other families reported decreased connections with the residents, and the families felt that the relationship lacked depth or that they were unable to connect with them. Lastly, regarding families' experiences with the relationship changes, many families discussed feelings of difficulty with seeing the residents' deterioration and "losing connection" between them and the resident (van Corven et al., 2022, p. 5). Conversely, some family member participants in Davison et al. (2019) reported negative changes in their relationship with the residents with dementia due to residents viewing their family members as the reason for their admission into a facility.

Additionally, families of residents with dementia experience barriers that impact how often they visit the residents (Miller, 2019). In a systematic review to understand impacts on family visits of nursing home residents living in the United States, Miller (2019) identified seven barriers to family visits. These barriers were categorized as being psychological, health-related, related to staff-family relationships, financial, travel-related, transportation-related, and other (personal/socioeconomic-related) category (Miller, 2019). Psychological barriers were the most frequently identified from the literature and included feelings such as guilt or discomfort while visiting the nursing homes. Similarly, Afram et al. (2015) also identified feelings of guilt and self-blame among family members of nursing home residents with dementia in their systematic review, though the authors did not discuss the impacts of these feelings on family visit frequency.

Further, during visits with the residents with dementia, families may complete activities with the residents. These activities often include walking, talking, going outdoors, reminiscing, assisting the resident in eating/nutrition, singing, listening to music, watching television, and caring for the resident's appearance (Cohen et al., 2014; Hartmann et al., 2017; van Corven et al., 2022). For example, Cohen et al. (2014) interviewed 467 families and 381 staff members regarding family involvement of residential care/assisted living and nursing home residents with mild/moderate to severe dementia from 24 facilities in the United States. The families of residents with dementia reported visiting around 20 times per month, whereas staff reported families visiting around 13 times per month. These families also discussed playing games/conversing, doing laundry, assisting the residents with walking and eating/nutrition, and taking care of the residents' appearances during their visits (Cohen et al., 2014).

Similarly, in a secondary analysis of a prospective cohort study in Germany in which 119 family members of nursing home residents with dementia were surveyed, families reported visiting approximately six to seven times per two weeks for roughly one to two hours per visit (Hartmann et al., 2017). Most families reported completing talking and walking with residents, some families reported completing care tasks, and few families reported completing crafts and sports (Hartmann et al., 2017). Additionally, families in van Corven et al. (2022) reported going outdoors, walking, reminiscing, singing, listening to music, watching television, arranging the resident's wardrobe, and drinking coffee/assisting with eating to connect with the residents. These families also discussed becoming limited in the activities they completed due to the declining health of both families and the residents (van Corven et al., 2022). Further, the families explained how conversing with the residents was sometimes challenging and that they sometimes preferred to have another individual involved in the conversation with whom to converse. Additionally, the frequency of these family visits can positively or negatively impact residents with dementia.

Impacts on Residents

From research performed during the COVID-19 pandemic, it is now known how drastic changes and restrictions limit family visits and social connection and negatively impact residents' health (Gibson et al., 2025). In a study to understand families' experiences with restrictions due to the COVID-19 pandemic, Gibson et al. (2025) completed interviews with 15 family members of long-term care home residents in Canada. Participants reported losing connections and relationships with the residents. Family members who were allowed to visit (sometimes from outside a window or behind a fence) have observed that their loved one with dementia appeared to have poorer cognitive and physical health during their visits (Gibson et al.,

2025). Additionally, some family members cite not being able to see their loved one with dementia during this time as the reason for their loved ones' premature death.

During times when families are allowed to freely visit skilled nursing facility residents, these family visits may not be as frequent as residents with dementia expect them to be. Residents often wait for their families to visit them and may feel disappointed when their families are not there to visit them or be a part of their lives (Moyle et al., 2011). With families visiting less frequently, some residents may seek their missing connection with facility staff; however, this may not feel the same to residents as connecting with their family members. This may be due to residents viewing staff members as fulfilling their work duties as opposed to solely visiting for a connection. Additionally, staff-resident relationships are not the same as family-resident relationships due to the power dynamic between staff and residents. Conversely, family visits positively impact residents with dementia (van Corven et al., 2022). Family members participating in van Corven et al.'s (2022) qualitative study described how the residents smiled, demonstrated better mood, and appeared to enjoy or verbalized enjoying the families' visits.

Interventions for Engagement in Meaningful Activity

Due to the importance of engaging in meaningful activities for skilled nursing facility residents with dementia, interventions that are simple and practical to implement are needed to improve engagement levels. While occupational therapy-specific interventions have shown to be effective in improving the quality of life of residents with dementia in skilled nursing facilities, these interventions do not assess resident engagement during meaningful activities (Mansbach et al., 2017; Sultan Ibrahim et al., 2021; Travers et al., 2016; Uceda-Portillo et al., 2024). There is a

gap in the literature in understanding the impacts that occupational therapy interventions have on the engagement of residents with dementia.

While these occupational therapy-specific interventions aim to improve quality of life, other interventions that can potentially be facilitated by occupational therapists targeted resident engagement during activities (Chan et al., 2021; Mbakile-Mahlanza et al., 2020; Neils-Strunjas et al., 2024). One intervention that seeks to improve the social engagement of long-term care residents is Bingocize®. This evidence-based program involves residents simultaneously playing bingo and completing various exercises, all led by a trained and certified healthcare worker (Neils-Strunjas et al., 2024). In one study, the social engagement of assisted living facility and nursing home residents were compared during and after completing Bingocize® using the Fun and Social Engagement evaluation. This evaluation involves observing the social engagement, attitude, and actions of participants while completing Bingocize® and is similar to the Engagement of a Person with Dementia Scale, another observation-based standardized assessment. Neils-Strunjas et al. (2024) observed positive behaviors more frequently than negative behaviors among the residents, and most residents reported feeling happy on the self-report question of the Fun and Social Engagement evaluation after completing the intervention.

Another intervention type that can be facilitated by occupational therapists and has demonstrated improvements in resident engagement involves completing Montessori activities (Chan et al., 2021; Mbakile-Mahlanza et al., 2020). In one randomized control trial, Mbakile-Mahlanza et al. (2020) assessed engagement and affect in 20 nursing home residents with dementia living in nine nursing homes in Australia during family visits. The 20 family member participants received education on Montessori activities and then identified Montessori activities to complete with the residents based on their past interests and present skills. Mbakile-Mahlanza

et al. (2020) found that the residents who completed the Montessori activities with their families demonstrated significantly improved positive engagement and affect (increased joy and decreased anger and anxiety) during the activities compared to the control group. In a similar study, Chan et al. (2021) completed a randomized control trial to determine the effects of a culturally adapted and group-based Montessori intervention on resident engagement and affect. One hundred eight residents with mild to moderate dementia residing in three community centers, three day care centers, and three care (nursing) homes in China were included as participants in the study. Participants in the experimental group completed Montessori activities (e.g., Memory Bingo or word/picture sorting) in a group of six residents for one hour. Chan et al. (2021) found that residents who completed the Montessori intervention demonstrated increased constructive engagement in the first and middle 10 minutes and decreased passive engagement in the last 10 minutes of the intervention compared to the control group. The authors also found that the Montessori group displayed higher pleasure and interest in the first and middle 10 minutes of the intervention compared to the control group. No differences were found between the three settings (Chan et al., 2021).

A third type of intervention that can be implemented with residents with severe dementia is the Namaste Family Care Program (Tasseron-Dries et al., 2021). In this program, residents with dementia are brought to a comforting room in a small group and provided with person-centered care and meaningful activities by trained staff for two hours daily in the morning and the afternoon (Stacpoole et al., 2017). Families and volunteers are able to participate with staff in providing care (Smaling, 2018). The authors completed a descriptive exploratory qualitative design through semi-structured interviews with 10 family caregivers, 31 staff members and two volunteers in 10 nursing homes in the Netherlands (Tasseron-Dries et al., 2021). The families

reported positive experiences with the program and that they enjoyed the activities (e.g., cooking, reading, painting), especially when they observed the residents' positive affect. The families also discussed how the program aided them in connecting and having meaningful interactions with the residents. Conversely, some families described feeling uncomfortable completing the activities with and managing the challenging behaviors of the residents (Tasseron-Dries et al., 2021). Continued participation in the program was identified as helping family members gain confidence to participate in the activities.

In addition to these interventions focused on long-term care, another intervention utilizing activity kits within the nursing home and home settings has shown to be beneficial for individuals with dementia and their loved ones (Cohen-Mansfield & Cohen, 2026; Crispi & Heitner, 2002). For example, one previous study implemented activity kits during visits between 29 family members and residents with dementia living in three nursing homes in New York City (Crispi & Heitner, 2002). The kits included various activity supplies and suggestions for how to use the supplies, and the families were asked to use the kits during their visits and provide feedback following their use of the kits. Overall, the families reported enjoying the kits and that the kits improved the quality of their visits with the residents as well as the quality of life of the residents (Crispi & Heitner, 2002).

Similarly, Cohen-Mansfield and Cohen (2026) developed enhanced group activity kits to be used by 16 home-dwelling persons with dementia and their facilitators (family members, formal caregivers, or friends) in Israel. On average, the participants with dementia aligned with the moderate dementia category and demonstrated some independence in activities of daily living. The facilitators and persons with dementia used the kits at least once a week, and some of the activities included singing, creative arts, and reading. The activity kits supplied all necessary

materials, including guide books for facilitators and persons with dementia, activity supplies, and additional activity resources. Cohen-Mansfield and Cohen (2026) interviewed the facilitators following their use of the kits, and facilitators reported the kits being successful and beneficial. Further, the facilitators reported learning more about the persons with dementia (e.g., their capabilities) by using the kits, and some explained that the kits helped them consider future activities to complete and helped them keep the individuals with dementia engaged in activities (Cohen-Mansfield & Cohen, 2026). Facilitators also discussed how using the kits improved their relationship and time spent with the people with dementia. These activity kits have also been shown to improve the well-being of nursing care and senior day unit residents with dementia when facilitated by facility staff (Cohen-Mansfield, 2025). However, Cohen-Mansfield (2025) did not incorporate family members of the residents into this residential study.

While the discussed interventions have shown to be effective, they also contain some limitations. One limitation of Mbakile-Mahlanza et al.'s (2020) Montessori intervention is that the intervention seeks to solely assess and address the engagement of the residents. With family members playing a key role in leading activities in some current interventions, it is important to understand how they view engagement and how they interact while completing the activities as well. Conversely, Tasseron-Dries et al. (2021) assessed family (not resident) experiences and engagement in activities through the Namaste Family Care Program. However, the program itself focuses on improving the quality of life of participating residents. Similarly, Cohen-Mansfield and Cohen (2026) and Crispi and Heitner (2002) only assessed facilitators' experiences after using activity kits. The literature demonstrates gaps in interventions that seek to address and understand engagement during meaningful activities for both residents and their family members.

Additionally, a limitation of Neils-Strunjas et al. (2024), Mbakile-Mahlanza et al. (2020), Chan et al. (2021), and Tasserón-Dries et al.'s (2021) interventions is the training and certification requirements to implement the interventions. With the busy schedules and lives of skilled nursing facility staff and residents' families, some staff and families may not be able to participate in the trainings. Additionally, requiring staff to be trained to facilitate the interventions leads to fewer staff members meeting the criteria to lead the interventions, further causing decreased offerings of the interventions. Conversely, facilitators using the activity kits in Cohen-Mansfield and Cohen (2026) and Crispi and Heitner (2002) did not receive training regarding how to implement the kits, and some families in Cohen-Mansfield and Cohen (2026) reported difficulties implementing the kits. Also, Chan et al. (2021) and Tasserón-Dries et al.'s (2021) interventions were designed specifically for residents in certain dementia stages. Neither intervention included participants from among all stages of dementia. While this may allow for better focus of the intervention to meet the needs of the residents in a specific stage/stages, it decreases the number of residents who can benefit from the intervention.

Thus, there is a need for an intervention that seeks to improve engagement during meaningful activities of both skilled nursing facility residents across all dementia stages and their family members. To empower many families to continuously participate in activities with the residents with dementia, the intervention should provide all information for family members needed to complete the activities (i.e., training sessions should not be required to participate). CONNEKT (Framework and Bin) aims to meet these needs by providing families with a thorough guide to complete meaningful activities with residents with dementia.

Summary

Skilled nursing facility residents with dementia desire continued participation in activities they find meaningful; however, these residents spend little of their daily time completing such activities. Challenges with staff schedules, turnover rates, and the skilled nursing facility environment, including the inability for residents to continue their typical routines and perform many of their daily tasks, are several factors that impact resident engagement. In addition to participating in meaningful activities, residents with dementia also long for visits from their families. However, some families experience barriers that limit their visit frequency. When families are able to visit, they often experience changes in their relationship and challenges interacting with the residents due to dementia-related declines. These families may also complete a limited number of activities that consist of walking, talking, and completing care tasks with the residents. While the literature outlines some activities families may complete during visits, there is a gap in the literature regarding the specific challenges and levels of engagement families experience during these activities.

Interventions utilizing meaningful activities have been developed to address challenges with residents' decreased participation in meaningful activities and changes in family-resident interactions. While these interventions have demonstrated their effectiveness, they also leave room for improvements. These improvements include a focus on improving the engagement of both the residents and their families, a focus on including residents in all dementia stages, and a focus on providing thorough information so that families do not have to attend trainings to participate. Activity kits have shown to be beneficial for individuals with dementia and their loved ones; however, literature regarding their benefits among long-term care residents with dementia and their families is limited. CONNEKT, including the CONNEKT Framework and

Bin, was developed as an activity-based intervention aimed to address these concerns and a gap in the literature.

Capstone Plan and Process

Project Description

Setting/Capstone Site

The capstone experience was completed at MacGregor Downs Health Center (by Harborview) in Greenville, North Carolina, a skilled nursing facility with 152 beds (North Carolina Health Care Facilities Association, n.d.). In this facility, approximately 58% of the beds are allocated for long-term care residents. Occupational therapists are employed at this facility as part of the rehabilitation team that consists of three full-time occupational therapy practitioners, one full-time physical therapy practitioner, and one full-time speech language pathologist. In addition, the facility includes an Activities/Volunteers Services Department with three staff members that plan and facilitate activities and events at the site.

Population/Participants

The target population of this capstone was long-term care residents with dementia living at MacGregor Downs Health Center. Residents from all stages of dementia were eligible to participate. This project involved the capstone student observing and participating in both treatment and activity sessions with the residents, trialing an activity with them, and observing their family visits. This project also involved the student completing weekly treatment sessions with residents with dementia (and cognitive deficits) to gain knowledge and skills related to dementia care to inform the capstone project. Additionally, families who visited the residents with dementia at MacGregor Downs Health Center were a target population. This involved the families utilizing the CONNEKT Bin (specifically, the “CONNEKT: Activities for Families”

binder from the bin) with the residents with dementia at the site. Individuals working at MacGregor Downs Health Center under the scope of occupational therapy were the final target population, as the “CONNEKT: Framework for Occupational Therapists” binder (from the bin) was designed and developed to be used by occupational therapists, occupational therapy assistants, and occupational therapy students at the site.

Project Focus Area

The primary focus area of this capstone project and experience was program development and evaluation, as CONNEKT was developed to address an unmet need at the site. The secondary focus of this capstone was education, as occupational therapists, physical therapists, and activities staff at the site received education (a presentation) regarding the purpose and implementation of CONNEKT. The student also developed a version of this presentation with added voiceover to educate future occupational therapy staff and students.

Needs Assessment

The needs assessment was completed during the week of April 21st, 2025. Prior to completing the needs assessment, the capstone student collaborated with the content expert to identify primary individuals whose knowledge of the site and subject would be valuable to inform the capstone project. Brittany Mundy (the site mentor), OTR/L, Rehabilitation Director at MacGregor Downs Health Center, and Terry Edwards, Activities/Volunteers Services Director at MacGregor Downs Health Center, were chosen for the needs assessment. The student completed separate semi-structured interviews with both individuals. Questions used for the two semi-structured interviews are included in Appendices A and B, and a summary of the process is included in Appendix C.

From the semi-structured interview with Brittany Mundy, the capstone student gained further knowledge of MacGregor Downs Health Center and its needs. It was identified that there were approximately 50-75 residents with diagnosed dementia at the site and that these residents demonstrated mild through severe stages of dementia. Mundy also explained that there was a larger number of residents with symptoms of dementia without an official diagnosis.

Additionally, most of the residents were wheelchair bound and had someone who regularly visited them. The activities completed by residents with dementia and their visitors during observations by Mundy included: talking (which occurred during most visits), completing word searches and coloring books, and going outside. Residents with more severe stages of dementia experienced difficulty in having typical conversations and speaking, with some not speaking at all. Visits were often completed in residents' rooms, the living room areas, and directly outside the facility. Mundy discussed the actions that needed to be taken to receive approval, and she identified residents' availability as a potential challenge during the capstone experience.

From the semi-structured interview with Terry Edwards, the capstone student gained further knowledge of the role of the activities department at MacGregor Downs Health Center with rehabilitation staff, residents, and their families. Activities completed by residents with dementia and their visitors during observations by Edwards included: listening to music, completing large-piece puzzles, sorting blocks, coloring, holding a doll, going outside, feeling different textured cloths, smelling different scents (e.g., candles), looking at labeled photo albums, completing devotions, using robotic dogs, using sensory blankets, and using rain makers (from a sensory box). Edwards discussed the importance of providing families with education on identifying activities and accepting residents' challenges. Some family members had activities

that they liked to do with the residents, and Edwards explained that it was important for the activities staff to know residents and help families interact with them.

Additionally, Edwards discussed that the activities staff completed a leisure assessment based on prior interests and developed a care plan based on this assessment. This plan could be found in residents' charts, and it listed activities the residents enjoyed to help staff-resident interactions and to benefit residents. Families were involved in the care plan to gather information about the residents and were informed on what activities the residents would complete during their admission. Edwards discussed the benefits of creating a handout (e.g., a pamphlet) on meaningful activities that families or visitors could do with residents while they visit. She also discussed the benefits of creating an activities binder and kit, including creating a general activity binder then personalizing it (for the residents and their visitors). Edwards discussed the need for finding a feasible place to house the kit (e.g., nurses' stations).

Overall, this interview revealed a need for the CONNEKT Framework for occupational therapists at MacGregor Downs Health Center to create activity plans for residents with dementia and their families. The occupational therapy department at the site was chosen to guide and implement CONNEKT because of occupational therapy's expertise in assessing activities, breaking them down into steps, and providing guidance on how best to modify and adapt the steps for successful completion. Additionally, the occupational therapy department was chosen due to occupational therapy's skilled knowledge of aging, health, and well-being and the ability to address challenges in the physical, cognitive, social, and emotional domains. At the time of the needs assessment and beginning of the capstone experience, there was no resource available at the site that formally provided a guide for families to complete meaningful activities with residents with dementia. Both Mundy and Edwards indicated that this was needed at the site.

Capstone Project/Experience Objectives

The goals and objectives of this capstone project and experience are described below.

- I. The CONNEKT Framework for occupational therapists to use with families of residents with dementia at MacGregor Downs Health Center to improve engagement between the families and the residents will be developed and finalized by March 15th, 2026.
 - a. Observation and engagement in activity and treatment sessions at MacGregor Downs Health Center will be completed to gain experience in facilitating activities and familiarize with residents with dementia from January 5th, 2026, to January 18th, 2026.
 - b. An activity to trial with residents with dementia will be chosen by January 18th, 2026, based on the activity's general acceptance as a preferable activity, its ability to be analyzed in clear steps, its ability to be upgraded/downgraded, and its feasibility to complete in the skilled nursing facility setting.
 - c. The chosen activity will be trialed with residents with dementia to establish the CONNEKT Framework by February 1st, 2026.
 - d. Feedback/data from the formal engagement assessment gathered from LO 2 will be used to finalize the CONNEKT Framework by March 15th, 2026.
- II. At least one CONNEKT Bin will be utilized by families and residents with dementia at MacGregor Downs Health Center from February 2nd, 2026, to February 22nd, 2026, to improve engagement between the families and the residents.
 - a. At least one CONNEKT Bin (i.e., both binders and resources for the families to complete the activity) will be created by February 8th, 2026, to improve engagement between families and residents with dementia.

- b. Observation and engagement in visits by families with residents with dementia using the CONNEKT Bin will be completed from February 9th, 2026, to February 22nd, 2026.
 - c. A formal engagement assessment will be completed with families of residents with dementia by February 22nd, 2026, to assess their engagement with the resident and views regarding CONNEKT.
- III. A caseload of residents with dementia not exceeding 10% of the weekly capstone experience time will be maintained from January 19th, 2026, to April 10th, 2026, at MacGregor Downs Health Center to gain in-depth experience in strategies used by occupational therapists when treating residents with dementia in a skilled nursing facility and inform the development and documentation of the CONNEKT Framework.
 - a. An initial caseload plan for maintaining a caseload that does not exceed 10% of the weekly capstone experience time, identifying goals/objectives for the capstone student to achieve for each session related to the capstone focus, and acquiring residents to treat based on the session goals/objectives will be developed and reviewed with the site mentor by January 18th, 2026.
 - b. The caseload plan, resident progression, and intervention plans will be reviewed during weekly meetings with the site mentor from January 19th, 2026, to April 10th, 2026, to enhance skills in the skilled nursing facility setting and increase the understanding of residents with dementia.
- IV. Resources to educate and inform relevant staff employed at MacGregor Downs Health Center about the purpose and use of CONNEKT will be developed and disseminated by April 10th, 2026.

- a. A date, time, and location for a presentation/presentations on CONNEKT to educate occupational therapists employed at MacGregor Downs Health Center will be planned and scheduled with the site mentor and appropriate leadership by February 20th, 2026.
- b. The presentation that will be used to educate relevant staff employed at MacGregor Downs Health Center about the purpose and use of CONNEKT will be developed and finalized by March 22nd, 2026.
- c. The presentation to educate relevant staff employed at MacGregor Downs Health Center about the purpose and use of CONNEKT will be presented and the post-presentation survey completed by March 29th, 2026.

Model of Practice: Ecology of Human Performance

The model that was used to design and inform this capstone is the Ecology of Human Performance. This model conceptualizes how the person and context interact with one another to impact the performance of tasks, with an emphasis placed on the context (Dunn et al., 1994). The Ecology of Human Performance views the context as the physical environment, as well as social, cultural, and temporal factors. This model was developed due to a lack of occupational therapy models and assessments that placed an emphasis on the context's effects on a person's behavior. Tasks in this model are defined as "...objective sets of behaviors necessary to accomplish a goal," and numerous tasks are available to the person (Dunn et al., 1994, p. 599). Specific tasks are chosen based on the person's skills and abilities. The person's abilities and the contextual supports determine the person's performance range (Brown, 2019). Additionally, the person is viewed through their experiences and cognitive, sensorimotor, and psychosocial abilities. Further, this model also uses five categories of intervention strategies: establish/restore (the

person's skills/abilities), alter (the context [i.e., new context]), adapt (the context and task demands), prevent (poor task performance from occurring), and create (without assuming a disability is present; Dunn et al., 1994).

The model's cognitive domain was applicable to this capstone's focus on residents with dementia. The Ecology of Human Performance also informed this capstone through its focus on the impacts of context (environment) and person (skills/abilities) on the performance range of tasks (i.e., meaningful activities). Specifically, the model's use of the alter, adapt, and prevent intervention approaches were implemented in this capstone. Through CONNEKT, an activity was completed by the capstone student with residents with dementia, and these observations were used to develop an activity plan that listed the most common strengths, challenges, and strategies for success experienced by residents at each step of the activity. Regarding the alter approach, this capstone provided families of residents with dementia strategies for altering the context to improve the residents' performance in the activity (e.g., powering off the television and switching lights on). Similarly, for the adapt approach, families were provided with ways to modify (e.g., downgrade) steps of the activity based on the challenges that the residents experienced when completing the activity with their families. Additionally, by adapting the social context (i.e., families' knowledge of how to appropriately complete activities with residents), the performance of the residents improved (Brown, 2019). Finally, according to Dunn et al. (1994, p. 604), "prevention approaches anticipate possible and likely problems and change the course of activities to increase positive outcomes." In the activity plan, the families were given possible challenges residents may experience. The activity plan also listed strategies to prevent the residents from experiencing challenges or from experiencing further challenges (e.g., becoming frustrated if they were unable to complete a task).

Planning and Development

Development Process

This capstone project and experience were developed by the capstone student in partnership and collaboration with the content expert (Dr. Young Kim), the doctoral capstone coordinator (Dr. Nikki Hancock), the site mentor (Brittany Mundy), and the OTD research professor (Dr. Anne Dickerson). First, the student collaborated with the content expert and the doctoral capstone coordinator to identify a target population for the capstone project and experience. The student then met with the content expert and identified a need among the identified target population based on the content expert's knowledge and previous experiences. The target population was further expanded to include skilled nursing facility residents with dementia and their families. These meetings informed the development of a general capstone idea (i.e., creating an activities binder for residents with dementia and their families). Then, a needs assessment was completed by the student with the site mentor and an additional relevant staff member to understand the site's needs. The capstone idea was further refined through this process, as well as through examination of the literature regarding the target populations and the setting and collaboration with the OTD research professor. It was then determined that a process (i.e., framework) for creating and completing the binder should be developed prior to fully developing an activities binder.

Finally, the capstone student completed goals and objectives, an evaluation plan for the goals and objectives, and a capstone experience timeline. The student utilized the Ecology of Human Performance model and the activity analysis process to inform the development of the capstone experience, including the steps to implement the capstone project.

Steps to Implement Capstone Project

To begin, the capstone student collaborated with the site mentor to create a list of residents with whom to trial an activity. This list included the residents' current dementia stage (according to the Functional Assessment Staging Tool) and their families' contact information. The Functional Assessment Staging Tool was chosen for CONNEKT due to its categorization of the dementia stages based on residents' functional performance in daily occupations and their abilities (Sclan & Reisberg, 1992). These stages include (1) Normal Adult, (2) Normal aged Adult, (3) Compatible with incipient Alzheimer's disease, (4) Mild Alzheimer's disease, (5) Moderate Alzheimer's disease, (6) Moderately Severe Alzheimer's disease (including five substages), and (7) Severe Alzheimer's disease (including six substages). Respectively, the seven main stages involve the following: (1) no deficits; (2) subjective deficits in recalling words, appointments, or locations; (3) some deficits in demanding (e.g., work) tasks; (4) deficits in complex tasks (e.g., paying bills); (5) deficits in choosing appropriate clothing and living independently; (6) deficits in performing daily tasks (e.g., dressing, bathing, toileting); (7) deficits in speech, mobility, and body functions (Sclan & Reisberg, 1992). Further, the Functional Assessment Staging Tool demonstrates statistically and clinically significant reliability, significant concurrent validity with the Ordinal Scales of Psychological Development in stages six and seven, and demonstrates ordinality of its stages in congruence with actual progression of dementia (Sclan & Reisberg, 1992).

For this project, residents were grouped into the Mild, Moderately Severe, or Severe stages from the Functional Assessment Staging Tool for CONNEKT based on discussion with the site mentor and nursing staff or the student's direct observations of functional performance. The student collaborated with the site mentor to identify residents who would be interested in

completing the activity trials and who had family members who frequently visited and would also be interested in completing an activity trial. An additional list was created based on this information and included the families' permission to work with the residents, their interest in participating, and their typical visitation schedules. None of the seven identified residents demonstrated functional performance to be categorized in the Moderate stage based on the Functional Assessment Staging Tool criteria.

Then, semi-structured interviews were completed with the families of the identified residents to understand the residents' and families' interests regarding activities. The student identified an activity (i.e., decorating a picture frame) to trial with residents with dementia based on the interviews, collaboration with the content expert, and several aspects including the activity's inclusion of an adequate number of steps and allowance for adaptation(s), its ability for forward/backward chaining and downgrading/upgrading, its ability to be completed on a year-round basis both inside and outside the facility, and the mobility demands of the activity. This chosen activity was used to guide the development process of the CONNEKT Framework.

Further, the Engagement of a Person with Dementia Scale was used to measure the engagement of the identified residents and their families prior to using CONNEKT. This scale was chosen for this capstone due to its inclusion of multiple aspects of engagement, its ability to supply an aggregate score, and its ability to be completed for multiple individuals simultaneously (Jones et al., 2018). The five categories of engagement measured on this scale include Affective, Visual, Verbal, Behavioral, and Social. An observer using the scale rates their level of agreement ([1] "strongly disagree" to [5] "strongly agree") with the positive (e.g., smiling) and negative (e.g., disinterest) behaviors listed in each engagement category. The scores from each section and category are added to obtain the aggregate score (Jones et al., 2018). The scale demonstrates

excellent internal consistency, inter-rater reliability, and test-retest reliability, as well as content validity and significant construct validity with the person-environment apathy rating scale (Jones et al., 2018). The student completed the Engagement of a Person with Dementia Scale during a typical visit between residents and their families and scored the scale for each resident and each family member.

The next part of the process involved the capstone student completing two trials of the chosen activity with each of the identified residents individually. In preparation for Trial One, the student used activity analysis to list the steps required to complete the activity (i.e., decorating a picture frame) and how the activity would typically be performed by an individual who would not have challenges completing the activity. Trial One involved the student observing and documenting residents' actual performance of the activity in each step and any immediate strategies the student used to assist the residents in successful completion of each step. The student then identified specific strategies per step for each individual resident based on the challenges they experienced in each step. These strategies were implemented in Trial Two to aid the residents in successfully completing each step of the activity. Trial Two included the student completing the activity again with the same residents and implementing the strategies for each resident in each step. The student observed and documented residents' performances and their responses to the implemented strategies.

Then, the student compared the performances in Trials One and Two among residents individually per step of the activity; compared trials among residents within the same stage of dementia per step to identify common strengths, challenges, and strategies for success in that stage; and compared trials among all residents to identify common strengths, challenges, and strategies in that step. The student also compared trials among all residents and steps of the

activity to identify common strengths, challenges, and strategies throughout the entire activity. These comparisons were done to inform the development of the “CONNEKT: Framework for Occupational Therapists” binder, the “CONNEKT: Activities for Families” binder, and the “Family Activity Plan #1” (included in the “CONNEKT: Activities for Families” binder). The student used data from these comparisons to write the “Family Activity Plan #1” for families for the same activity trialed with the residents. Because there were no identified residents in the Moderate stage, the student used clinical reasoning from the activity trials, comparisons of residents in the Mild and Moderately Severe stages, and the Functional Assessment Staging Tool description of the Moderate stage to create a column for the Moderate stage. The activity plan was added in the “CONNEKT: Activities for Families” binder and included step-by-step instructions for families to complete the activity with common strengths and challenges the residents may experience and strategies that may help them listed at each step by stage. The activity plan was formatted into a table with columns, organized according to readability guidelines, and was written in a client-centered manner, including jargon-free wording in collaboration with the site mentor, content expert, and doctoral capstone coordinator. A portion of the “Table Family Activity Plan #1” is included in Appendix F for reference.

The final part of the process involved the student observing the residents and their families completing the chosen activity while the families used the “CONNEKT: Activities for Families” binder. The student again completed and scored the Engagement of a Person with Dementia Scale to obtain data for the engagement of residents and their families while using CONNEKT. After using the binder, the student asked the family members semi-structured questions to gain their feedback on using CONNEKT. The questions were developed using ChatGPT to refine their wording, increase their understandability, and format the questions on a

numerical scale (OpenAI, 2026). These questions are included in Appendix H for reference. The feedback received from the families was used to make necessary modifications and additions to the “CONNEKT: Activities for Families” binder for the benefit of future families and residents. One modification included the creation of Short Family Activity Plans, with one for each stage, in addition to the “Table Family Activity Plan #1,” and the short plans included condensed information and instructions from the table plan. A portion of the “Short Family Activity Plan #1: Mild Stage” is included in Appendix G for reference.

Plan for Sustainability

The CONNEKT Framework was designed to ensure that occupational therapists, occupational therapy assistants, and occupational therapy students at MacGregor Downs Health Center could utilize the framework to create additional activity plans for residents with dementia and their families. This included creating full documentation and rationale for the framework and providing the site with the “CONNEKT: Framework for Occupational Therapists” binder, as well as the entire CONNEKT Bin. The site was provided with the necessary materials and resources to continue using the CONNEKT Framework to further develop the “CONNEKT: Activities for Families” binder. Additionally, the site received an in-person presentation and a copy with voiceover that educated current and future occupational therapy staff and students on how to implement and use the CONNEKT Framework. The documentation of the CONNEKT Framework also allowed for occupational therapy staff and students to use the framework to complete the “CONNEKT: Activities for Families” binder at the site.

Evaluation Plan

The primary purpose of CONNEKT was to improve the engagement between residents with dementia and their families while completing meaningful activities. To evaluate

CONNEKT's ability to accomplish this purpose, a formal assessment was identified and used to measure engagement. The Engagement of a Person with Dementia Scale was completed by the student for each resident and family member during a typical visit between residents and their families and scored by the student following the visit. The Engagement of a Person with Dementia Scale was again completed by the student for each resident and family member while the family and resident completed the sample activity using the "CONNEKT: Activities for Families" binder and the CONNEKT Bin. The student again scored the scales following this visit. Further, semi-structured interview questions were developed by the student to understand the families' views regarding their experiences with using CONNEKT and how they felt it benefitted them. The feedback from these questions was also used to make necessary edits to the "CONNEKT: Activities for Families" binder.

Additionally, each of the four primary goals included completion of at least one tangible item to demonstrate and evaluate the goal's completion. Goal I included finalizing the CONNEKT Framework in the "CONNEKT: Framework for Occupational Therapists" binder, including full descriptions and documentation of the framework by March 15th, 2026. Goal II included the initial completion of one CONNEKT Bin, which included the "CONNEKT: Framework for Occupational Therapists" binder, the "CONNEKT: Activities for Families" binder, and supplies needed for at least one activity all housed in a bin by February 8th, 2026. Additionally, in Goal III, a caseload plan was developed by January 18th, 2026. This caseload plan was updated weekly during meetings with the site mentor and weekly treatment sessions not exceeding 10% of the weekly capstone experience time were performed by the student from January 19th, 2026 to April 10th, 2026. Finally, in Goal IV, the student developed a presentation by March 22nd, 2026, and performed the presentation on March 26th, 2026.

Further, to evaluate relevant staff members' understanding of and views about CONNEKT and their willingness to use the CONNEKT Framework to develop activity plans, a post-presentation survey was completed by occupational therapy staff on March 26th, 2026. Feedback and data from these surveys were used to evaluate the staff's understanding and views of CONNEKT and to identify potential implications for future study, future adaptation, and continuation of the CONNEKT Framework at the site by staff and students.

Timeline

The weekly timeline activities completed by the student during the capstone experience are listed below.

- **Week 1:** During Week 1, the capstone student communicated with the site mentor (Brittany Mundy) regarding observing and engaging in treatment and evaluation sessions and identifying residents with dementia at MacGregor Downs Health Center. The student also communicated with activities staff regarding observing and engaging in activities with residents with dementia at the site. The student observed and engaged in activity and treatment/evaluation sessions at the site. A list of residents with whom to trial activities was developed. A list of these residents' families was created, and interviews regarding activity preferences were completed with these families. The student compared the interview results and reviewed materials to identify an activity to trial. A plan was drafted for maintaining a caseload that did not exceed 10% of the weekly capstone experience time, identifying goals/objectives to be achieved each session related to the capstone focus, and acquiring residents to treat based on the session goals/objectives. The student reviewed resources to gain further understanding in facilitating activities with the population and understanding common challenges and strategies.

- **Weeks 2-4:** The capstone student continued to observe and engage in treatment sessions at the site. The activity to trial with residents to develop the CONNEKT Framework was identified. The student completed Trials One and Two of the identified activity with residents with dementia. The student compared residents' performances for Trials One and Two, including identifying common strengths, challenges, and strategies. The student began developing the "CONNEKT: Framework for Occupational Therapists" binder. The Engagement of a Person with Dementia Scale was completed for residents and their family members during typical visits. The caseload plan was finalized (in collaboration with the site mentor) and followed, and the student completed regular treatment sessions and meetings with the site mentor.
- **Weeks 5-7:** The capstone student completed the "CONNEKT: Framework for Occupational Therapists" and the "CONNEKT: Activities for Families" binders. The student completed the CONNEKT Bin and utilized it and the "CONNEKT: Activities for Families" binder with residents with dementia and their families. The student completed the Engagement of a Person with Dementia Scale during visits and the semi-structured interview questions after visits by families utilizing the bin. The feedback/data was used to identify changes/modifications needed for CONNEKT. The student followed the caseload plan, updated session goals, and completed regular treatment sessions and meetings with the site mentor. The student communicated with the site mentor and appropriate leadership regarding the CONNEKT presentation and lunch.
- **Weeks 8-9:** The capstone student updated and completed the CONNEKT Bin based on data/feedback from the families and capstone team. The student observed one resident-family member pair using the CONNEKT Bin and completed the Engagement of a

Person with Dementia Scale and the semi-structured interview questions. The student followed the caseload plan, established/updated session goals, and completed regular treatment sessions and meetings with the site mentor. The CONNEKT presentation and post-survey were created. The student edited and updated materials for dissemination.

- **Week 10-11:** The capstone student observed one resident-family member pair using the CONNEKT Bin and completed the Engagement of a Person with Dementia Scale and the semi-structured interview questions. The student collaborated with the capstone team, residents, and family members to trial a second activity. The student updated and finalized the CONNEKT presentation and post-survey based on the feedback received from the capstone team and completed mock presentations to gain additional feedback and practice. The student followed the caseload plan, established/updated session goals, and completed regular treatment sessions and meetings with the site mentor.
- **Weeks 12-14:** The capstone student gave the CONNEKT presentation to relevant site staff and obtained post-presentation survey data, including occupational therapy staff's views regarding CONNEKT and using the framework. A version of the in-person presentation with voiceover from the student was created for future staff and students at the site. The student trialed a second activity with three residents, developed "Family Activity Plan #2," and trialed the activity plan and CONNEKT Bin with one resident-family pair. The student followed the caseload plan, established/updated session goals, and completed regular treatment sessions and meetings with the site mentor. The student edited and updated materials for dissemination. The student communicated with the site mentor regarding housing the CONNEKT Bin at the site. The CONNEKT Bin, including both binders and activity supplies, was organized and finalized for future uses at the site.

Outcomes

Project Summary

This capstone project aimed to develop a framework to improve engagement between families and residents with dementia during meaningful activities at MacGregor Downs Health Center. The CONNEKT Framework was developed through the process of completing two trials of a specific activity with residents (decorating a picture frame), documenting their performances, and comparing the performances between trials and among residents in the same stages and among all residents. This process also involved trialing the activity with families and residents together. To determine CONNEKT's effectiveness at improving the engagement of residents with dementia and their families, the CONNEKT Bin was developed following the process outlined in the CONNEKT Framework. This bin included the "CONNEKT: Framework for Occupational Therapists" and "CONNEKT: Activities for Families" binders and all necessary supplies for the activity. The CONNEKT Bin was used by the residents with dementia and their families, and data was collected by the capstone student using the Engagement of a Person with Dementia Scale.

Project Outcome and Analysis

Project Learning Objectives Achieved

This capstone project included four objectives, and each objective was met before the end of the capstone experience on April 10th, 2026. For Goal I of developing and finalizing the CONNEKT Framework, a finalized version of the CONNEKT Framework was developed, printed, and placed in the "CONNEKT: Framework for Occupational Therapists" binder in the CONNEKT Bin at the site. This goal was achieved through the capstone student observing treatment and activity sessions at the site, identifying an appropriate activity to trial, trialing the

activity with seven residents with dementia, and obtaining data from the Engagement of a Person with Dementia Scale for six resident-family pairs as well as feedback from the six family members using semi-structured interview questions. One resident with whom the activity was trialed passed away before trialing the CONNEKT Bin with their family member.

Additionally, for Goal II of utilizing one CONNEKT activity kit with residents and families, the CONNEKT Bin was developed and trialed with six resident-family pairs. To attain this goal, an initial CONNEKT Bin (i.e., the framework and family binders and all activity supplies housed in a storage bin) was created prior to trialing it with families and residents, and the capstone student observed and engaged, as needed, in visits by the six resident-family pairs using the CONNEKT Bin. This goal was also attained by the capstone student collecting data for the Engagement of a Person with Dementia Scale for each resident and family member and collecting feedback from each family member following their use of the CONNEKT Bin. To compare Engagement of a Person with Dementia Scale scores, the assessment was completed by the capstone student twice for each resident and family member at the site: once during their typical visit as a baseline and another while using the CONNEKT Bin. The total number of the Engagement of a Person with Dementia Scale assessments completed was 24 (i.e., two for each participant). The results of the 24 completed Engagement of a Person with Dementia Scale assessments are discussed in the Primary Project Objectives Achieved section of this paper.

Further, for Goal III of maintaining a caseload of residents with dementia, a caseload of residents with dementia not exceeding 10% of the weekly capstone experience time (i.e., 4 hours) was maintained by the capstone student from Weeks 3-14. This goal was achieved by the student developing and updating a weekly caseload plan in collaboration with the site mentor. The goals on the caseload plan included skills the student needed or desired to attain that were

directly related to the capstone project (e.g., modifying the environment or task to ensure the residents completed the tasks as successfully and independently as possible). The weekly caseload plan also included the number of residents being treated by the student per week and intervention plans for each resident.

Finally, for Goal IV of developing and disseminating resources for site staff, a presentation to educate and inform relevant staff at MacGregor Downs Health Center about the purpose and use of CONNEKT was developed and presented. This goal was achieved by the capstone student discussing an appropriate date, time, place, and format for a presentation with the site mentor and collaborating with the site mentor to invite relevant staff members (i.e., rehabilitation and activities staff). The presentation was developed and finalized by the student based on feedback from the site mentor, content expert, and doctoral capstone coordinator, and the presentation was delivered in-person to occupational therapy, physical therapy, and activities staff. Following the presentation, three occupational therapy staff members completed a survey created by the student to understand their views of CONNEKT and their willingness to use it in the future. Further, this goal was also achieved by the student adding voiceover to slides of the staff presentation to educate and inform site staff about the purpose and use of CONNEKT.

Participant Demographics

Resident Demographics. The seven residents included in this capstone project were primarily White (71.4%), male (57.1%), in their 70s (42.9%), and were able to ambulate independently using assistive devices (57.1%). Most of the residents (71.4%) demonstrated functional abilities aligned with the Moderately Severe dementia stage according to the Functional Assessment Staging Tool. Comprehensive demographic information for each resident is included in Table 1 below.

Table 1. Resident demographic information

Participants	Age, Gender, Ethnicity	Primary Diagnoses	Dementia Type (if applicable)	Functional Levels	FAST Stage
Resident 1	Mid-70s, male, Black	Hemiplegia/paralysis following cerebral infarction; osteoarthritis; epilepsy; Type 2 diabetes	Cognitive deficits noted by care team	Ambulates independently using rolling walker; independently completes dressing and toileting	Mild
Resident 2	Late-90s, female, White	Chronic obstructive pulmonary disease, asthma, peripheral vascular disease, chronic kidney disease, congestive heart failure, hypertension	Alzheimer's disease	Ambulates independently using wheelchair; assists in toileting and lower body dressing; independent with upper body dressing; urinary incontinence	Moderately Severe
Resident 3	Early-90s, female, White	Legal blindness, cervical spinal stenosis, osteoarthritis, hypertension	Cognitive deficits noted by care team	Ambulates with rolling walker and some assistance; needs a lot of assistance with dressing and toileting; urinary incontinence	Moderately Severe
Resident 4	Late-70s, male, White	Hypertension, gastroesophageal reflux disease, pacemaker	Alzheimer's disease	Ambulates independently using wheelchair; assists in lower body dressing;	Moderately Severe

				independent with upper body dressing; urinary incontinence	
Resident 5	Early-80s, male, White	Parkinson's Disease, cervical spondylopathies, hypertension, osteoarthritis	Vascular dementia, moderate	Ambulates independently using rolling walker; assists in toileting; needs some assistance in dressing; urinary incontinence	Moderately Severe
Resident 6	Mid-70s, male, White	Cerebral infarction, chronic kidney disease, Type 2 diabetes, peripheral vascular disease, hyperlipidemia, congestive heart failure, hypertension	Cognitive loss/dementia noted by care team	Rarely ambulates; needs some assistance with upper body dressing; needs a lot of assistance with lower body dressing and toileting; urinary incontinence	Moderately Severe
Resident 7	Mid-80s, female, Black	Osteoarthritis, Type 2 diabetes, atrial fibrillation, hypokalemia, hypertension, epilepsy, cerebral infarction, gastroesophageal reflux disease, hyperlipidemia, chronic kidney disease	Vascular dementia, severe	Unable to ambulate; needs full assistance with dressing and toileting; incontinence	Severe

Family Demographics. The six family members who participated in the project were primarily White (66.7%), female (83.3%), in their 70s (66.7%), and were the wives (50.0%) of the residents. Specific demographic information for each family member is included in Table 2 below.

Table 2. Family demographic information

Participants	Age, Gender, Ethnicity	Relationship to Resident
Family 1	Late-60s, male, Black	Brother
Family 2	Early-70s, female, White	Daughter
Family 3	Early-70s, female, White	Daughter
Family 4	Late-70s, female, White	Wife
Family 5	Mid-70s, female, White	Wife
Family 6	Mid-50s, female, Filipino	Wife

Primary Project Objectives Achieved

Formal Assessment Results. There were two primary objectives of this capstone project, (1 to develop the CONNEKT Framework and CONNEKT Bin and (2 to determine its ability to improve engagement between residents with dementia and their families. The first primary objective was achieved through the development of the CONNEKT Framework and the CONNEKT Bin, as discussed previously.

To determine whether or not the second primary objective was achieved, the two aggregate scores, one collected during a typical visit and the other collected while using CONNEKT, of the Engagement of a Person with Dementia Scale obtained for each resident and family member were compared. The lowest and highest scores during a typical visit for the residents were 37 and 47, respectively. The lowest and highest scores during a typical visit for

the family members were 45 and 47, respectively. The lowest and highest scores while using CONNEKT for the residents were 39 and 48, respectively. The lowest and highest scores while using CONNEKT for the family members were 47 and 50, respectively. Most (83.3%) of the residents in the project demonstrated a slight increase in aggregate Engagement of a Person with Dementia Scores, while one resident (16.7%) demonstrated a slight decrease in this score. Additionally, all (100.0%) of the family members who participated demonstrated a slight increase in aggregate Engagement of a Person with Dementia Scores. Further, most (83.3%) family-resident pairs completed the activity of “talking” during their typical visit. One pair (16.7%) completed “listening to music” and “talking” during their typical visit. The activity completed while using CONNEKT for all family-resident pairs was “decorating a picture frame.” The resident and family member Engagement of a Person with Dementia Scale aggregate scores are included in Tables 3 and 4 below.

Table 3. Resident Engagement of a Person with Dementia Scale aggregate scores

Participants	Typical Visit Scores	Using CONNEKT Scores
Resident 1	47	48
Resident 2	37	45
Resident 3	37	40
Resident 4	44	39
Resident 5	41	45
Resident 6	40	46

Table 4. Family Engagement of a Person with Dementia Scale aggregate scores

Participants	Typical Visit Scores	Using CONNEKT Scores
Family 1	47	49
Family 2	47	49

Participants	Typical Visit Scores	Using CONNEKT Scores
Family 3	47	49
Family 4	45	47
Family 5	47	50
Family 6	45	47

Further, scores for each of the five categories of the Engagement of a Person with Dementia Scale were compared to assess any improvements in the types of engagement for each resident and family member. These categories included Affective Engagement, Visual Engagement, Verbal Engagement, Behavioral Engagement, and Social Engagement. The percentage of residents that demonstrated an increase in positive engagement while using CONNEKT by category were: 33.3% Affective, 66.7% Visual, 33.3% Verbal, 83.3% Behavioral, and 33.3% Social. The percentage of family members that demonstrated an increase in positive engagement while using CONNEKT by category were: 16.7% Affective, 83.3% Visual, 33.3% Verbal, 66.7% Behavioral, and 33.3% Social. Both Engagement of a Person with Dementia Scale scores for each category per resident and family member are included in Tables 5 and 6 below.

Table 5. Resident Engagement of a Person with Dementia Scale scores per category

Participant	Affective (typical, CONNEKT)	Visual (typical, CONNEKT)	Verbal (typical, CONNEKT)	Behavioral (typical, CONNEKT)	Social (typical, CONNEKT)
Resident 1	10, 10	9, 10	10, 9	8, 10	10, 9
Resident 2	8, 8	6, 9	8, 9	8, 10	7, 9
Resident 3	9, 10	Not applicable	10, 10	8, 10	10, 10
Resident 4	10, 7	7, 9	8, 8	9, 8	10, 7
Resident 5	9, 9	8, 8	9, 9	7, 10	8, 9
Resident 6	6, 10	8, 9	8, 9	9, 10	9, 8

*Resident 3 Visual Engagement not applicable due to blindness.

Table 6. Family Engagement of a Person with Dementia Scale scores per category

Participant	Affective (typical, CONNEKT)	Visual (typical, CONNEKT)	Verbal (typical, CONNEKT)	Behavioral (typical, CONNEKT)	Social (typical, CONNEKT)
Family 1	10, 9	9, 10	10, 10	8, 10	10, 10
Family 2	9, 9	9, 10	9, 10	10, 10	10, 10
Family 3	9, 9	8, 10	10, 10	10, 10	10, 10
Family 4	10, 9	8, 10	8, 9	9, 10	10, 9
Family 5	10, 10	9, 10	10, 10	9, 10	9, 10
Family 6	7, 9	10, 8	10, 10	9, 10	9, 10

Semi-Structured Interview Results. The capstone student completed the semi-structured interview with the six family members following their use of CONNEKT. See Appendix H to reference the questions asked of family members. Interviews were conducted on the same day as the visit using CONNEKT, and family members were asked to rate several aspects of CONNEKT and their experiences with it using a scale of 1-10. They reported an average of 7.9 (with answers ranging from 5-10) when asked how much they enjoyed using CONNEKT and reported an average of 8.5 (with answers ranging from 6-10) when asked how easy it was to use CONNEKT. Family members reported an average of 8.7 (with answers ranging from 8-10) when asked how effective they felt CONNEKT was in helping them complete an activity with the residents. They also reported an average of 8.7 (with answers ranging from 7-10) when asked how positive of an impact they felt CONNEKT had on their interactions with the residents.

Additionally, family members were asked to give specific feedback in addition to the ratings. When asked what they liked about CONNEKT, one theme families identified was that CONNEKT provided an activity that challenged the residents' cognitive and motor abilities. For example, one family member discussed how drawing on the frame, especially from memory,

challenged the resident's creativity and thinking. These families also noted that they enjoyed peeling and sticking the foam stickers and watching the residents complete these tasks as well. When asked what they liked least about CONNEKT, the families explained that some of the activity tasks and supplies were difficult for residents to complete and use due to the residents' abilities and the size of the activity supplies. For example, one family member discussed how it was difficult for the resident to draw with the markers due to her arthritis and eyesight. The families also discussed wanting the activity instructions on one sheet of paper (due to finding the length of the instructions overwhelming). When asked what made CONNEKT easy to use, one theme families identified was that the activity itself and aspects of the activity were easy for the residents to complete, such as putting the stickers on the frame. Another theme the families identified was that the instructions made CONNEKT easy to use, particularly the columns, directions, and visuals/symbols in the activity plan. One family member explained that the columns kept them from needing to read the full page.

Also, when asked what made CONNEKT difficult to use, some families reported "nothing," and some families reported that the residents' inability to understand the activity and their decreased interest in completing the activity made CONNEKT difficult to use. Additionally, when asked if it was clear from the instructions that they could also complete the activity, most families indicated that they knew that they could participate in the activity with the resident or help them if they needed assistance, while a couple of the family members indicated that it was not clear that they could also participate in the activity. One family member also mentioned preferring to watch the resident complete the activity. Further, when asked to give their feedback regarding modifications and/or additions to CONNEKT, families discussed making small additions to the family binder or activity supplies. For example, one family

member described the benefits of adding a picture showing families how to cut the construction paper to make the frame. Some family members also recommended simplifying the activity instructions to be on one page, while some families recommended making no changes.

Discussion

The primary objectives of this project were to develop the CONNEKT Framework and determine its ability to improve the engagement between residents with dementia and their family members. Both objectives were met, as the CONNEKT Framework (including the CONNEKT Bin) was developed to assess and achieve the second primary objective. This second objective was met, as most (83.3%) of the six residents demonstrated a slight increase in aggregate Engagement of a Person with Dementia Scores, and all (100.0%) of the six family members demonstrated a slight increase in these scores as well.

Further, although CONNEKT (Framework and Bin) aimed to improve engagement across all categories of the Engagement of a Person with Dementia Scale, the nature of the activities during the two visits impacted the scores for each category. For the Affective engagement category, only 33.3% of residents and 16.7% of family members experienced an increase in scores from the typical visit to the visit using CONNEKT. Some of the positive behaviors in this category include pleasure, excitement, smiling, and laughing, and some of the negative behaviors include apathy, anger, fear, and restlessness (Jones et al., 2018). While a small percentage of residents and family members demonstrated an increase in these scores, the families reported an average of 7.9 on a 1-10 scale of how much they enjoyed using CONNEKT. Overall, the families reported enjoying CONNEKT, and their scores for Affective engagement decreasing or remaining the same between visits could be impacted by families displaying positive Affective engagement behaviors less frequently due to their focus on following the

activity plan and completing an unfamiliar activity. This could also be the case for the residents, as they were being guided through an unfamiliar activity. Further, the activity completed by most families and residents during the typical visit was “talking,” which is a typically uncomplicated activity and may allow for increased demonstration of positive affective behaviors.

Conversely, 66.7% of residents and 83.3% of family members demonstrated an increase in scores for Visual engagement. Some of the positive behaviors in this category include eye contact with the materials or people involved in the activity, and some of the negative behaviors include inattention and turning the head/eyes away from the materials or people involved in the activity (Jones et al., 2018). The increase in these scores could be due to the CONNEKT activity requiring families to read the “CONNEKT: Activities for Families” binder and requiring the residents and families to look at the activity supplies to complete the activity. Compared to “talking,” “decorating a picture frame” provided more visual input, as residents and family members are not required to look at each other to talk. Additionally, some residents may become distracted while talking and look away from their family members.

Further, only 33.3% of residents and 33.3% of family members experienced an increase in Verbal engagement scores from the typical visit to the using CONNEKT visit. Some of the positive behaviors in this category include maintaining verbal conversation or sounds or demonstrating gestures (e.g., nodding) in response to the activity, and some of the negative behaviors include refusing to participate or verbalizing complaints about the activity materials or people involved (Jones et al., 2018). The smaller increase in these scores is most likely due to the typical visit activity being “talking,” which was completed verbally by all of the families and residents who participated in it. Because “decorating a picture frame” does not rely solely on

verbal engagement to complete (as “talking” does), it is expected for this engagement category to remain the same or decrease between scores.

Conversely, 83.3% of residents and 66.7% of family members demonstrated an increase in scores for Behavioral engagement. Some of the positive behaviors in this category include reaching out, touching, or holding the activity materials or people involved, and some of the negative behaviors include avoiding, shoving away, or hitting the activity materials or people involved (Jones et al., 2018). This is most likely due to residents and family members interacting with fewer materials during “talking.” Families often interacted with their cellphones to show the residents pictures or give them updates during the typical visit; however, the residents often did not interact with any materials while talking.

Finally, 33.3% of residents and 33.3% of family members experienced an increase in Social engagement scores from the typical visit to the using CONNEKT visit. Some of the positive behaviors in this category include using the activity to encourage others to interact or communicate, and some of the negative behaviors include distracting or disrupting others (Jones et al., 2018). The small percentages of increases in these scores could be impacted by the inherent social nature of the typical visit activity of “talking” and the families’ use of “talking” as a way to socially engage with the residents.

While at least one resident and one family member demonstrated an increase in their scores between the typical and using CONNEKT visits, CONNEKT improved engagement differently among Engagement of a Person with Dementia Scale categories. CONNEKT provided residents and their family members an opportunity to participate more frequently in each of the five categories of engagement compared to “talking.” This is especially evident with the Visual and Behavioral categories, which saw the largest percentages of increases in scores

compared to typical visits. This could be impacted by the nature of the typical visit activity and the CONNEKT activity. Overall, the CONNEKT activity allowed for engagement in more categories compared to “talking.” This assisted in the achievement of the capstone project’s second primary objective of increasing engagement between residents and families.

Interpretation of Results

The results of this project demonstrate the CONNEKT Framework’s utility for developing activity plans that can be used by families to improve the engagement between them and the residents with dementia. The increase in aggregate scores on the Engagement of a Person with Dementia Scale for residents and families indicates an increase in positive behaviors observed among the five engagement categories. Similar results were found by Neils-Strunjas et al. (2024) who used the Fun and Social Engagement evaluation (comparable to the Engagement of a Person with Dementia Scale) to measure social engagement during a structured, meaningful group activity with long-term care residents. Neils-Strunjas et al. (2024) frequently observed positive social engagement behaviors (e.g., smiling, laughing, and talking to others) which is somewhat different than this capstone project that found a lower percentage of increases in social engagement scores of the Engagement of a Person with Dementia Scale compared to those during a typical visit. However, unlike this project, Neils-Strunjas et al. (2024) observed the frequency of positive social behaviors among all participants and also compared the frequency between assisted living facility and nursing home residents. The authors did not compare the Fun and Social Engagement evaluation scores or frequency of behaviors within the same residents. Further, Neils-Strunjas et al. (2024) did not target residents with dementia in their study, which could have impacted the frequency of positive social behaviors observed, as residents with dementia often experience apathy.

Additionally, this capstone project findings are related to those of Mbakile-Mahlanza et al. (2020), who also assessed the engagement and affect of nursing home residents with dementia while completing Montessori activities with their families. Mbakile-Mahlanza et al. (2020) observed significantly improved positive engagement and affect during the activities for the experimental group compared to the control group. In the control group, families read a newspaper with the residents, which may not be a preferred activity or one typically completed during visits. This could have impacted the significant improvement of positive engagement and affect for residents in the experimental group in Mbakile-Mahlanza et al. (2020) compared to the slight increase in positive engagement scores found for residents (and families) in this project.

Further, comparable to Crispi and Heitner's (2002) findings that families enjoyed using activity kits and that the kits improved the quality of visits between nursing home residents with dementia and their families, the six family members who participated in our project, on average, reported enjoying using CONNEKT and that it had a positive impact on their interactions with the residents. This is also analogous to the findings of Cohen-Mansfield and Cohen (2026) who found that enhanced group activity kits improved the relationship and time spent between home-dwelling persons with dementia and the activity kit facilitators (e.g., friends and family). Further, the results of this project are similar to those of Tasseron-Dries et al. (2021) in which families of nursing home residents with severe dementia participated in meaningful activities through the Namaste Family Care Program and reported their positive experiences with the program, enjoyment of the activities, and their improved interactions with the residents. These studies, along with this project, provided families of individuals with dementia with the supplies needed and, in some cases, additional information to complete the activities. This could be part of the reason for families' enjoyment of these interventions and CONNEKT, as they are not left with

the burden of thinking of an activity to complete with the residents or completing the same activity/activities every visit.

Because there are activity instructions and supplies in the CONNEKT Bin, families do not have to create an activity on their own or obtain the supplies. This allows families to participate in a wider variety of activities, as most families who participated in this project completed “talking” during their typical visit and indicated that this was the activity they usually completed during visits. This is similar to Cohen et al. (2014), Hartmann et al. (2017), and van Corven et al. (2022) who also identified talking/conversing as an activity completed by family members and residents with dementia during visits to the facilities. However, as residents with dementia decline, maintaining conversations and speaking intelligible words become challenging, and families may no longer be able to participate in mutual conversations during visits (Sclan & Reisberg, 1992; van Corven et al., 2022). This theme of challenges with conversing was discussed by one family member who participated in this project. This individual explained that it was sometimes difficult to engage the resident in conversations and that the CONNEKT activity provided a good conversation starter for her and the resident.

Finally, some of the family members who participated in or observed the visit using CONNEKT reported that completing the CONNEKT activity with the residents gave them insight into the abilities that the residents had maintained (e.g., handwriting skills). This is similar to the findings of Cohen-Mansfield and Cohen (2026). Also, some of the family members who participated in or observed the CONNEKT activity discussed how completing the activity helped them think of ideas for future activities they could complete with the residents, which was also found in Cohen-Mansfield and Cohen (2026). This is most likely due to the activity kits and the CONNEKT Bin providing persons with dementia and their families with activities in which

they could use their skills. Because most families who participated in this capstone project completed “talking” as their typical visit activity, they may not have been able to often observe the residents’ abilities, as this activity typically does not allow for residents to interact with activity materials. As such, CONNEKT also benefits residents with dementia by allowing them to continue using their skills and abilities during activities and by allowing family members to gain a deeper understanding of residents’ skills and abilities.

Dissemination

The summary of this project, including the process for developing CONNEKT (Framework and Bin) and the project’s outcomes, was presented to several audiences. First, the capstone student developed a presentation for relevant staff at MacGregor Downs Health Center. This presentation included information about what CONNEKT entails and how it can be used at the site by families (using the bin) and by occupational therapy staff and students (developing additional activity plans). The capstone student performed the presentation on March 26th, 2026, to activities and rehabilitation staff at the site.

Second, the student developed a poster for dissemination at the AOTA INSPIRE Conference in Anaheim, California, on April 25th, 2026. The poster included a summary of the literature review, the project objectives, the capstone development process, the outcomes and discussion, and the conclusion. This poster was presented to occupational therapy practitioners and students during the conference.

Third, the student developed an oral presentation for the annual Research Day hosted by the College of Allied Health Sciences at East Carolina University. This presentation was held on April 29th, 2026. The presentation included a summary of the capstone project and its results, and it was presented to faculty, staff, and students from the College of Allied Health Sciences.

Limitations

Despite the strengths and benefits of this project, there are some limitations. One limitation is that none of the residents who participated in the project demonstrated functional skills to be placed in the Moderate stage according to the Functional Assessment Staging Tool. This could be due to residents with dementia at the site frequently demonstrating more severe stages and less frequently demonstrating less severe stages, as individuals in less severe stages can often remain in the home environment with informal caregivers (Olsen et al., 2016). While clinical reasoning was used to create a Moderate Stage column in the “Family Activity Plan #1,” this column may be less accurate compared to the other columns as it is based on presumed rather than actual performance of residents in that stage. Further, while residents from three different stages were included in the project, only one resident was identified for each of the Mild and Severe stages. This limited the scope of the strengths, challenges, and implemented strategies included in the columns of the “Family Activity Plan #1” for these stages. Future projects and uses of the CONNEKT Framework should aim to include more than one resident from each of the four dementia stages of the Functional Assessment Staging Tool to gain a more accurate and full scope of residents’ performance and abilities.

Another limitation is that the family members who were contacted to participate in the project were primarily listed in residents’ charts as being the responsible party for the residents’ care decisions. These family members were chosen to participate in the project due to their increased visit frequency and interest in completing activities with the residents. Because the family members visited more often and were responsible for the residents’ care, these family members were fairly familiar with the residents’ physical and cognitive abilities. This may have caused families to rely less on the information included in the “CONNEKT: Activities for

Families” binder and use their own knowledge of the resident to complete the activity. Further, the family members who participated were all adults. It is unknown to what extent CONNEKT would improve the engagement between residents with dementia and their family members who are 18 years of age or younger and if these individuals could use the CONNEKT Bin successfully during their visits. Similar future projects and uses of the CONNEKT Framework should assess the engagement between residents with dementia and family members who are not as familiar with the residents/visit less frequently (including adolescent family members). Future projects using the CONNEKT Framework should also assess to what extent individuals 18 years of age or younger are able to use and follow the activity plans included in the CONNEKT Bin to complete an activity with residents.

A final limitation is that the Engagement of a Person with Dementia Scale was scored by one person, the capstone student, and was based on their observations of the residents’ and families’ engagement. Because this scale is based on the observer’s level of agreement with the statements provided for the positive and negative engagement listed for each category, the results may be subjective. This impacts the reliability of the results (aggregate scores), though the resident and family scores using CONNEKT differ only slightly from their scores during a typical visit. Future similar projects could improve the reliability of the results by having multiple individuals observe the visits (in-person or via recording) and score the Engagement of a Person with Dementia Scale.

Implications for Profession

This capstone project and its results are relevant to the occupational therapy profession, as it adds to the range of interventions that can be implemented by occupational therapists to improve the lives of skilled nursing facility residents with dementia (Mansbach et al., 2017;

Sultan Ibrahim et al., 2021; Travers et al., 2016; Uceda-Portillo et al., 2024). However, occupational therapy interventions targeting the engagement of residents with dementia and their families are limited. The CONNEKT Framework and CONNEKT Bin help address this gap. Importantly, this capstone adds to the literature regarding the benefits of activity kit utilization among residents (and individuals) with dementia and their families and broadens the scope of these kits to be developed by occupational therapy practitioners and students through the CONNEKT Framework (Cohen-Mansfield & Cohen, 2026; Crispi & Heitner, 2002).

Further, because meaningful activities are occupations, occupational therapists are vital to developing the activity kits. Occupational therapy practitioners and students also possess the knowledge and skillset needed to create a guide for families to successfully complete activities with residents, while also allowing the residents to maintain as much independence as they are able. The CONNEKT Framework provides a lens and guide for occupational therapy practitioners and students to translate their knowledge of activity analysis and modification, task upgrading/downgrading, various aspects of health and skills (e.g., cognitive, physical, etc.), and the importance of maintaining independence into activity plans for families (AOTA, 2020). This occupational therapy-specific knowledge is vital to develop activity plans and kits that can improve the engagement of both residents with dementia and their family members.

Future Directions

To continue improving the lives of residents with dementia and their families, it is recommended that further projects and research be conducted in this area. One such research recommendation is to include family members who may not frequently visit the residents and may not be as familiar with their functional abilities as family members who regularly visit. While similar projects have focused on implementing activity kits with people with dementia and

their family members, the studies included family members who were familiar with the individuals with dementia and visited them frequently (Cohen-Mansfield & Cohen, 2026; Crispi & Heitner, 2002). This may be due to convenience, as families who visit more frequently or spend more time with the individuals with dementia may be more willing and available to participate in the studies. However, including family members who visit residents less often allows for the assessment of the kits' effectiveness in helping families understand the residents' condition and how to complete an activity with them.

Further, the participants in Cohen-Mansfield and Cohen (2026) were required to be over 18 years of age, and while Crispi and Heitner (2002) did not specify the ages of participants, it is assumed they were over 18 years of age due to the requirements that participants be the primary caregivers of the residents. Because adolescent family members also visit residents with dementia and because the activities included in the kits can typically be completed by adolescents (e.g., playing games, decorating a picture frame, etc.), it is important to assess their engagement also and to assess their ability to use and follow the activity kits.

Additionally, it is recommended that further studies be completed to design or assess occupational therapy interventions that specifically target the improvement of engagement between residents with dementia and their family members. As discussed, occupational therapy interventions with this population often aim to improve the quality of life of residents, and there is a need for more research in the area of occupational therapy interventions targeting engagement (Mansbach et al., 2017; Sultan Ibrahim et al., 2021; Travers et al., 2016; Uceda-Portillo et al., 2024). Interventions such as Bingocize® or Montessori activities can be easily adapted by occupational therapists to study and improve engagement during meaningful activities (Chan et al., 2021; Mbakile-Mahlanza et al., 2020; Neils-Strunjas et al., 2024).

Finally, because activity kits have shown to be beneficial to residents/persons with dementia and their families, it is important for this intervention to be implemented in everyday practice. These kits can be developed by occupational therapy staff and students not only in skilled nursing and other long-term care facilities, but also in home health settings. Occupational therapy staff and students can create the kits to be housed in and used by residents and families in long-term care facilities. Further, the activity kits can be created and given to home-dwelling individuals with dementia and their family caregivers, thus expanding the scope and range of clients who can benefit from this intervention.

Conclusion

This capstone project sought to address challenges experienced by skilled nursing facility residents with dementia and their families, including residents' decreased participation in meaningful activities and families' challenges engaging with residents in a variety of activities due to dementia-related declines. The student collaborated with the capstone team, including the content expert, site mentor, and doctoral capstone coordinator, to determine the needs of the population and the site, MacGregor Downs Health Center. The student established the CONNEKT Framework as a way to address challenges experienced by and improve the engagement between residents with dementia and their families, as supported in the literature. The Ecology of Human Performance guided the development of the CONNEKT Framework and process to implement the capstone project.

Further, through trialing an activity (decorating a picture frame) with seven residents and comparing their performances, the student created the "CONNEKT: Framework for Occupational Therapists" and "CONNEKT: Activities for Families" binders and the CONNEKT Bin (all titled as "CONNEKT"). Most of the six residents and all of the six family members who

trialed the CONNEKT Bin demonstrated a slight increase in Engagement of a Person with Dementia Scale scores. Additionally, the family members, on average, rated CONNEKT highly, and the student used the families' feedback to make modifications and additions to the CONNEKT Bin and binders to improve them for future uses. The CONNEKT Bin was also housed at the site to continue benefitting residents with dementia and their families, and information for staff and families was provided by the student to the site to ensure the CONNEKT Bin's continued development and use.

The CONNEKT Framework can be used by occupational therapy staff and students to create activity plans that improve the engagement between residents with dementia and their families. In addition to this, CONNEKT also provides families the means and instructions to complete other activities than those typically completed during visits. Further, families who do not know how to overcome challenges experienced by the residents during activities can more confidently complete the activities in the CONNEKT Bin due to the guidance of the "CONNEKT: Activities for Families" binder. This also allows for increased independence for residents and the opportunity to use their skills during meaningful activities. This capstone project's primary objectives were successfully met, and the CONNEKT Framework and Bin add to the ways that occupational therapy practitioners and students can benefit the health and wellbeing of residents with dementia and their families.

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Appendix A

Semi-Structured In-Person Interview With Rehabilitation Director at MacGregor Downs Health Center

1. How many residents with dementia are living in the facility?
2. What stages of dementia are typically displayed by residents at MacGregor Downs Health Center?
3. How many of those residents with dementia can ambulate independently using an ambulation device? How many of those residents with dementia are wheelchair bound?
4. How many of those residents with dementia do not have anyone who regularly visits them?
5. Have you observed any visits of dementia residents and their visitors? If so, what did the visitors and residents with dementia typically do to interact (i.e., what activities did they do together)?
6. Have you witnessed any difficulties with visitors and residents with dementia being able to engage with one another during visits? (This could include not being able to complete activities together or communicate with one another during visits).
7. Did these visits you observed typically occur in the residents' rooms or in another place in the facility?
8. Are there specific things regarding my capstone or me being at the site that will need approval from leadership (such as working with the residents)? Do I need to have the visitor that I interview sign an informed consent form before being interviewed?
9. Will I have access to residents' EHRs to identify residents with dementia? Will I need to receive approval for this?

10. Is there a space that I could work in at MacGregor Downs Health Center to review residents' EHRs (if allowed) and put together activities to complete with the residents?
11. When is the front desk person available on weekdays and weekends (working hours)?
12. What, if any, do you feel are current challenges with completing and implementing my proposed capstone ideas at this site?
13. Are there any additional details about this site that I should know?
14. What is the best way to communicate with you, and can I have your preferred contact information?
15. Do you have any additional questions, comments, or concerns for me?

Appendix B

Semi-Structured In-Person Interview With Activities/Volunteers Services Director at MacGregor Downs Health Center

1. Have you observed any visits of dementia residents and their visitors? If so, what did the visitors and residents with dementia typically do to interact (i.e., what activities did they do together)?
2. Have you witnessed any difficulties with visitors and residents with dementia being able to engage with one another during visits? (This could include not being able to complete activities together or communicate with one another during visits).
3. Did these visits you observed typically occur in the residents' rooms or in another place in the facility?
4. What has your role been in working with residents with dementia and their visitors? Have you had a role in facilitating activities for the residents and the visitors to complete together?
5. Are there currently any handouts, materials, resources, etc., that are provided to visitors when visiting the residents with dementia?
6. What supplies/materials for any activities are available to be used by the visitors (leased during the visits)?
7. If a standard sized bin for the binders and resources for the activities were to be developed, is there a place that it could be housed at MacGregor Downs Health Center so that visitors could access it?
8. Is any activity staff working during weekends or evenings?
9. What time does activity staff typically finish their day?

10. What, if any, do you feel are current challenges with completing and implementing my proposed capstone ideas at this site?
11. Are there any additional details about this site that I should know?
12. What is the best way to communicate with you, and can I have your preferred contact information?
13. Do you have any additional questions, comments, or concerns for me?

Appendix C

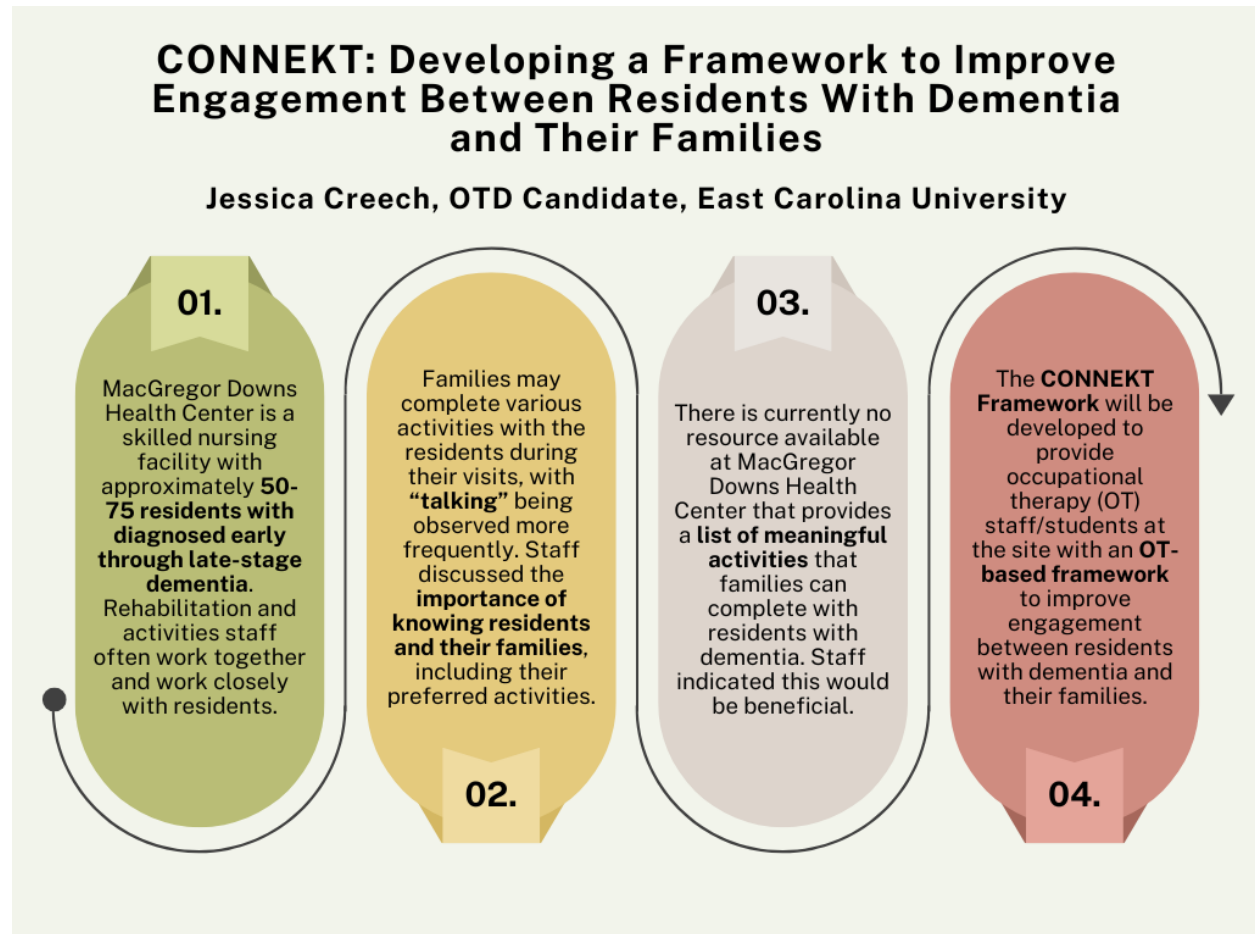
Data Collection Process Timeline

Who	When	Format/Context of Data Collection
Brittany Mundy, OTR/L (Rehabilitation Director)	April 22 nd , 2025	Semi-structured in-person interview
Summary of Data Collected:		
• Approximately 50-75 residents with diagnosed dementia; residents display mild through severe stages of dementia • Most residents: wheelchair bound and have regular visitors • Activities observed: completing word searches, coloring books, going outside, and talking (most visits); talking may be difficult for later stage dementia residents • Visits typically completed in residents' rooms, living room areas, and outside of facility • Approval process discussed • Residents' availability identified as a potential challenge during capstone experience		

Who	When	Format/Context of Data Collection
Terry Edwards (Activities/Volunteers Services Director)	April 24th, 2025	Semi-structured phone call interview
Summary of Data Collected:		
- Activities observed: listening to music, completing large-piece puzzles, sorting blocks, coloring, holding dolls, going outside, feeling textured cloths, smelling different scents, looking at labeled photo albums, completing devotions, using robotic dogs, using sensory blankets, and using rain makers - Discussed importance of providing families with education on identifying activities and accepting residents' challenges - Explained that some families have preferred activities with residents and explained importance of knowing residents and helping families interact with them - Discussed that activities staff completed prior leisure interests assessments and developed care plans for residents' charts - Explained that families were involved in care plan and informed on what residents would do while at facility - Described benefits of developing a handout for meaningful activities for families/visitors and indicated that an activities binder and kit could be beneficial		

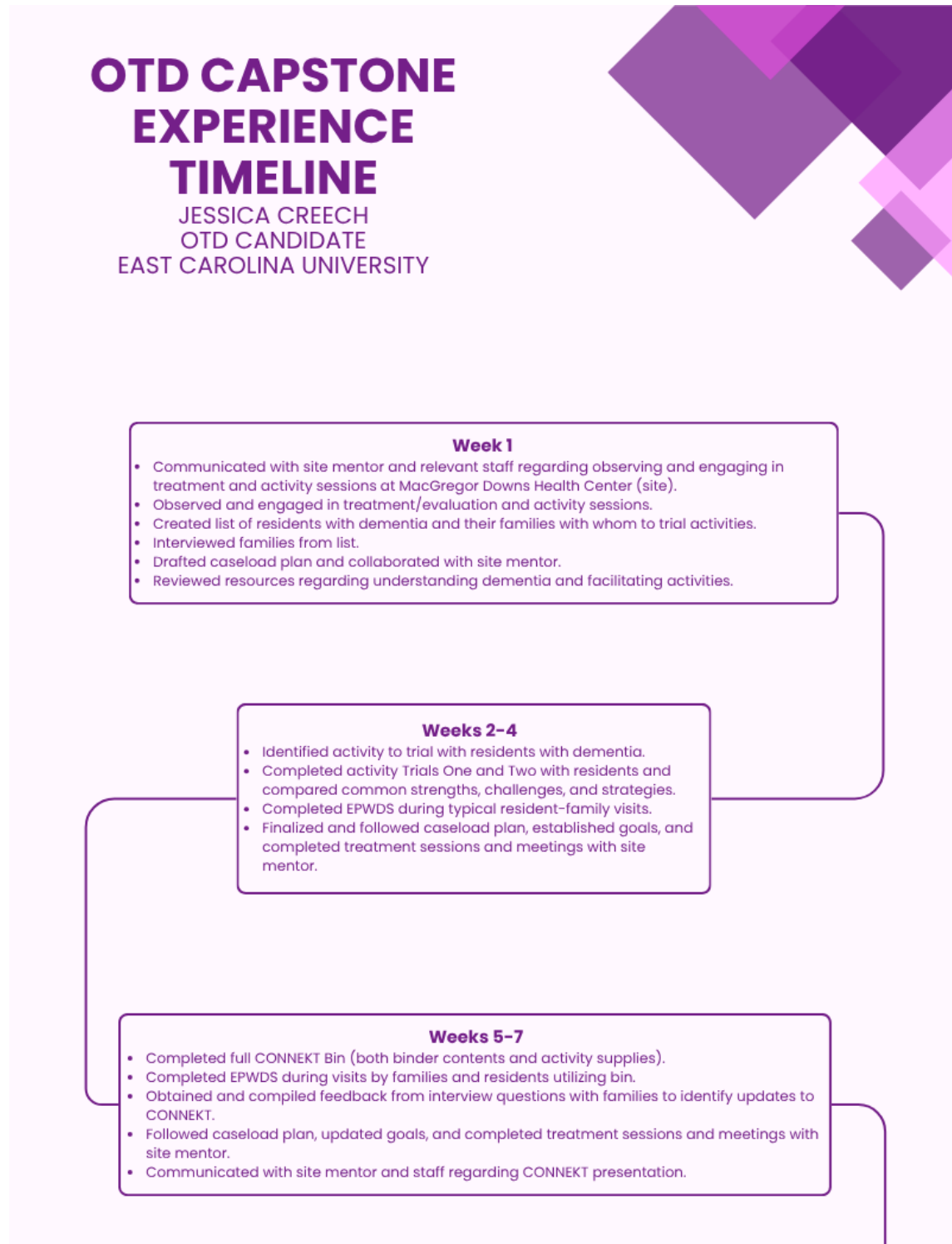
Appendix D

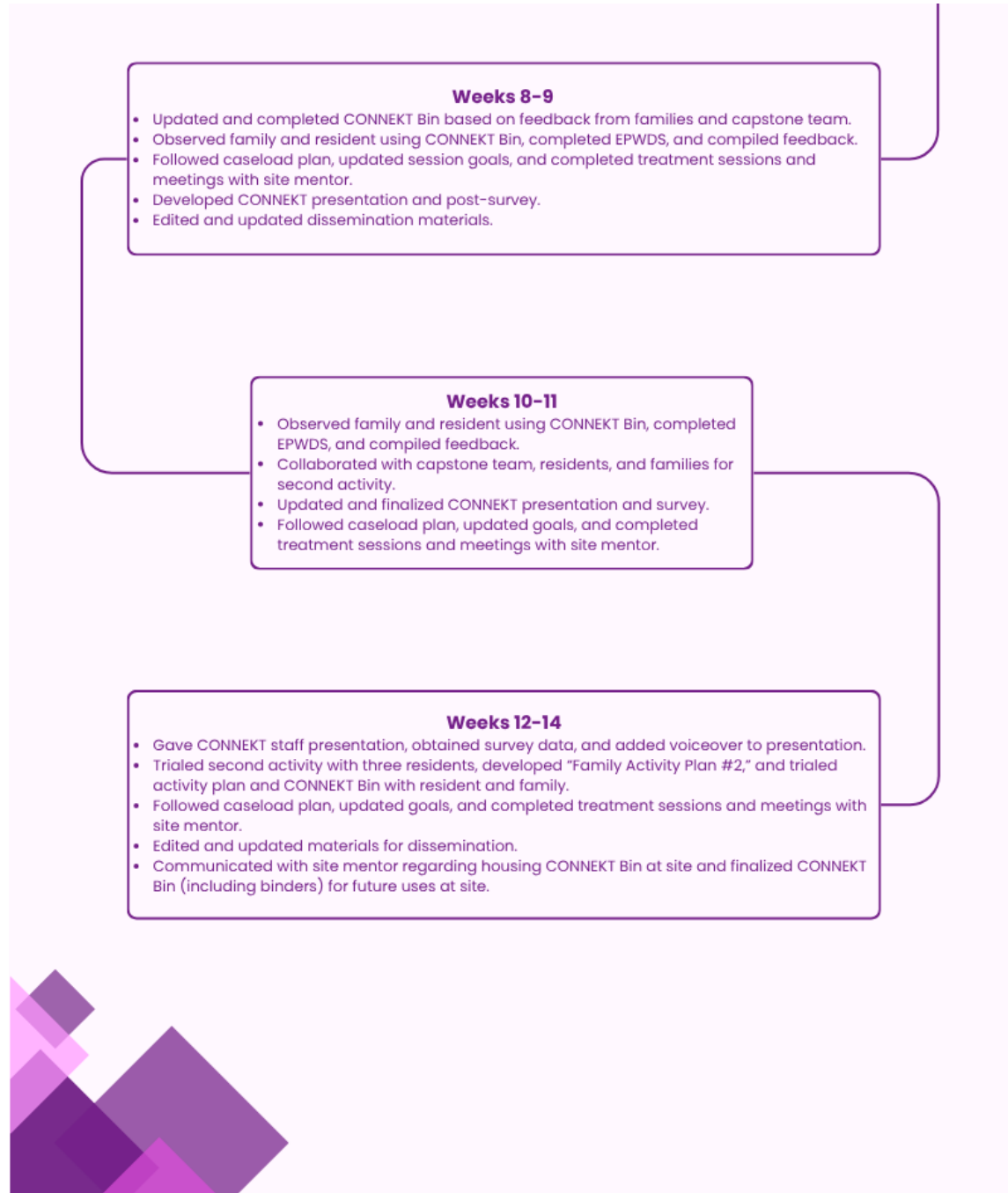
Needs Assessment Infographic



Appendix E

Capstone Experience Timeline Infographic





Appendix F

Portion of Table Family Activity Plan

Big Picture	Mild Stage	Moderate Stage	Moderately Severe Stage	Severe Stage
Step 1. Put a small stack of construction paper on the table in front of the resident. Ask the resident to pick the color they want.				
Some residents may not be able to pick from the stack and may need 2 options.	The resident should be able to pick the color they want.	The resident should be able to pick the color they want. You may need to tell them to pick their favorite color.	The resident may be able to pick the color they want. If not, give the resident 2 options and tell them to pick 1.	The resident may not be able to look at, point to, or say which color they want. Pick a color you think they would like.

Appendix G

Portion of Short Family Activity Plan

Short Family Activity Plan #1: Mild Stage

1. Put a small stack of construction paper on the table. Ask the resident to pick
1.
2. You or the resident should fold the paper in half as if making a card. ***Look at the sample frame in the binder.**
3. Cut a square on the folded side of the paper. ***The resident should not do this step if they do not meet the safety concerns on Page 1.**
4. Unfold the paper and put the markers on the table.
5. Ask the resident to pick 1, open it, and draw on the frame. ***You may need to show them how to open the marker and draw examples of simple pictures for them to draw on the frame.**
6. Ask the resident to close the marker and put it down when they are done drawing.

Appendix H

Post-CONNEKT Questions for Family Members

1. On a scale of 1 to 10, how much did you enjoy using CONNEKT? (**1 = not at all, 10 = very much**)
 - a. What did you like about it?
 - b. What did you like the least about it?
2. On a scale of 1 to 10, how easy was it to use CONNEKT? (**1 = very hard, 10 = very easy**)
 - a. What made CONNEKT easy to use?
 - b. What made CONNEKT hard to use?
3. On a scale of 1-10, how effective do you feel that CONNEKT was in helping you complete an activity with your loved one? (**1 = not very effective, 10 = very effective**)
4. On a scale of 1-10, how positive of an impact do you feel that CONNEKT had on your interactions with your loved one? (**1 = no impact, 10 = very positive impact**)
5. Was it clear that you could take part in the activity too (for example, by drawing or placing stickers)? Did you think that you had to watch the resident do it and that you could only complete the steps listed for you?
6. Please share any additional feedback that could help me improve CONNEKT. This includes any changes you would make or anything you would add. This will help me make it better and easier for future families to use.