7-2019

Speech-Language Pathologists' Assessment and Treatment of Dementia: A Mixed Methods Study

Alyssa Mount
University of Nebraska-Lincoln, alyssa.mount@huskers.unl.edu

Mount, Alyssa, "Speech-Language Pathologists' Assessment and Treatment of Dementia: A Mixed Methods Study" (2019). *Public Access Theses and Dissertations from the College of Education and Human Sciences*. 339.
https://digitalcommons.unl.edu/cehsdiss/339

Speech-Language Pathologists' Assessment and Treatment of Dementia: A Mixed Methods Study

by

Alyssa L. Mount

A THESIS

Presented to the Faculty of

The Graduate College at the University of Nebraska

In Partial Fulfillment of Requirements

For the Degree of Master of Science

Major: Speech Language Pathology and Audiology

Under the Supervision of Professor Kristy Weissling

Lincoln, Nebraska

July, 2019

Speech-Language Pathologists' Assessment and Treatment of Dementia: A Mixed Methods Study

Alyssa Mount, M.S.

University of Nebraska, 2019

Advisor: Kristy Weissling

The intent of this research was to investigate how speech-language pathologists (SLPs) are assessing and treating people with dementia (PWD). To examine this the researcher first completed a literature review to determine prominent evaluation and treatment procedures for dementia. Then the researcher set out to identify whether there was a gap between the external evidence found in the literature and the practice patterns of SLPs, and subsequently attempt to delineate potential reasons for the differences.

Using a mixed-method design, the researcher conducted 10 phone interviews and 114 SLPs participated in an online survey. The researcher engaged in grounded theory coding procedures for the interviews. Survey data were analyzed based on demographic groups (e.g., rural versus urban) using non-parametric procedures. In general, the results suggested that SLPs are completing some of the assessment and treatment procedures identified in the literature. In regard to assessment, there was a departure from the literature in terms of the need to screen for vision/hearing and depression and engaging differential diagnosis to inform the evaluation. Both qualitative and quantitative results yielded a discrepancy in the use of vocabulary across participants. In fact, some SLPs reported engaging in procedures without having a name for them. SLPs with more years of experience and more dementia-related CEUs had higher confidence in completing several dementia-related procedures than those with fewer years/CEUs. Participants with fewer dementia-CEUs and a smaller caseload of PWD were less familiar with treatment approaches identified in the extant literature than those with more CEUs/higher caseloads. Participants with fewer dementia-CEUs reported using external memory aids less frequently than those with more CEUs; and, SLPs with fewer years of experience used errorless learning less frequently than those with more years of experience. Barriers that emerged that identify sources of gaps between the literature and clinical practice (i.e., implementation of EBP) included: lack of time, lack of carryover by caregivers, insurance barriers, lack of applicability of research, limited evidence, and lack of materials/resources.

Author’s Acknowledgements

I first would like to thank my thesis advisor, Dr. Weissling, who has shown me great guidance throughout my undergraduate and graduate career and never hesitated to drop what she was doing to assist me with my project. Her mentorship has not only taught me better ways to be a researcher, but also to be a better clinician. I would also like to thank my other committee members, Dr. Harvey and Dr. Lambert. I appreciate you both taking the time out of your busy schedules to answer my questions and probe me with questions to make me a stronger researcher.

I would also like to thank Jacquelyn King and Sam Galligan, the undergraduate students who served as reliability agents throughout my project. I hope I was as helpful to you as you were to my project! I’d also like to thank Nikki Scott, Beth Dineen, Jessie Kohn, Alicia Davis, and Abby Pelster who all provided me with insightful feedback for the content of my survey.

Of course, I’d like to express my gratitude to my family for always being understanding of the long hours and supportive throughout. I’d like to thank Michaela Sullivan, Anthony Kohtz, and other close friends who were there to provide moral support, ideas, and show genuine interest in my work throughout the years of this project.

I also thank all my peers and clinic supervisors at UNL for supporting me throughout my graduate career. To Dr. Champley, my clinic supervisor during my medical externship, I appreciate your frequent encouraging words to get this project completed.

Table of Contents

Appendices

Multimedia Objects

Tables

Figures

CHAPTER 1: BACKGROUND

Review of Relevant Literature

Dementia is a broad category of acquired brain diseases that cause progressive loss of cognitive functions (Bourgeois, 2011). According to the Diagnostic and Statistical Manual of Mental Disorders-5th Edition (DSM-5), dementia (also referred to as “Major Neurocognitive Disorder”) is diagnosed with the following criteria:

> 1. Evidence of significant cognitive decline from a previous level of performance in one or more cognitive domains (i.e., complex attention, executive function, learning and memory, language, perceptual-motor, or social cognition)
>
> 2. The cognitive deficits interfere with independence in everyday activities
>
> 3. The cognitive deficits do not occur exclusively in the context of a delirium.
>
> 4. The cognitive deficits are not better explained by another mental disorder. (American Psychiatric Association, 2013, p. 635)

According to the Alzheimer’s Association (2017), the most common cause of dementia is Alzheimer’s disease (AD) with 60 to 80 percent of estimated cases being of the Alzheimer’s type. Approximately 5.5 million Americans were living with AD in 2017 (5.3 million over the age 65 and 200,000 under 65) (Alzheimer’s Association, 2017). Following AD, the two most common causes of dementia are vascular disease (which can cause Vascular Dementia, or VaD) and Lewy Body Disease (LBD) (Alzheimer’s Association, 2017; Bayles & Tomoeda, 2014). Frontotemporal Dementia (FD) is another type of dementia, caused by frontotemporal lobar degeneration which results in behavioral variant frontotemporal dementia or language variants, such as primary progressive aphasia (Bayles & Tomoeda, 2014). FD accounts for approximately 10% of dementia cases (Alzheimer's Association, 2017). Dementia can also be caused by other degenerative disease processes, such as Parkinson's disease (i.e., one-tenth as prevalent as AD), Huntington's disease, and Amyotrophic Lateral Sclerosis (ALS), which are sometimes but not always accompanied by dementia (Bayles & Tomoeda, 2014). The percentages of prevalence by disease process vary depending on the source. Additionally, the presence of more than one type of dementia (i.e., mixed dementia) is found in approximately 50% of cases, thus obscuring the statistics. Nonetheless, AD, VaD, and LBD account for at least 85% of dementia cases, including the individuals with mixed dementia (Alzheimer's Association, 2017). For the purposes of this project, the three main causes were prioritized to determine the most common dementia assessments and treatments. Many assessments and treatments apply across the aforementioned types of dementia. Due to the more prominent impact on language found in FD, it may have a different treatment course than that seen in AD, VaD, and LBD. Thus, it was not considered when designing the content of this project.

Physiologically, AD is characterized by the presence of neurotic plaques, neurofibrillary tangles, atrophy, and granulovacuolar degeneration in the brain. Official diagnosis of AD cannot be done until autopsy. However, there have been recent developments in identifying biomarkers that can indicate a presence of preclinical AD and present AD. For example, cerebrospinal fluid testing (i.e., presence of Tau Protein and Aβ) has been noted as the most specific and sensitive biomarker for AD (Anoop, Singh, Jacob, & Maji, 2010). Genetic testing is a way for individuals to identify, but not confirm, a risk for developing Alzheimer's disease (National Institute on Aging, 2015).

There are several distinguishing characteristics of AD. One of the most prominent features of AD is its insidious onset. Additionally, AD is typically described by three stages: early, middle, and late. The early stages of AD tend to be characterized by a decrease in episodic memory (i.e., memories attached to a specific context), working memory, and sustained attention. Deficits in the early stage are not seen in basic activities of daily living (ADLs) (e.g., dressing and bathing). Rather, there tends to be difficulty participating in instrumental activities of daily living, which require higher levels of cognitive processing (e.g., paying bills). Linguistically, patients may present with repetitious discourse, reduced cohesiveness of speech, and forgetting auditory information and thoughts, which impacts receptive language. During the middle stage of AD, an individual's independence is severely limited, requiring supervision for basic ADLs. In this stage, there is an increase in feelings of disorientation, daily function, and a continued decrease in memory (i.e., episodic, semantic, encoding, and storing). Individuals begin to produce "empty speech," have reduced auditory and written comprehension, and experience word-finding problems. Late stage AD is characterized by an inability to complete basic ADLs (e.g., incontinence). A catastrophic decline in working and declarative memory is present. Motor impairments are often found at this stage, which can progress to a decrease or loss of ambulation. Some patients still produce verbal output with mostly diminished meaning, while others may be mute or strictly echolalic (Bayles & Tomeda, 2014).

VaD is caused by ischemic/hemorrhagic cerebrovascular disease or cardiovascular/circulatory disorders. VaD is rarely found in isolation, as it typically occurs alongside another disease process, such as AD. VaD can be suggested when: vascular events tend to be followed by cognitive decline and cerebrovascular disease pathology is present with cognitive impairment. According to Bayles and Tomoeda (2014), the progression of VaD is typically less predictable than AD. Progression is thought to be more “step-wise,” meaning that cognitive function remains stable between vascular events, but declines following a vascular event. Like AD, individuals with VaD experience cognitive decline that eventually limits their abilities to participate in instrumental and basic ADLs. Specific symptoms may vary depending on the location of disease pathology (i.e., cortical vs. subcortical). Overall, the effects of VaD are similar to AD in that communication, working memory, and executive function are negatively affected. When the two disease processes are present, an earlier and more severe cognitive impairment that shortens the lifespan is more likely. Additionally, episodic memory deficits appear to be more pronounced in AD than they are in VaD (Bayles & Tomoeda, 2014).

LBD is a spectrum of disorders that cause a collection of round protein clumps called Lewy bodies within neurons in the brain. Patients with LBD present with parkinsonism and dementia very similar to AD. One distinguishing characteristic of LBD is varying day-to-day attention and alertness, rather than the gradual decline seen in AD or the stepwise progression seen in VaD. LBD is typically misdiagnosed with Parkinson’s Disease Dementia (PDD), due to the similarity of motor impairments.

However, the presence of visual hallucinations and cognitive symptoms preceding motor symptoms can distinguish LBD from PDD. Additional symptoms of LBD are impairments of sleep, executive function, visuo-perceptual, spatial functions, attention, and memory. Communicatively, individuals may present with impairments in language form, such as speaking in fragments, decreased cohesion, and nonsensical speech. As in AD, individuals will likely decrease their use of language throughout the disease progression, and eventually result in echolalic or repetitive speech (Bayles & Tomoeda, 2014).

Due to the impact of communication from decreased cognitive functioning in dementia, speech-language pathologists (SLPs) have a role in assessing and treating these individuals. According to the American Speech and Hearing Association (ASHA), the national certification body of SLPs, these clinicians play a role in screening, assessing, diagnosing, and treating individuals with dementia. Duties of the SLP include both clinical and educational services, to prevent/treat impairments related to dementia (American Speech and Hearing Association [ASHA], 2016). Due to the progressive nature of most dementias, the goal of therapeutic intervention is to maintain cognitive functioning, rather than restore it. Bayles and Tomoeda (2014) used the broad categories of treatment they labeled direct and indirect. Direct interventions consist of individual or group therapy aimed at retaining cognitive functioning. Indirect treatment generally consists of the clinician modifying the environment (i.e., physically or linguistically) to help individuals compensate for their deficits. Ultimately, professionals are encouraged to rely on the patients’ retained cognitive abilities to increase their safety and quality of life throughout the progression. For example, nondeclarative memory systems tend to be spared for much of the early and moderate stages of AD. The clinician can utilize this strength by implementing classical conditioning, procedural learning, and priming to assist the patient in learning new behaviors. Due to the changing nature of the disease, it is suggested that clinicians frequently reassess a patient's cognitive abilities to identify strengths and weaknesses. Having the knowledge of the likely underlying disease causing the dementia can be beneficial to the clinician, as the degree and type of cognitive impairments can vary (Bayles & Tomoeda, 2014).

SLPs are expected to practice under the principles of evidence-based practice (EBP). In 2005, ASHA mandated the implementation of EBP to the daily practice of its professionals. The essence of EBP is that the practicing clinician considers the published literature (i.e., external evidence), the needs and preferences of the patient (i.e., internal evidence), and their own clinical expertise (i.e., internal evidence) when assessing, treating, and modifying treatment plans for clients (ASHA, 2005; Paul, 2013). External evidence can range from textbooks and expert opinions, to meta-analyses of randomized control trial studies. It is expected that clinicians stay up to date on new developments in research. Implementing EBP also requires SLPs to evaluate the quality of their external evidence and ensure that said evidence has implications for clinical practice (ASHA, 2005). This may include being skeptical of expert opinions, especially when they contradict scientific evidence from research (Paul, 2014).

Clinicians can utilize levels of evidence charts to gauge the credibility of the external evidence in question. Once external evidence has been considered, clinicians need to gauge if the evidence applies to the specific client they are seeing (Paul, 2014). The clinician should consider client and family preferences, the greatest needs of the client, and whether the intervention dosage matches the intervention plan with the client. More specifically, Dollaghan (2007) described internal evidence as considering the data from therapeutic sessions to make decisions. Though it is important to appraise external evidence to select potential treatments, clinicians need to test (i.e., through clinical data) treatments for individual clients, rather than assuming it will be effective (Dollaghan, 2007). Finally, a clinician's expertise should be considered, which encompasses their clinical experiences, relevant education/training, and environmental resources (Paul, 2014).

Related Research

Though there is research regarding treatment practices that may prove successful for a person/people with dementia (PWD), there is currently little known about how SLPs make decisions about assessing and treating PWD. Paul and Mehrhoff (2015) investigated direct and indirect treatment strategies, barriers, and facilitators in SLP dementia practice through an online cross-sectional survey posted to ASHA's Special Interest Groups (SIG). Fifty-eight SLPs participated in the survey. Most of the survey contained close-ended questions, with the exception of open-ended questions to gain information about barriers and facilitators of practice, and areas for participants to write-in "other." The authors' main research question was, "What are the issues identified by SLPs who provide direct and indirect interventions to persons with dementia-related cognitive communicative disorders?" (Paul & Mehrhoff, 2015, p. 2).

Paul and Mehrhoff reported their results for the research questions. The most frequently used direct interventions included: specific verbal instruction, cognitive stimulation, memory wallet, spaced retrieval, and errorless learning. Researchers determined that these were the most-frequently used treatments across all years of clinical experience (i.e., one to 10 years, 11 to 20 years, and over 21 years). For indirect interventions, clinicians most frequently identified caregiver training, prospective memory aids, and linguistic manipulation as strategies. A high percentage (85% or above) of participants noted that they collaborate with the family/caregiver, occupational therapy, client, nurse, physical therapy, and/or assistants to implement indirect interventions. When asked to indicate the influences of their clinical decision making regarding when to make direct and indirect interventions, the five most frequent answers were: continuing education (82% of participants), peers/co-workers (65%), published research evidence (62%), client preference (60%), and practice documents from the profession (58%) (Paul & Mehrhoff, 2015).

Paul and Mehrhoff found that one prominent barrier to dementia treatment was caregiver related (e.g., poor follow through, limited education regarding dementia, and high rates of staff turnover). Participants also discussed the barriers to implement therapy, such as a limited time with the patient or to collaborate with others and limited materials. Policy barriers, such as trying to bill for more qualitative measures and “unrealistic productivity expectations” were also a reoccurring theme among many participants (Paul & Mehrhoff, 2015).

Though the design of the study had limitations (i.e., implemented a specific convenience sample, whose experiences may not generalize to other SLPs), this study provides preliminary evidence towards what SLPs are doing with PWD and highlighting the main barriers to practice. However, the limited qualitative portion of this study did not allow for the participants to influence the themes that emerged in dementia practice. Additionally, participants were unable to elaborate meaning behind their answers.

Pilot Studies

In 2015, Buhr, Weissling, Fitzgerald-Dejean, Harvey, and McKelvey reported a mixed methods pilot study similar to Paul and Mehrhoff (2015). A concurrent embedded design was utilized, with quantitative data nested within the larger qualitative method. Buhr et al. (2015) gathered five semi-structured interviews from SLPs who work with PWD. In addition to general demographic questions (e.g., years in the field, region of the United States, number of continuing education units (CEUs) in dementia), participants were asked Likert scale questions regarding their comfort using, familiarity with, and frequency of use of common treatment methods that were highlighted by the Academy of Neurologic Communication Disorders and Science's (ANCDS) evidence-based practice guidelines. See Appendix A for the interview and Likert scale questions used in the study. Unlike Paul and Mehrhoff (2015), the semi-structured interviews allowed SLPs to go into detail about their practice in a narrative form. Qualitative data were analyzed through open, axial, and selective coding. Four main themes emerged: assessment, treatment (direct), treatment (indirect), and limitations. Sub-themes were also identified. See Appendix B for the results of the coding process. Cohen's Kappa was calculated to determine the reliability of codes. Though some codes demonstrated strong reliability (i.e., a Kappa of 1), others did not (Buhr et al. (2015).

Buhr et al. (2015) discussed two main findings, which were referral process and terminology. Referral process refers to the way practitioners receive clients on their caseload. Terminology refers to the name practitioners call the strategies/supports they implement in therapy. Participants tended to discuss two different ways of referral, “functional-based” (i.e., referred based on specific behaviors) and “impairment based” (i.e., referred due to a likely diagnosis). Additionally, researchers described a variance in terminology, especially when asking an open-ended question about memory aids clinicians utilize. It was concluded that without having specific information about the types of memory aids (e.g., what information they include in memory wallets), these data were difficult to transfer into clinical practice (Buhr et al., 2015).

Mount and Weissling (2017) extended Buhr et al.’s (2015) pilot study to gather four additional interviews. The current researcher utilized the same design and questions as the original pilot study. After gathering the additional interviews, the current researcher combined the data from both pilot studies for a total of 10 interviews. Mount and Weissling attempted to confirm the stated categories from the original study. Codes from the original study were refined based on new information extracted from the additional interviews and clarified to make coding more reliable (i.e., refining definitions of codes). Due to time limitations, interrater reliability was not calculated. The four main themes from the pilot study also emerged in this study, but axial coding resulted in different sub-themes (Mount & Weissling, 2017). See Appendix C for all coding themes.

Mount and Weissling (2017) also analyzed trends in the data by determining the percentage of participants who discussed various topics. When prompted to discuss assessment, 100% (10/10) of participants mentioned they use standardized measures and 70% discussed interviewing patients and/or families. When prompted to discuss their treatment of PWD, all participants implemented treatments based on the patient's wants, needs, and concerns. Additionally, all (100%) participants used an individual's stage of dementia or type of dementia to help determine treatment targets. SLPs tended not to specify the types of therapy they used when asked open-ended questions. Rather, they discussed the impairments they often treat (e.g. agitation and communication). Participants were prompted to discuss how they engage in caregiver training and all participants revealed that they used caregiver training to teach techniques. Of the participants, 80% said they collaborate with other professionals, suggesting that dementia practice is often a team effort, including: nursing, other therapists, doctors, and other staff (Mount & Weissling, 2017).

The final theme that emerged from Mount and Weissling (2017) was limitations, in which 60% of participants discussed regulations that create barriers (e.g. insurance and facility regulations) and 70% described people that create barriers (e.g. family members and staff). Although the participants in Mount and Weissling's study were not prompted to discuss barriers, a barrier theme emerged that was similar to those discussed in Paul and Mehrhoff (i.e., person-related and regulation-based barriers) (2015).

By analyzing responses to Likert-Scale questions, Mount and Weissling (2017) found that participants were most familiar with reminiscence, spaced retrieval, and

Montessori-based techniques. Reminiscence and spaced retrieval were identified as being used more frequently than other treatments (Mount & Weissling, 2017). See Appendix D for a list of Likert-Scale results. Paul and Mehrhoff (2015) also found that spaced retrieval was one of the most frequently used treatments. Reminiscence therapy was not incorporated into Paul and Mehrhoff's survey, making it unknown how popular that approach was among participants (2015). Overall, in Buhr et al. (2015) and Mount and Weissling (2017), there were treatments that had been indicated in the literature by ANCDS that clinicians were unfamiliar with and infrequently used (i.e., Computer-assisted cognitive stimulation and simulated presence). This result was also found in Paul and Mehrhoff (2015), in that Montessori, Audio-Assisted Memory Training, and Preview Question Read State Test (PQRST, a reading comprehension and recall strategy) were more frequently indicated as never used. However, the authors of the study did not describe how they determined the treatments to ask SLPs about, beyond calling it a "careful review of the literature" (Paul & Mehrhoff, 2015).

In the two pilot studies, some participants initially indicated that they were unfamiliar with a certain therapy technique. However, after being read a definition of the technique, they stated that they do use it in their practice. This indicated that there may be a range of names for similar types of therapy (Buhr et al., 2015; Mount & Weissling, 2017). Better identifying these terminology discrepancies could help to create more consistency across the profession. The researchers concluded that clinicians may be using techniques not identified in the Buhr et al. (2015) and Mount and Weissling (2017) studies (Mount & Weissling, 2017). These conclusions helped to guide the development of this thesis methodology and sought to overcome the limitations of Buhr et al. (2015) and Mount and Weissling (2017): (a) inter-rater reliability was not completed on the coding, limiting the reliability of the coding methods, (b) small sample size limited external validity, and (c) the selection of the treatment approaches included in the survey were not systematically identified.

Statement of the Problem

Mount and Weissling (2017) sought to understand the impact of clinical expertise on the EBP literature in dementia. Despite the good intentions of individuals and organizations that promote EBP, clinicians have identified barriers to its implementation in day-to-day clinical practice. Oftentimes the relevance of research to the clinical setting is incompatible, especially when considering the internal evidence of the patient (Dodd, 2007; Ratner, 2006). Zipoli and Kennedy (2005) found that SLP's lack of time to commit to the external evidence process as the most significant barrier to EBP. The quantity and quality of available research and resources (i.e., access to literature) were occasionally, but less frequently noted as barriers. Despite an overall positive attitude of research and EBP, Zipoli and Kennedy found that only 17.7% of respondents implemented research studies into their clinical practice during the past six months. Participants most frequently reported using their own clinical experience, opinions of colleagues, clinical practice guidelines, and continuing education to guide clinical practice (Zipoli & Kennedy, 2005). Research that identifies the current practice of clinicians working with PWD may help to better understand the gaps between the current and extent literature, and clinical practice.

EBP and implementation science are related ideas that may assist clinicians in improving their clinical practice. According to Olswang and Prelock (2015), implementation science is, “associated with research that investigates the best ways to ensure that evidence-based information is integrated into practice” (p. 1). ASHA has implemented resources, such as practice portals and evidence maps for speech-language diagnoses as a way bridge gaps between research and practice. Understanding the current state of assessment and treatment of PWD in real world settings may assist in determining what assessments and techniques are currently being used and which ones need additional study, in order for them to be implemented by clinicians in the field.

Given the noted barriers and gaps in implementing EBP, it is to be expected that not every clinician is utilizing assessment and treatment practices that align with the external evidence. However, beyond Paul and Mehrhoff (2015) and the unpublished pilot studies, little research has been done to understand what SLPs are actually doing to assess and treat PWD. Thus, the purpose of this research was to identify whether there is a gap between the external evidence found through this paper’s reviews and clinical decision making of SLPs during assessment and treatment of PWD. Additionally, the researcher sought to identify the size and potential sources of the gap. Results of this research could lead to more focused research questions to help bridge the gap between research and practice. By identifying where the discrepancies between research and practice occur, researchers also hope to strengthen the speech pathology graduate training programs. This could be done by assisting students to identify the barriers to implementation of various assessment and treatment procedures and to anticipate how they will manage their own practice. The researcher of this study developed the following hypotheses:

1. SLPs are engaging in dementia assessment and treatment procedures from the external literature.

2. In some cases, SLPs are doing what aligns with the literature, but may use different terminology to describe it.

3. SLPs who have (a) more years of clinical experience, (b) more dementia-related continuing education units, (c) a higher percentage of PWD on their caseload, and/or (d) taken a dementia-related course are more: confident in working with PWD, familiar with top five treatment approaches, and frequently using those top five strategies.

4. SLPs who report: (a) strictly using journals/CEUs to guide their dementia practice and/or (b) being prepared to treat dementia are more: familiar with top five treatment approaches, frequently using those top five treatment approaches, and are more confident in working with PWD than those that use other sources post-graduate learning or felt unprepared to treat dementia.

5. SLPs' from different geographical regions, work settings, and population densities (i.e., rural versus urban) will report similar levels of confidence in working with PWD, familiarity with top-five strategies, frequency of use of those top five strategies, and access to resources.

6. SLPs who report higher confidence in treating dementia are more familiar and use the top five strategies more frequently in their practice than SLPs who report lower confidence.

CHAPTER 2: STUDY DESIGN AND METHODS

Reviews of the Literature

To better understand the external evidence in dementia assessment and treatment, which was only minimally completed/described in the pilot studies and Paul and Mehrhoff (2015), the author completed reviews of assessment and treatment literature in the area of dementia. These reviews were used to add validity to the methods of this study. The researcher used Moher, Liberati, Tetzlaff, Altman, and PRISMA Group (2009) as a guide for important elements to include within the review results of this paper. However, since the purpose of this project was not to review literature, specific results of each study are not described. Ten, out of 27 of Moher et al.'s more general guidelines were implemented into this paper (e.g., reporting database search methods and providing the number of articles screened). The components of Moher et al. (2009) that were excluded included items that: (a) asked to report specific information of individual studies, (b) asked to provide a detailed analysis of review findings, (c) asked to report procedures that went beyond the scope of the review (e.g., describing additional methods of analyses, such as meta-regression). More specifically, some components of the checklist that went beyond the purpose of this paper included: (a) provide summary data for each intervention group and (b) give data on risk of bias within each of the studies. The results for both the assessment and treatment review are discussed separately below.

Treatment

To assess the current external evidence for dementia treatment, the researcher reviewed the literature. The researcher utilized EBSCOhost, PsycINFO, World of Science, and PubMed databases. The following search terms were used including: "dementia therapy AND speech pathology," "facilitating communication AND dementia," "communication intervention and dementia," "dementia AND speech pathology," "dementia care and speech pathology," and "Alzheimer's and speech pathology" and identical search terms were used for each database.

For the database searches, the researcher read the titles in search results and read the abstracts of any article that appeared to be relevant. The researcher chose to read abstracts of article titles that mentioned: (a) speech pathology and dementia, (b) a known therapy technique for SLPs, (c) dementia treatment in general (e.g. direct treatment), (d) factors of improving quality of life (e.g., decreasing behaviors), (e) key words related to communication (i.e., communication, language, discourse, conversations) and dementia, and, (f) key words related to cognition (e.g., cognition, attention, and memory). Articles with abstracts that met the inclusion/exclusion criteria were downloaded and read completely.

Using the ASHA website, the researcher searched through the evidence map treatment articles for dementia. The researcher also completed a hand search of four relevant textbooks by reading through article titles in the references.

Articles were selected and compiled given the following inclusion criteria:

- Articles that studied specific treatments for individuals with dementia (when dementia was discussed generally)
- If the article specifically stated that the treatment was for individuals with a specific type of dementia, the treatment was specifically for one of the top three most common types of dementia (i.e., Alzheimer's, Vascular, and Lewy Body Dementia)
- Treatment was specifically communication-oriented or discussed a known treatment for dementia (i.e., it had been mentioned in the ANCDS practice guidelines) (Academy of Neurologic Communication Disorders and Sciences, n.d.).
- The study could be categorized as Level 1, 2, or 3 based on the following modified Levels of Evidence (Table 2.1):

Table 2.1

Levels of evidence as outlined by the Centre for Evidence-Based Medicine.

Level	Type(s) of evidence
1a	A systematic review or metanalysis of randomized controlled trials.
1b	A well-conducted single randomized controlled trial (RCT)
2a	A systematic review of nonrandomized quasi-experimental trials or a systematic review of single-subject experiments
2b	A high-quality quasi-experimental trial or a lower quality RCT or a single-subject experiment
3	A case series
4	Expert opinion that originated without ongoing critical appraisal or based on theoretical knowledge or basic research

Note. Reprinted from "Focusing clinical questions", by Centre for Evidence-Based Medicine (2001a). Retrieved from http://www.cebm.net/focus_quest.asp

Articles with the following were excluded from the literature review:

- Articles that were not translated into English
- Articles that were published before the year 2000
- Articles that were speech pathology related, but not related to cognitive communication or within the scope of practice for SLPs (e.g., purely dysphagia and pharmaceutical drugs for cognition)
- Articles of studies that could be categorized as basic research, rather than applied research (e.g., Analyzing PWD’s discourse without an intervention)
- Articles that were specifically related to Mild Cognitive Impairment with no other mention of dementia

See Figure 2.1 for a visual of the inclusion and exclusion of articles.

Once a finalized list of articles was compiled, the researcher evaluated three to four aspects of internal and external validity of each study. The author utilized a combination of What Works Clearinghouse (WWC) (2017), Dollaghan (2007), and Martella, Nelson, Morgan, and Marchand-Martella (2013) to help identify important validity factors to consider based on design type. Though strictly adhering to only the standards of What Works Clearinghouse may have been better practice, other sources were utilized to add differing perspectives and allow for analysis of qualitative designs. The researcher did use What Works Clearinghouse (2017) as a guide for judging articles on the basis of their attrition rate, degree of equivalence of control and treatment groups in controlled studies, and the amount of control in single-case study designs.

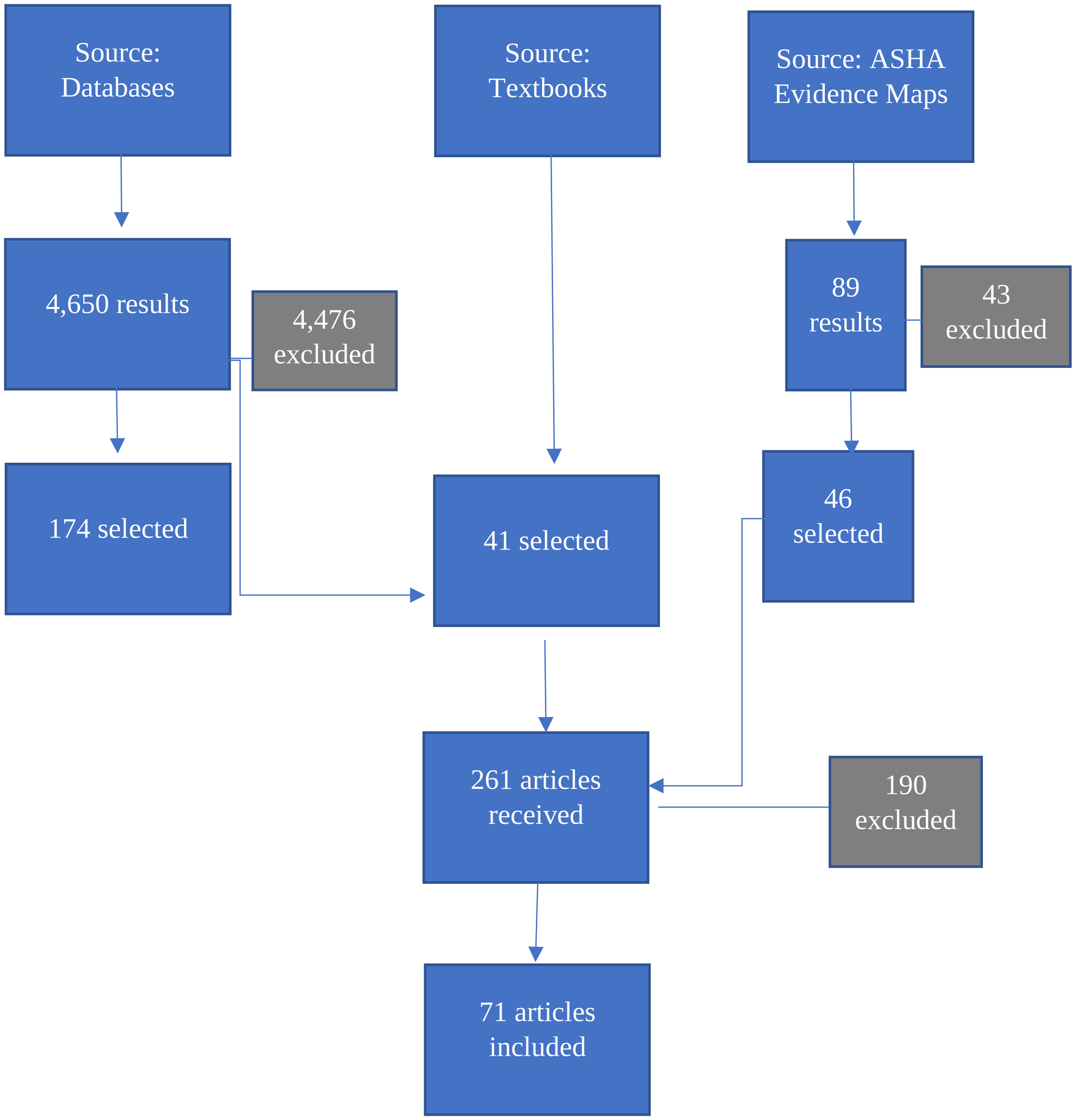


Figure 2.1 Database search methods completed for dementia treatment. This figure illustrates the process of search methods in the treatment literature review.

Dollaghan (2007) was used to select validity elements for control group designs, systematic reviews, and metanalyses. Considering control group or treatment phases, the following factors were utilized to determine validity: (a) attrition rate of 20% or less, (b) blinding was implemented, (c) whether or not a placebo was provided. The researcher used Martella et al.'s (2013) discussion of reliability and validity of qualitative research to select important elements to assess qualitative studies, for example, triangulation of data.

Each article was placed into one of five broad categories: control group design, single-subject design, qualitative design, systematic review, or meta-analysis. Though there were cases of overlap between qualitative and single-subject designs, only studies whose measures were purely qualitative were categorized as "qualitative." The validity elements considered for each design type included:

- Control group design
    - Blinding- Was there any blinding in the study of participants or researchers?
    - Attrition Rate- was attrition rate higher than 20% for general studies or 40% for longitudinal studies?
    - Placebo- Did the control group receive any intervention?
    - Groups equal- Were the control and intervention group statistically equal prior to intervention?
- Single-subject design
    - Attrition rate
    - Clear inclusion or exclusion criteria for participants (i.e., could a clinician have enough information from the participant

    description to understand if they match their client's demographics?)
  - Control- Did the researchers implement enough data, data points, or a more "rigorous" single-subject design (e.g., multiple baseline or ABAB) for participants to serve as their own control?
- Qualitative Studies
  - Were interviews/observations recorded and transcribed?
  - Reliability- Did the researchers engage in reliability methods, such as inter-rater reliability or inter-observer reliability, to strengthen the objectiveness of the variables being studied?
  - Attrition rate
  - Triangulation of data- Did the researchers combine data from more than one source (i.e., focus group, observation, interviews, gathering artifacts)?
- Systematic Reviews
  - Wide search: Did researchers search at least three different electronic databases or 2 electronic searches AND another method (looking through journals by hand, or textbooks)?
  - Clear inclusion/exclusion criteria: Did researchers make their inclusion and exclusion criteria clear? Would a researcher be able to mostly replicate what they did based on their description?

    - Reliability: Did researchers engage in any inter-rater reliability for the systematic review (i.e., finding studies, including/excluding studies, and/or classifying levels of evidence to studies)
    - Blinding: Were any of the researchers blinded to the name or researchers of the studies analyzed?
- Metanalyses
    - Clear inclusion/exclusion criteria
    - Reliability
    - Blinding
    - Average effect size metric presented: Did the researchers provide an average effect size metric?

Studies that contained at least two out of four (50%) or two out of three (66%) validity elements were incorporated and were categorized by type of treatment (e.g., errorless learning). The researcher also read the results and discussion of each study and eliminated studies that did not suggest or recommend the study in practice or continued research of the treatment. The researcher then categorized and tallied the number of studies based on type of treatment strategy that was implemented (e.g., caregiver training). For studies that included more than one type of treatment strategy (e.g., spaced retrieval and external memory aids), the researcher added one tally for each type. For systematic reviews and meta-analyses, the researcher gave a tally for the review itself and any additional studies that were included in the review that had not previously been accounted for. For example, if there was a systematic review that analyzed several studies on spaced retrieval, the researcher gave the “spaced retrieval” category one tally for the systematic review and also added any additional studies that were included in the review to the tally.

By recruiting on the UNL NSSHLA Facebook group, the researcher selected a volunteer undergraduate research assistant to help serve as a “reliability agent.” The assistant independently assessed 20% of articles (i.e., selected via a random number generator) on the same validity elements. Agreement was 61% for the first set of 15 articles. Since the percentage agreement was lower than 80%, the researcher provided additional education on the validity elements and selected another 20% of articles for the assistant to assess. Additionally, the researcher and assistant reached consensus on all aspects of each study. Agreement the second time was 81%.

A list of 16 treatment categories resulted from the literature review. Errorless learning/spaced retrieval, cognitive stimulation, reminiscence therapy, and external memory aids were the most frequent strategies implemented in the literature. Categories are listed in order of most mentioned/studied in the literature:

- Spaced Retrieval/Errorless Learning- 43
- Cognitive Stimulation (Cognitive rehabilitation, cognitive/memory training, group cognitive therapy)- 41
- Reminiscence (group reminiscence, individual reminiscence, computerized reminiscence)- 38
- Caregiver Training/Caregiver Administered Cognitive Stimulation- 34

- External Memory Aids (memory books, memory notebooks)- 16
- Reality orientation- 7
- Montessori Intervention- 6
- Computerized Cognitive Intervention- 5
- Vanishing Cues– 5
- Multidisciplinary Approaches (Walking/Talking programs, exercise and social groups)- 4
- Communication Aids- 2
- Simulated Presence- 2
- Validation Therapy- 2
- Non-Reminiscence Group (Story-telling group)-1
- Language intervention- 1

Assessment

To investigate the external evidence for dementia assessment, the researcher completed a literature review. The researcher used EBSCOhost, PubMed, PsycINFO, and Web of Science to search the following terms: “dementia assessment AND speech pathology” and “dementia assessment AND speech pathology or speech language pathology or speech therapy.” A total of 318 results were found from all databases. The researcher read the titles of articles in the search results and read the abstracts.

The researcher excluded articles that were:

- not related to cognitive-communication dementia assessment (i.e., swallowing or focused on neuroimaging assessments)
- focused on aphasia
- tests that were tested on individuals outside of the United States (i.e., indicating that they may not be valid for individuals in the United States)
- for a specific type of dementia that was not in the top three most frequent (e.g., frontotemporal, Huntington's, Parkinson's)

After excluding a majority of the articles for the above reasons, the researcher identified six that were relevant for the review. The researcher read each article and determined the main topic or idea from the text (e.g., focused on differential diagnosis using writing and specifically talked about the Environmental and Communication Assessment Toolkit for Dementia Care (ECAT)).

Due to minimal results from the database search, most of the literature review was completed through hand searches of textbooks and textbook chapters from experts in the field of speech pathology and dementia. Authoritative sources (i.e., textbooks) were utilized to better understand the key components of assessment, which may be better summarized in textbooks than in assessment research articles. The research articles tended to include information about a specific standardized assessment or specific way to assess (e.g., discourse analysis). The researcher selected the following textbooks to extract information from:

- Aphasia and Related Neurogenic Language Disorders- Fourth Edition by Leonard L. LaPointe (Chapter by Michelle Bourgeois)
- Language Intervention Strategies in Aphasia- Fifth Edition by Roberta Chapey (the dementia chapter)
- Aphasia and Related Neurogenic Communication Disorders- Second Edition by Ilias Papathanasiou and Patrick Coppens (dementia chapter)
- Cognitive-Communication Disorders of Dementia- Second Edition by Kathryn Bayles and Cheryl Tomoeda
- Assessment of Communication Disorders in Adults- Second Edition by M.N. Hedge and Don Freed

The researcher also extracted information from assessment articles on ASHA's evidence map for dementia. The researcher evaluated the necessity of assessment components by coding assessments and procedures by the number of sources that mentioned them (e.g. The Arizona Battery of Communication Disorders of Dementia (ABCD) assessment was mentioned in a total of five out of seven sources evaluated). The researcher compiled information from all sources of information (i.e., the research articles, evidence maps, and textbooks). The researcher considered any assessment information from research articles (i.e., from the database search) as one broad source. Anything from the ASHA evidence maps was also considered as one source. Each of the five textbooks was considered its own source, based on the depth and specificity of information. In combination, a total of seven sources of information resulted.

Based on the results, the following were identified as the most important components of an SLP’s dementia evaluation (i.e., they occurred in at least three out of seven sources):

- Standardized cognitive assessments or screeners (e.g., Mini Mental State Examination, Global Deterioration Scale, ABCD)
- Screening to rule out other diagnoses (e.g., depression, sensory impairments)
- Medical history review (i.e., reviewing case history and any recent changes, current medications)
- Case history information- Educational level to help understand level of impairment
- Interview with the family/caregiver and/or patient

See Appendix E for the complete list of final results.

Study Design

Using Buhr et al. (2015) and Mount and Weissling (2017) as a guide, this research aimed to revise and expand the content of questions asked regarding dementia practice. Like the pilot studies, a mixed method’s design was utilized. A mixed methods design was selected for the following reasons: (a) its ability to offset the weaknesses of both qualitative and quantitative designs, (b) to provide a more comprehensive account of the research questions and hypotheses, (c) to use survey data as a way of getting a more representative sample to compare the qualitative results, and (d) to gain information to describe a process through qualitative measures, while gathering more objective information through quantitative measures. The researcher specifically wanted to implement qualitative methods to gain a more detailed understanding of the topic through open-ended questions, rather than writing questions based on what the literature states should be done or what is expected to be found (Creswell, 2013). Due to the implementation of qualitative methods, participants received the chance to “tell their story.” By engaging in later analysis, the researcher determined how much their narrative aligns with the current empirical literature. Weaknesses of quantitative designs, such as a lack of considering the context in which the target population is acting, can be compensated through implementation of qualitative measures. Additionally, the weakness of a researcher’s bias interfering with the discussed results of a qualitative design can be counterbalanced through the implementation of valid quantitative measures. More specifically, this mixed methods study supported a pragmatic worldview, meaning that single and multiple realities are investigated through a combined methodology (Creswell & Clark, 2011). The study was composed of a qualitative measure (i.e., interviews) and quantitative measures (i.e., survey design with Likert Scales and other various question types). More specifically, a parallel-databases variant of convergent design described by Creswell and Clark (2011) was selected. See Figure 2.2 for a visual of the analysis process. A convergent design entails collecting quantitative and qualitative data usually simultaneously, meaning that both methods have equal importance, rather than one data set influencing the procedures of another data collection method (i.e., explanatory or exploratory designs). In the parallel-databases approach, the two data sets are analyzed and discussed separately. Finally, the researcher combines the data in the discussion after highlighting the data sets individually. The researcher then concludes the extent that the data converge or diverge and/or can be combined to reach a general understanding of the study (Creswell & Clark, 2011).

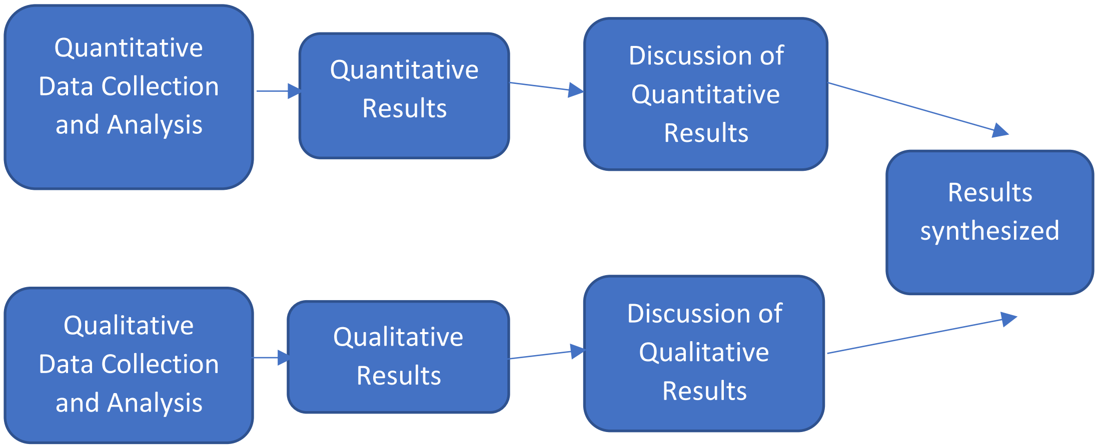


Figure 2.2 The process of analysis in a parallel-databases design. Adapted from Designing and Conducting Mixed Methods Research (p. 56) by J. Creswell and P. Clark, 2011, p. 56, Thousand Oaks, CA: SAGE Publishing

For the qualitative aspect of this study, a grounded theory approach was selected. According to Creswell (2013), grounded theory is "to move beyond description and to generate or discover a theory…for a process or an action" (p. 83). It is often the approach used when there is not an existing theory to describe a process, which is evident in the lack of understanding of what SLPs are doing with PWD. When working under this approach, researchers focus on describing a process (Creswell, 2013). In this current study, that process was the assessment and treatment of PWD by SLPs. From that process, the researcher concludes with a theory of their understanding of the process (Creswell, 2013).

Methods

The most common form of data collection in a grounded-theory approach is an interview, which was completed in the current study. The researcher conducted a total of 10 individual semi-structured interviews over the phone to gather information regarding the process of assessment and treatment for PWD. Refer to Appendix F for the interview questions. The researcher asked open-ended questions to increase the chances of authentic answers from participants. The researcher implemented more specific questions as determined necessary and to ensure that similar points were covered during each interview. Follow-up questions were utilized when there was confusion in what the interviewee was discussing about their practice or need arose for more understanding from the interviewee. Modifications were made to the questions used in Buhr et al. (2015) and Mount and Weissling (2017). They were adapted to account for clinical decision making. More specifically, this was done to determine the rationales for the procedures being used and understand how SLPs measure outcomes for PWD. The interviews were audio-recorded using the Audacity audio recording program. The researcher placed participants on speaker phone and recorded the whole conversation, which was deemed to be a reliable method during the pilot study. The recordings were transcribed verbatim using Microsoft Word and stored on an encrypted and password protected flash drive. These transcripts were then transferred into the coding software NVIVO 10©.

Using Creswell (2011) and Strauss and Corbin (1990) as a guide, the researcher engaged in open, axial, and selective coding that resulted in a proposition of a "theory." During open coding, the researcher identified categories of information to segment the interviewees' responses. Subcategories were also identified under the broad categories, to help highlight the range of possibilities on a continuum. By completing axial coding, the researcher identified two phenomena around the topic, causal conditions that influence said phenomenon, the specific strategies that resulted from the phenomenon, and the consequences or outcomes. Finally, through selective coding, the researcher created a theory which related all the categories together under one central phenomenon (Creswell, 2011; Strauss & Corbin, 1990). More specific methods of the coding process are embedded within the "Qualitative Results" section of this paper to better provide a description of the entire process.

The quantitative data from this study were collected through an online Qualtrics survey, which included a total of 54 questions. Survey questions included a mix of demographic questions, Likert scale questions drawn from Salbach and Jaglal's (2011) Evidence-Based Practice Confidence Scale (EPIC), Likert scale questions drawn from the current researcher's treatment literature review, and supplemental questions written by the researcher for additional information regarding day-to-day practice. The structure of questions also differed by a combination of multiple choice, multiple select answers, short/free response, "pick, group, and rank," and slider (i.e., ranking degree of confidence from 1 to 100) questions. See Appendix G for the full survey. Demographic questions were implemented to evaluate how demographics may affect how individuals answered the rest of the survey (e.g., number of years in the field, setting of work, and geographic area in the United States). Questions from the EPIC aimed to gauge participants' level of confidence in implementing EBP from all components of internal and external evidence (Salbach & Jaglal, 2011). The remaining questions aimed to investigate how SLPs are assessing and treating individuals with dementia and were often based on the practice patterns found from the literature reviews.

In regard to the treatment procedures section of the survey, the researcher included the top five treatments found in the external evidence, as well as treatments less prominent in the literature. As previously noted from the pilot study, SLPs may often implement strategies without referring to it by its official name. To better understand this phenomenon, the survey was structured to show participants the definitions of the external-evidence practices from the previous page and then re-asked if they use those practices (i.e., only if a participant indicated that they were not familiar). If participants do implement the strategies, they were prompted to disclose if they call the practice by an alternative name. The survey was initially distributed to the expert faculty reviewers in the department of Special Education and Communication Disorders at UNL. Respondents were asked to report the following about each survey question:

1. Overall, how clear is this question?
    a. Very unclear
    b. Moderately unclear
    c. Neutral
    d. Moderately clear

    e. Very clear

2. If you answered very unclear-moderately clear, please indicate why it was specifically unclear: ________________________.
3. Overall, do you believe this question could be interpreted the same, despite who (SLPs with varying backgrounds, experience, and different parts of the country) was taking the survey?
    a. Yes
    b. No
4. If you answered “no” to the previous question, please indicate why you believe they may be unclear to others: ___________

Reviewer feedback was analyzed and resulted in rewording of questions (e.g., making a question more straight-forward) and changing the layout of the survey (e.g., putting fewer questions on a page to decrease participants feeling overwhelmed).

Recruitment

The researcher utilized the following inclusion criteria for participants in this study: (a) SLPs certified by ASHA, (b) SLPs practicing with PWD for at least four years, (c) SLPs who reside in the United States. Individuals were notified of these inclusion criteria at the time of recruitment. Due to the limitations in gathering a truly representative sample (i.e., lack of availability of a national database of all SLP e-mail addresses), a convenience sample was utilized. To accomplish this, the researcher used the messaging feature on the ASHA website to contact individuals with ASHA memberships who opted to participate in website activities. ASHA has a resource called “ASHA Profind” which allows individuals who are seeking speech-language services options in their area to find local clinicians. The researcher used ASHA Profind to message all users who categorized their practice population as Dementia (*n* =338). The researcher also messaged 50% of individuals listed under Cognitive-Communication Disorders (*n* =1,866), which was as a total of 933 members. A total of 1,515 potential participants were reached through the ASHA website.

Following IRB approval of the methods, potential SLP respondents received a generic message giving a brief outline of the study and the list of qualification factors. In the brief overview of the study, both the qualitative and survey information were listed separately, meaning that individuals had the choice to participate in one of the study components, or both. In addition, a question was implemented in the online survey asking for participants’ interest in completing the qualitative portion of the study. If survey participants were interested in also participating in the qualitative study, they utilized a link to another Qualtrics survey to enter their email address to keep their answers from the original survey anonymous. Following a month-long waiting period, 53 survey responses had been received, making the initial response rate 3.5%. Additionally, a total of 10 email addresses had been submitted for interest in the interviews, though not all those interested SLPs followed through in setting up an interview. To increase participation in the study, the researcher sent a follow-up message through the ASHA messaging feature to the 333 individuals who listed that their practice included dementia. The current research also posted to private SLP Facebook groups and the thesis advisor posted to the Neurogenic Communication Disorders special interest group (SIG) through ASHA. Due to the nature of recruitment methods, an exact response rate could not be calculated once Facebook groups were utilized. A breakdown of participant recruitment can be found in Table 2.2 and Table 2.3.

Table 2.2

Recruitment via ASHA Website

Recruitment Group	Number of People Messaged
Members listed under “Dementia” [a]	333
Members listed under “Cognitive-Communication”	1,182
Total	1,515

[a] These participants received a follow-up message one-month following the initial message

Table 2.3

Recruitment Breakdown Via SLP Facebook Groups

Facebook Group Name	Number of Members (at the time of recruitment)
Medical SLP Forum	33,057
Clinical Research for SLPs	12,185
Geriatric OT, PT, and SLP	25,054
Collaborative Group SLPs in Home Health Care	2,239
SLPs in SNFs	4,284
Total (Maximum number of people reached)[a]	**76,819**

[a] The total number of people reached cannot be determined, due to the likelihood that members of these groups belong to more than one

CHAPTER 3: QUALITATIVE RESULTS

Interviewee Demographics

A breakdown of demographics for interview participants can be found in Table 3.1. Nine (90%) of the participants were female and one (10%) was male. Nine of the participants' highest degree of education was a master's degree, with one participant holding a Ph.D. Using the same regional boundaries as the online survey, which will be referenced in future sections, four participants practiced in western states at the time of the interview (i.e., California, New Mexico, and Arizona), three in southern states (i.e., Alabama, Kentucky, and Louisiana), two in midwestern states (i.e., Ohio and Illinois), and one in a northeastern state (i.e., New York). Seventy percent of participants practiced in the same region they attended graduate school, while 30% worked in a different region.

The number of years as a practicing SLP ranged from 6 to 36 (M = 16.25, SD = 9.8). The number of years as an SLP working with PWD ranged from 5 to 36 years (M = 12.2, SD = 9.1). Participants also revealed the approximate number of CEUs they had received in the past five years that addressed assessment and/or treatment in dementia, which in two instances were reported by participants as a range (e.g., "15 to 20"). When calculating the mean and standard deviation of the number of CEUs, the researcher used the low number of the ranges that participants reported (i.e., 10 CEUs for participant 7 and 30 CEUs for participant 8). Overall, the number of reported CEUs by interviewees ranged from 0 to up to 40 (M = 16.3, SD = 11.7). All participants were ASHA certified clinicians. Six participants were VitalStim certified and two were LSVT certified. Other noted certifications (i.e., only reported by one participant each) included: sEMG, Expiratory Muscle Strength Training, McNeill Dysphagia Therapy Program, PROMPT, Dementia

Care Specialist, and MBSImP. One participant reported being certified for "tactile stimulation for dementia," but the researcher was unable to determine the specifics of the certification following an online search after the interview was completed. Per the IRB protocol, the researcher deleted email threads following the end of the interview, eliminating the ability to contact participants again. Fifty percent of participants worked in one setting, while the other 50% worked in two or more settings. The researcher tallied the number of mentions that each setting received. Home health was the most frequent setting (n = 5), followed by outpatient and skilled nursing/nursing home (n = 4), hospital/acute care (n = 3), university setting (n =1), and tele practice with children (n = 1).

Table 3.2 compares the demographic information of interviewees (sample) to the larger population of ASHA-certified SLPs. Overall, the SLPs in the sample were similar to SLPs in the population in the following categories: two work settings (i.e., hospital-based and non-residential health care facilities) and two geographical regions (i.e., southern and midwestern) (ASHA, 2018c). The interviewees reflected a higher percentage of males and a higher percentage of doctoral level SLP's than in the total population of SLPs at large (ASHA, 2018c). When comparing percentages of work settings, the researcher adjusted the ASHA statistics to only include SLPs who would potentially work with PWD (i.e., excluding K to 12th grade school settings). Given this adjustment, the sample contained a much higher percentage of SLPs who work in home health settings and skilled nursing facilities. The interviewee sample contained a higher proportion or SLPs from the western region, and fewer from the northeast region (ASHA, 2018c). Though it is possible that SLP practice patterns may differ by region; however, given the small sample size of the interviewees, one individual represents 10% of the sample; therefore, the true differences in the sample are difficult to determine.

Table 3.1

Demographic Information of Interview Participants (n = 10)

State (Region)	State of Graduate School(s) (Region)	Location	Years as SLP	Years of Dementia	# of CEUS in Dementia	Work Setting(s)
CA (West)	MI (Mid)	Urban	36	36	0	Outpatient
IL (Mid)	IL & MI (Mid)	Rural	12	10	10	University Setting and skilled nursing
AZ (West)	MN (Mid)	Urban (culturally rural)	Over 25	10	40	Home Health
NY (Northeast) and MI	NY (Northeast)	Rural	22	10	15	Per diem work in home care, skilled nursing, sub-acute rehab, tele practice
NM (West)	NM (West)	Rural	6	6	20	Hospital, nursing home, outpatient, home health
OH (Mid)	IL (Mid)	Urban	11	8	5	Outpatient rehab
AZ (West)	KY (South)	Urban	10	8	10-15	Skilled nursing and acute care
AL (South)	MS (South)	Rural	23	18-20	30-50	Home Health
KY (South)	KY (South)	Rural and urban	6.5	5	15	Home health
LA (South)	LA (South)	Urban	11	11	18	Acute care, some inpatient

rehab/outpatient

Table 3.2

Comparison Between Interviewee Demographics and Certified ASHA Members

Demographic Element	**Interviewees**	**Certified ASHA Members**
Gender	Female: 90% Male: 10%	Female 96.3% Male 3.7% (ASHA, 2018c)
Work Setting [a]	Home Health: 50% SNF: 40% Hospital: 30% University: 10% Other non-residential facility [b]: 30% Other residential facility: 0%	Home Health: 13.6% SNF: 19.5% Hospital: 29.8% University: 6.4% Other nonresidential facility [b]: 27.5% Other residential facility: 3.6% (ASHA, 2018c)
Geographic Region	Southern: 30% Midwest: 20% Western: 40% Northeast: 10%	Southern 36% Midwest: 22% Western: 18% Northeast: 24% (ASHA, 2018c)
SLPs with Doctoral Degrees	Ph.D: 10%	Ph.D: 1.8% (ASHA, 2018d)

Note. [a] ASHA percentages were adjusted for this component to only account for settings where SLPs would work with PWD (i.e., excluded Birth-12th grade school-based settings)
[b] Includes: private physician's office, SLP's/AUD's Office/Speech & Hearing Center, and "other"

Open Coding

The initial step of analyzing qualitative data using a grounded theory approach is engaging in open coding. According to Strauss and Corbin (1990), open coding is "the process of breaking down, examining, comparing, conceptualizing, and categorizing data" (p. 61). The researcher began the open coding process with an inductive approach, meaning emphasis was put on finding all themes that emerged from the data.

Using Strauss and Corbin (1990) as a guide, the researcher worked towards "taking apart an observation, a sentence, a paragraph, and giving each discrete incident, idea, or event, a name, something that stands for or represents a phenomenon" (p. 63). The researcher completed this stage of "labeling phenomenon" by utilizing the comment function on Microsoft Word to write memos and summarize qualitative data through open coding (Strauss & Corbin, 1990, p. 63). Memos included a general term that summarized the overall intent of a participant's description (e.g., "treatment reasoning"), followed by a summary of the specific information they provided the interviewer. Included below are examples of memos from early open coding:

- "Trend: training staff in severe"
- "Treatment reasoning: b/c disease progresses and needs change, can't rationalize why behaviors are happening"
- "Limitation: not much we can do if no follow through"

Once all ten interviews contained memos of themes, all of the memos were pasted into a new Word document and organized by interview question (e.g., all memos that were obtained from the "How do you measure outcomes for individuals with dementia?" question by each participant were all pasted into a table). In total, the chart was organized by the 13 different interview questions asked. For a visualization and example of this final result, refer to Appendix H. This process was completed based on Strauss and Corbin's description of categorizing all the phenomena that were identified in prior steps (1990). The researcher examined the categorized list of memos (i.e., starting with the first interview question) and began to create categories and subcategories as they emerged from the compiled data.

This process was completed until a sense of saturation had occurred (i.e., the presented data no longer required additional categories and subcategories to be created, as they aligned with the ones already in place). Saturation was judged to occur following the analysis of question 12 out of 13 from the compiled chart, meaning that that new categories and subcategories were still emerging from the data until the researcher reached question 13. The researcher used Saunders et al.'s (2017) definition of inductive thematic saturation to gauge saturation in this study. According to Saunders et al. (2017), inductive thematic saturation can be defined as when "the emergence of new codes or themes" (p. 1897) reaches a point of saturation and is focused more within the mindset of analysis rather than sampling. A similar mindset to saturation was proposed by Urquhart (2013) whose definition was within the realm of grounded theory and states, "the point in coding when you find that no new codes occur in the data" (p. 194). Once saturation had occurred with the categories and subcategories, the researcher wrote clear cut definitions for all of them.

During the next process of open coding, a deductive approach was utilized to test the solidity of the categories and subcategories based on the newly specified definitions. Using Word, the researcher coded all ten interviews using the comment feature based on the categories and subcategories. At the time, there were a total of 57 categories and 20 subcategories. During this process, the researcher actively tallied both the number of interviews that the categories and subcategories were mentioned in and the frequency per interview. Due to the intent to generate an overarching theory based upon the available data, categories or subcategories that were only mentioned by four or fewer participants were eliminated from the list. Instead of being completely discarded, the researcher looked for ways that "eliminated categories" could be reorganized to fall under another already existing category or combined with another less frequently occurring category.

As described by Strauss and Corbin (1990), the researcher also utilized questioning when immersed in the data (e.g., "how much?") to verify that all of the properties (i.e., attributes) of categories and dimensionality (i.e., along a continuum) of categories had been identified within the data. The researcher dissected each interview again, looking for properties and dimensions to add depth to the theory (Strauss & Corbin, 1990). During this process, saturation of dimension categories was established by the end of interview six, meaning that no new dimensionality emerged from the last four interviews. These new categories and subcategories were added to the existing list. Dimensions that were difficult to make clear cut comparisons with or judged to be too subjective (e.g., comparing "I do this weekly" vs. "a lot") were weeded out. Since the purpose of the dimensional categories was to gauge the extent to which properties existed, less strict requirements were placed on them (i.e., for some dimensions, only one participant landed on one extreme). All transcripts were coded again based on the newly refurbished category system. Categories that had fewer than five participants and less than five overall mentions were deemed unsustainable and were absorbed to fall under the definition of another category.

The final lists of categories and subcategories included a total of 30 categories, 16 subcategories, and nine dimensionality categories. The lists of all categories, their definitions, and hypothetical examples can be found in Appendix I. A list of the categories, subcategories, the number of sources (i.e., number of participants), and number of references can be found in Table 3.3.

Inter-rater reliability was calculated for the coding system from open coding by the thesis advisor. Given the categories, subcategories, their definitions, and hypothetical examples, the thesis advisor independently coded 20% of each interview. These portions of interviews were randomly selected by using an online random number generator to select which minute of the interview to begin coding. Following reliability, the researcher calculated Cohen's Kappa using the NVIVO software. Cohen's Kappa was found to be .85 between the two coders for the parts of the interviews both coders completed. This value, as originally proposed by Jacob Cohen, can be interpreted as "almost perfect" reliability (McHugh, 2012). The average percentage agreement between the coders was 98.97%, which is also "near perfect" agreement.

Axial Coding

The next step of visualizing and manipulating the qualitative data is through axial coding. Strauss and Corbin described the process of axial coding in a grounded theory study as:

> Our focus is on specifying a category (phenomenon) in terms of the conditions that give rise to it; the context (its specific set of properties) in which it is embedded; the action/interactional strategies by which it is handled, managed, carried out; and the consequences of those strategies. (1990, p. 96)

Table 3.3

Number of Sources and References by Category and Subcategory (n = 10)

Major Theme	Category	Subcategory	Sources	References
Evaluation	Formal Testing		10	56
		Formal testing reasoning	9	29
	Informal procedures/measures		9	47
		Caregiver input/interviewing family	10	25
		Specific questions/information	8	13
		Interview patient	9	12
		Considering safety/behaviors	6	8
	Assessment decisions based on level		8	16
	Evaluation reasoning		8	34
	Frequency (evaluation)	Never	3	3
		Maybe	7	14
		Typically	7	20
		Always	6	12
Treatment	Top 5 Strategy		10	72
		Description of caregiver training	9	27
	Non top 5 strategy		9	35
	Negative approach		7	11
		Reasoning against	8	14
	Cognitive target		9	29
	Language/communication target		8	29
	Safety/behavior target		10	31
	Treatment reasoning		10	66
	Frequency (treatment)	Don’t do	8	18
		Maybe	10	30
		A lot	10	56
		Always	7	13
	Extent of success	Not or minimally successful	6	11
		Can make progress	4	6
		Extremely successful	1	1
	Theory/principles		10	35
		Functional or individualized	10	45
	Decision making based on level		5	11
		Trend at early stage	7	9
		Trend at late stage	5	10
	Measuring outcomes description		8	19
		Source (patient)	8	12
		Source (caregiver)	5	7
		Reasoning behind outcomes	6	8
		Description of expected progress	7	18
	Change in approach/treatment process		10	18
		Family/caregivers as source	7	8
	Group therapy		5	19

	Functional maintenance plan		9	13
		Description of adjusting	5	7
		Initiation of plan: beginning	3	4
		In between	1	1
		Near discharge	2	2
	Terminology		4	9
	Treatment materials/resource		9	31
	Schedule		10	27
		Reasoning behind schedule	9	20
	Caseload description		9	25
		Specific patient situation	7	12
	Extent type changes	None/minimally	2	2
		Not in big ways	5	5
		Definitely changes	3	3
		Reason why	8	23
Impacts	Family/follow through		5	12
	Other professionals		8	22
	Collaboration		10	27
	Setting		10	36
	Funding/insurance driven		7	18
	Feedback/reaction	Negative	3	4
		Positive	4	7
	Interviewee wants		5	14
	SLP role		8	18
	Extent of expertise	Not an expert	3	3
		Area of specialty	2	2
	Evidence-Based Practice		6	12
	Dysphagia		6	16
	Proportion dysphagia	A lot	2	3
		Mostly	2	3
		All	1	1

Thus, during axial coding, the researcher began to connect the categories and subcategories from open coding together according to the coding paradigm outlined by Strauss and Corbin (1990) (i.e., conditions, context, actions/interactions strategies, and consequences). The process of axial coding was completed by drafting various diagrams fitting the categories and subcategories into the coding paradigm. Through an inductive and deductive approach, the researcher wrote memos for each category or subcategory, describing where they fit on the coding paradigm. An inductive approach was completed by reviewing the data for all the instances each category was coded in open coding and writing a description that fit all instances of a concept. For example, to write a memo or “description” surrounding the category of “Formal Testing,” the researcher read all the quotes from interviewees that were coded as “Formal Testing.” The researcher then wrote a description of the concept of “Formal Testing” that each specific quote could fall under. At other times, a deductive approach was employed by writing a description and using data to verify the accuracy of the description against the data. For example, since the researcher had been immersed in the data for an extended period of time, the researcher wrote a description based on the foundational knowledge of the category of “Feedback/reactions.” After writing the description, the researcher used hard data (i.e., interviewee quotes from each instance that “Feedback/reactions” was coded) to verify that the description covered all specific instances. During the process of axial coding, the researcher organized the categories and subcategories under the two main phenomena: evaluation and treatment. The following sections provide a narrative for which the categories began to relate to one another and are supported by evidence from the data. The author qualitatively assessed two phenomena, evaluation and treatment of PWD by SLPs.

Phenomenon: Evaluation

According to Strauss and Corbin, a phenomenon in the context of axial coding is “the central idea, event, happening, incident which a set of actions or interactions are directed at managing, handling, or to which the set of actions is related” (1990, p. 96). As seen in Figure 3.1, there are several components that were organized around the phenomenon of dementia evaluation: causal conditions, context, actions/strategies, and consequences. The sections that follow are organized according to this coding paradigm and describe how the categories/subcategories labeled during open coding fit within the paradigm.

Causal Conditions

Like previously described, causal conditions are the part of the coding paradigm that "give rise" to the phenomenon and the actions of the phenomenon. In this study, there were a total of seven categories and subcategories that were determined to be causal conditions of evaluation: (a) evaluation based on level, (b) formal testing reasoning, (c) evaluation reasoning, (d) EBP, (e) SLP role, (f) theory/principles, and (g) functional/individualized. Within the text, the researcher discusses some specifics regarding these conditions. For more specific information and specific examples of the conditions, refer to Appendix J.

Evaluation based on level. Dementia evaluation for a specific individual with dementia typically rises from the anticipated level of the patient (*n* = 8 in this study). For seven interviewees, this eventually changes what they do for formal testing. For four SLPs, this affects what they do informally, such as conducting interviews. An example from the code informal measures is exemplified in the participant quote, "In early stages we can actually have a full conversation with them."

Formal testing reasoning. Nearly all participants (*n* = 9) had reasoning behind completing or not completing formal testing measures, which eventually gave rise to their evaluation actions. For five interviewees, the reasoning was based on the content of the test (e.g., language-based) and for four interviewees, the reasoning was grounded in the properties of the test (e.g., short assessment). A total of three interviews described reasoning based on their specific setting or funding requirements. To visualize the complete variety of reasoning reported, refer to Table 3.4 in Appendix J.

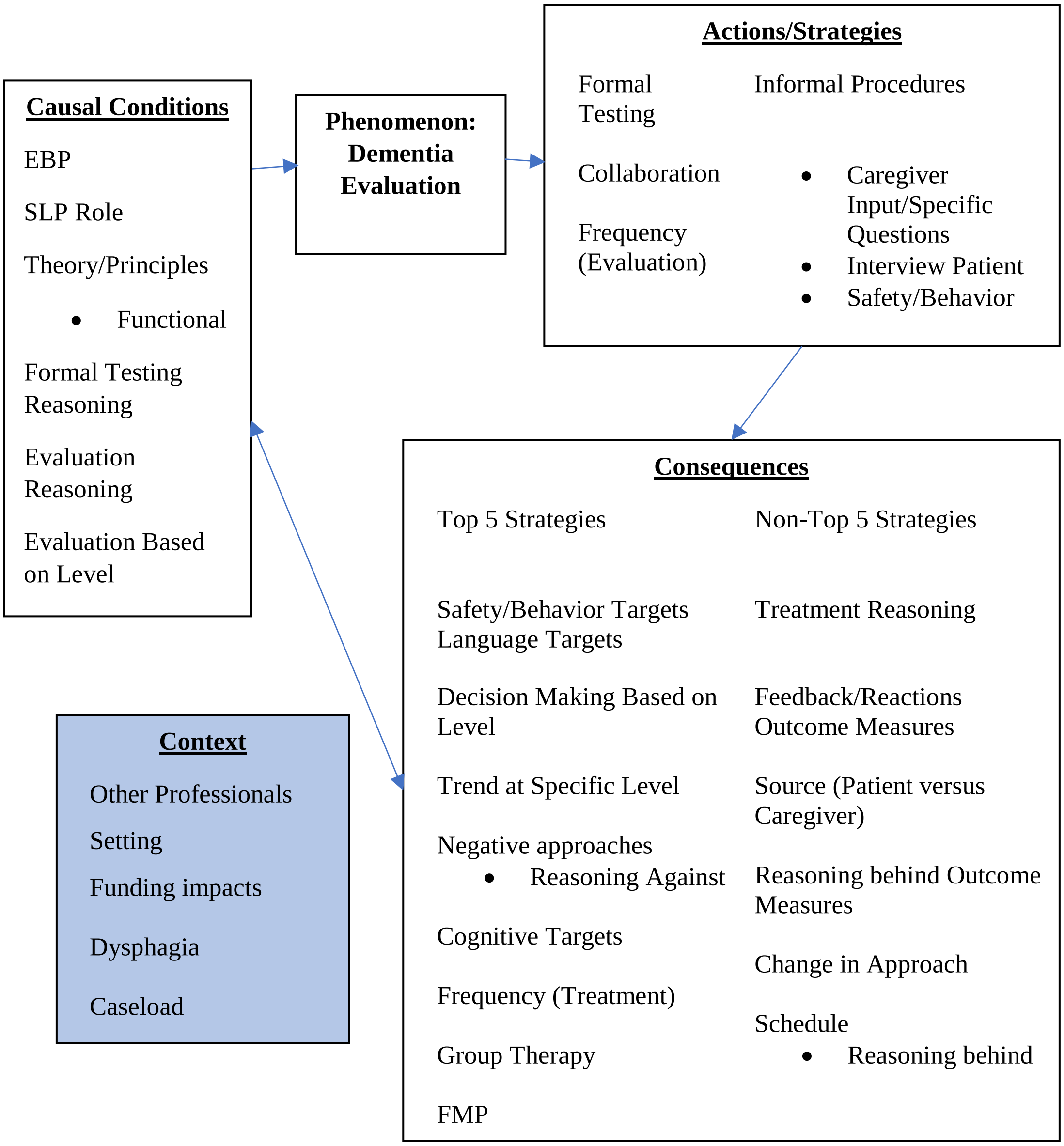


Figure 3.1. Diagram for the phenomenon of dementia evaluation. This figure illustrates how the categories and subcategories from open coding fit within the coding paradigm of axial coding.

Evaluation reasoning. Dementia evaluation can also be guided by an SLPs reasoning behind doing evaluative tasks (*n* = 8). For five participants, the reasoning for doing an evaluation procedure was to gauge what a patient is like (e.g., getting background information or to understand "what the world is like" for the PWD) from caregivers. Additional reasoning was provided by three interviewees who identified three additional principles: (a) getting to know a patient, (b) not wanting the patient to feel analyzed, and (c) to gauge a patient's self-awareness or learn about their concerns. For a complete look at all the reasoning and examples of this concept, see Table 3.5 in Appendix J.

EBP. Some SLPs (*n* = 4), may have an awareness of EBP that influence their evaluation. One example of this concept is exemplified in the following participant quote, "This (AD8) was actually one that I pulled into my dissertation and I hadn't used it much before, but it has been fairly well researched." The other three examples of this concept can be read in Table 3.6 in Appendix J.

SLP role. Four of the SLPs' evaluation procedures were influenced by their discipline-specific role as an SLP. For example, two SLPs talked about their awareness of not being able to diagnose dementia, with one participant stating, "I feel like I can say this is language and this is cognition, but I don't feel comfortable saying this patient has dementia. I can identify the presence of what I suspect is dementia." Table 3.7 in Appendix J shows all examples of this concept.

Theory/principles. Though participants were asked about their theory or principles of dementia intervention, four SLPs' theories were related to the evaluation process as well. Two participants indicated their approach was to “scale” or “stage” the dementia and provide education, highlighting that their theory causes actions in the evaluative process (i.e., staging the disease). One participant disclosed that they are mindful to stay open-minded about the PWD from the beginning (i.e., from the start of an evaluation). One SLP stated an emphasis on functional dementia practice beginning at the evaluation, which overlapped with the concept discussed in the next section.

Functional/individualized. Half of the SLPs (*n* = 5) disclosed that their philosophy of being functional or making their practice individualized plays a role in their evaluative process. Four participants remarked that their wish to be functional in dementia practice causes them to ask PWD and their families what is important to them and their interests. For one participant, their evaluation is partially driven by wanting to determine remaining abilities of the patient. Finally, for one participant, their theory of wanting the patient to be independent was evident in the evaluative process when they said, “I want to get a good picture of what’s going on so I can help them (interviewing caregivers) and keep that patient happy and as independent as possible.”

Context

As previously described, “context” is defined by Strauss and Corbin as the “specific set of properties in which it (the phenomenon) is embedded” (1990, p. 96). There were a total of five categories and subcategories that are considered “context” within the process of dementia evaluation: (a) other professionals, (b) dysphagia, (c) caseload, (d) funding impacts, and (e) setting.

Other professionals. The phenomenon of evaluation of dementia can exist in the context of the presence and actions of other professionals (*n* = 6). For four participants, this meant they often question the diagnosis given by the physician, while one interviewee described how they are often not given a specific label by a physician. For two participants, the presence of colleagues (e.g., OT) influenced what areas are covered by the SLP for evaluation.

Dysphagia. Evaluation can also exist in the context of clients who have issues with swallowing; thus, dysphagia was discussed by two participants in that context.

Caseload. Some interviewees also discussed dementia evaluation in the context of their typical caseload. For example, SLPs may be impacted by rarely having dementia as an official diagnosis (*n* = 2) and often having PWD with comorbidities (*n* = 2). See Table 3.8 in Appendix K for an overview of all instances of this concept.

Funding impacts. For two SLPs, the phenomenon of evaluation also exists in the context of certain funding impacts, such as needing to implement a standardized test for funding related reasons (e.g., Medicare).

Setting. Half of the SLPs mentioned ways in which their setting plays a role within the context of dementia evaluation. This can exist in many different forms. For some, it was their specific work setting (e.g., home health), such as having the availability to interview caregivers (*n* = 2), not having enough time (*n* = 2), having a lot of time (*n* = 1), having standard interview questions from their agency to ask (*n* =1), or the possibility of observation of PWD (*n* = 1). For one participant, the context of their "setting" was more based on her location in a rural area, as they do not have access to a neuropsychologist for more in-depth assessment. This caused this SLP to frequently question the medical diagnosis of the PWD they saw.

Actions/Strategies

Actions/strategies are the processes that are taken in regard to the phenomenon (Strauss & Corbin, 1990). The researcher found there to be a total of seven actions/strategies during the process of dementia evaluation. These actions/strategies include: (a) formal testing/screeners, (b) informal procedures, (c) caregiver input/interviewing family and specific questions or information, (d) interview patient, (e) considering safety/behaviors, (f) collaboration, and (g) frequency (evaluation).

Formal testing/screeners. All participants use formal measures/screens as an action or strategy for evaluation in the realm of dementia. The MOCA was most frequently reported (*n* = 5), followed by the SLUMS (n = 3) and Allen Cognitive Levels (n = 3). Table 3.9 in Appendix L includes a list of all tests reported by interviewees.

Informal procedures. Nearly all the SLPs (*n* = 9) described the action of using informal measures or procedures. These instances occurred when described procedures did not fall under more specific subcategories (e.g., interviewing the patient). Some subcategories of informal procedures/measures emerged including: (a) caregiver input (b) interview patient, and (c) considering safety/behaviors. Items that did not fit into one of the subcategories are described in Table 3.10 in Appendix Q. In this more general theme of informal procedures/measures, chart review, building rapport, and referral for other services emerged as the most common; however, each only occurred with three participants.

Caregiver input/interviewing family and specific questions or information. All interviewees discussed the action of caregiver input or conducting an interview with family for evaluation of dementia. The content of those interviews or input are better represented by the SLPs who provided information about the specific information or questions they consider. Overall, four interviewees reported asking caregivers about concerns or problems they have concerning the PWD and four interviewees specifically get information from caregivers regarding the behaviors of the PWD. All other reported questions/information are represented in Table 3.11 in Appendix L.

Interview patient. Nearly all the SLPs (n = 9) indicated conducting a patient interview or having questions to ask the PWD during evaluation. Some SLPs disclosed specifics regarding what they hope to gain from the patient interview, such as gauging their concerns (n = 3), patient interests (n = 3), or communication concerns (n = 2).

Considering safety/behaviors. Many of the SLPs (n = 6), reported taking active steps to consider safety or behavior issues within the evaluation. Four SLPs described asking caregivers about the behaviors they see. Two SLPs disclosed gathering information about a patient’s safety from either the patient themselves (i.e., own awareness) or from caregiver report.

Collaboration. For a majority of the SLPs (n = 7), collaboration is an action taken in the process of evaluation. For three participants, this included communicating to make appropriate referrals. Collaborating also took the form of receiving input from colleagues and other staff members. Finally, collaboration for two participants included communicating with physicians, for example, asking a physician to reconsider a patient's medical diagnosis.

Frequency. All the SLPs at some point denoted terminology that suggests a frequency of use of evaluation procedures. This ranged from never doing a procedure (e.g., never diagnosing dementia) to always doing a procedure (e.g., always doing a patient interview). See Table 3.12 in Appendix L for the specifics and range of these data.

Consequences

There were a total of 17 categories and subcategories that are considered consequences of dementia evaluation. However, only two will be described in the text: (a) feedback or reactions and (b) change in approach. The rest of the consequences are described in detail when they are either under the subheading of "causal conditions" or "actions" of the "Phenomenon: Treatment" section. For example, the category of "safety/behavior targets" can be considered a consequence of evaluation. It can also be considered as an action that is taken during dementia treatment. The categories that will be described later in the text within the treatment section include: (a) top 5 strategies, (b) non-top 5 strategies, (c) cognitive targets, (d) safety/behavior targets, (e) treatment reasoning (f) frequency (treatment), (g) decision making based on level, (h) trend at specific level, (i) group therapy, (j) outcome measures and source (patient versus caregiver), (k) functional maintenance plan, (l) negative approaches, (m) reasoning against (n) schedule, and (o) reasoning behind schedule.

Feedback or reactions. For two SLPs, the consequences of the actions taken in the evaluative process can include feedback or reactions of PWD. This exists on a spectrum ranging from negative to positive. One participant described negative reactions that arose from standardized tests, stating, “You put them at a level where they’re very stressed and they shut down…sometimes get angry with you.” On the opposite end, one participant described PWD’s positive reactions to the Placemat test, saying, “They just think they’re doing an arts and crafts project and they just loved it.”

Change in approach. Another consequence that can arise from evaluation actions include a change in approach. For three participants, the information they gained regarding information about the patient caused them to change their focus for future therapy. For example, one participant stated, “I think oftentimes what most frequently happens I guess is that you get a clearer sense of severity of somebody’s dementia from the family.” Additionally, one interviewee described how they changed their approach to dementia evaluation to be less formal after receiving a negative reaction from a PWD (i.e., stressed out) when completing a standardized test.

Phenomenon: Treatment

The second phenomenon investigated is dementia treatment. Figure 3.2 below is a visualization of this phenomenon and its surrounding coding paradigm. Like in the previous section (Phenomenon: Evaluation), the following sections outline how the categories and subcategories fit within the coding paradigm (i.e., causal conditions, context, actions/strategies, and consequences).

Causal Conditions

There was a total of 16 concepts that were considered “causal conditions” of dementia treatment. Many of these concepts are the same actions as dementia evaluation. Since these have been previously described, repetitive categories will simply be listed: (a) formal testing/screeners, (b) formal testing reasoning, (c) informal procedures/measures, (d) caregiver input/interviewing family, (e) specific questions/information, (f) interview patient, and (g) considering safety/behaviors.

However, eight of conditions that emerged are unique to the treatment realm and are described individually below: (a) SLP role, (b) extent type changes and reasons why, (c) expected progress, (d), treatment reasoning, (e) theory/principles, (f) functional/individualized, (g) decision making based on level, (h) reasoning behind outcome measures, and (i) treatment materials (resources).

SLP role. One concept that often influences an SLP’s dementia treatment (*n* = 8) is what they consider their role to be or the services they advocate for regarding PWD. Some examples of items that fit under SLPs’ roles of practice included: (a) not being able to recommend medications and (b) being the professional to target verbal problem solving.

Extent type changes and reasons why. Interviewees were also influenced by the extent they believe that the type of dementia a person has changes their actions in treatment. This condition exists on a continuum from “does not change treatment” (*n* = 2) to “definitely changes treatment” (*n* = 3), with “does not change in big ways” falling in the middle of the spectrum (*n* = 5)**.** For SLPs who believe that the type of dementia does change their treatment (*n* = 8), they have various reasons why or how it impacts their

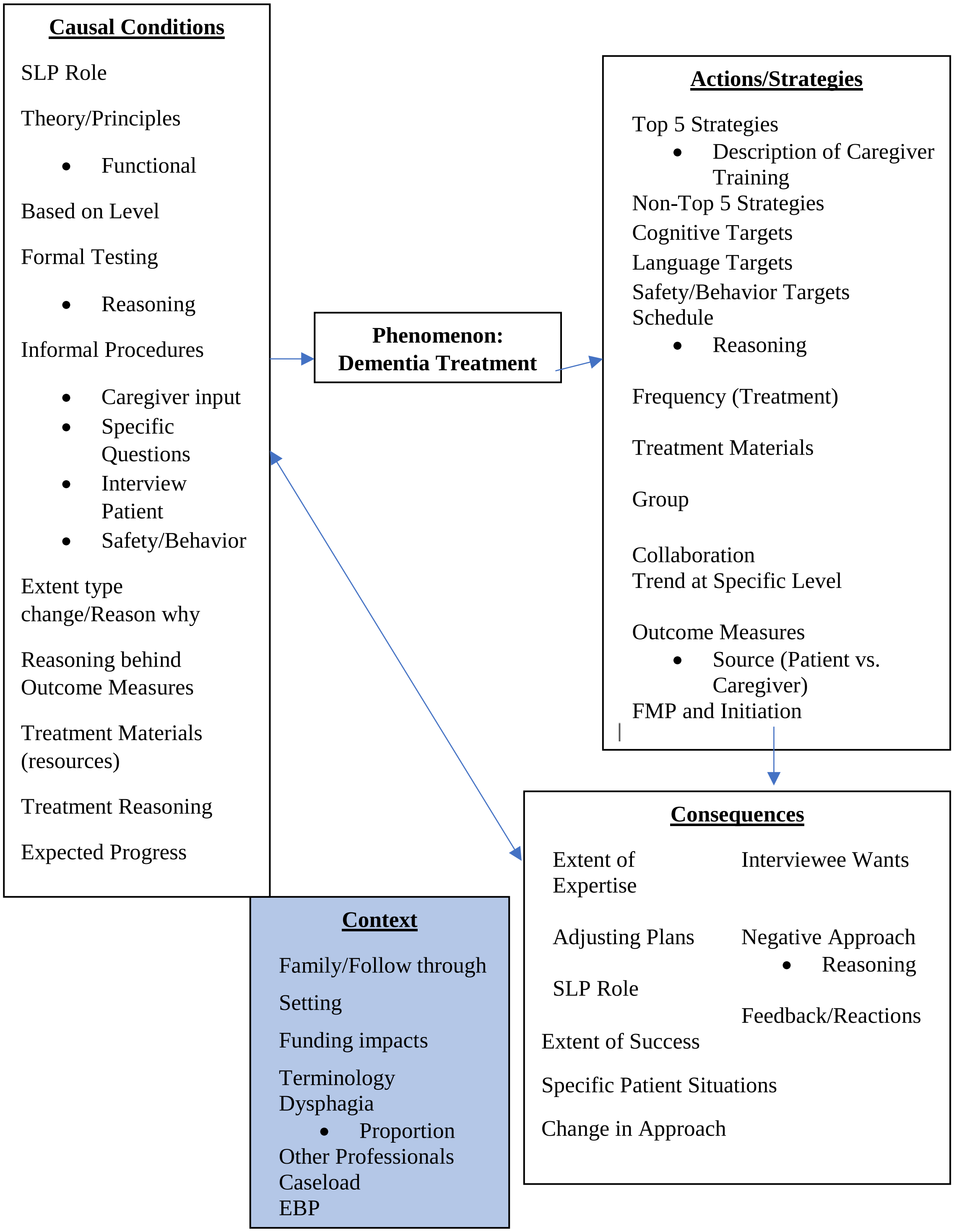

Causal Conditions
SLP Role
Theory/Principles
• Functional
Based on Level
Formal Testing
• Reasoning
Informal Procedures
• Caregiver input
• Specific Questions
• Interview Patient
• Safety/Behavior
Extent type change/Reason why
Reasoning behind Outcome Measures
Treatment Materials (resources)
Treatment Reasoning
Expected Progress
Phenomenon: Dementia Treatment
Actions/Strategies
Top 5 Strategies
• Description of Caregiver Training
Non-Top 5 Strategies
Cognitive Targets
Language Targets
Safety/Behavior Targets
Schedule
• Reasoning
Frequency (Treatment)
Treatment Materials
Group
Collaboration
Trend at Specific Level
Outcome Measures
• Source (Patient vs. Caregiver)
FMP and Initiation
Consequences
Extent of Expertise
Interviewee Wants
Adjusting Plans
Negative Approach
• Reasoning
SLP Role
Feedback/Reactions
Extent of Success
Specific Patient Situations
Change in Approach
Context
Family/Follow through
Setting
Funding impacts
Terminology
Dysphagia
• Proportion
Other Professionals
Caseload
EBP

Figure 3.2. Diagram for the phenomenon of dementia treatment. This figure illustrates how the categories and subcategories from open coding fit within the coding paradigm of axial coding.

treatment. Specific characteristics of AD (e.g., memory) and LBD (e.g., hallucinations and aggressive behaviors) were the most frequent types of dementia talked about by participants. All examples of the types of dementia that change treatment are outlined in Table 3.13 in Appendix M.

Expected progress. Another condition that can influence treatment is an SLP's preconceived notion of the expected progress (or lack thereof) of a PWD (*n* = 7). In this study, this fell under the consideration of dementia as a progressive disease, meaning there will be a deterioration process; thus, the goal is not really to improve their function.

Treatment reasoning. All the SLPs provided reasoning behind their specific treatment actions, thus, the reasoning behind the actions can be considered a causal condition for dementia practice. Due to various number of examples from each of the participants and specific distinctness of each response, it was not feasible to include all 66 examples of this concept. However, to demonstrate the vastly different reasoning, the following examples are provided: (a) one interviewee provided reasoning for targeting medication to try to prevent re-hospitalization, while (b) another interviewee gave reasoning for conducting group therapy outdoors because PWD "need sunshine."

Theory/principles. Though an SLPs theory/principles of dementia practice are similar to the idea of "treatment reasoning," "theory/principles" was a category that covered instances when SLPs provided the broad principles of what guides their practice. For example, four SLPs described the principles of their treatment as compensatory.

Other themes that emerged (though only reported by two interviewees each) included: (a) remaining open-minded about PWD, (b) using a combination of a restorative and maintenance/compensatory approach, (c) scaling dementia (i.e., determining the severity of the dementia) and providing education, (d) providing functional therapy (stated in general terms), and (e) a focus on improving quality of life. For a complete visualization of the examples of this concept, see Table 3.14 in Appendix M.

Functional/individualized. The concept of "functional/individualized" practice can be considered a subcomponent of "theory/principles," as there were enough examples to make this its own category. Thus, there was some overlap between themes that fell under "functional/individualized" and "theories/principles." The concept of "functional/individualized" can be defined as a focus on functional tasks, individualized therapy, or promoting independence. The following themes emerged from the content of this study for this category: (a) focused on patient interests/what's important/individualized (*n* = 8), (b) functional goals or outcomes (*n* = 5), (c) maintaining independence (*n* = 5), (d) focusing on patient strengths (*n* = 4), and (e) providing functional therapy in general (*n* = 2).

Decision making based on level. The actions that SLPs take in dementia treatment are also influenced by the severity level of the PWD. In this study, this decision-making influences the actions of treatment based on whether the PWD is in the early stages or in the later stages. The specifics on how this decision-making influences actions is discussed in the later section "Trend at specific level (early stage vs. later stage)" which falls under the "actions/strategies" of dementia treatment.

Reasoning behind outcome measures. SLPs may also be guided by their clinical reasoning about selecting outcome measures of treatment (*n* = 6). This reasoning may be caused by funding or insurance reasons (*n* = 2). For example, one participant describing an outcome measure they were considering using stated, “because it’s another piece of paper with numbers on it that I thought Medicare would like.”

Treatment materials (resources). SLPs’ dementia treatment may also be guided by a source or resource of information (*n* = 4). One SLP described that their training for being a Dementia Care Specialist drives their dementia treatment, saying, “but ever since I became certified as a Dementia Care Specialist, it still includes that, but it focuses more on patient’s remaining abilities.” This participant specified that prior to becoming a Dementia Care Specialist, they relied on independent research to influence their dementia treatment. Additionally, resources such as the Allen Cognitive levels and Global Deterioration Scale were found to drive dementia treatment for three participants.

Context

Eight of the categories/subcategories serve as “context” within which dementia treatment is nested. These categories include: (a) family/follow through, (b) setting, (c) funding impacts, (d) other professionals, (e) caseload, (f) terminology, (g) dysphagia, and (h) proportion dysphagia.

Family/follow through. Dementia treatment is often dependent on the context of the impacts of family or the ability of have follow through of treatment (*n* = 6). The only family impact that was talked about by more than one interviewee was the concept of working with difficult caregivers (*n* = 2). All other examples of this concept can be found in Table 3.15 in Appendix N.

Setting. An SLP's setting also exists as context for dementia treatment. The impacts of a setting can be positive (e.g., working in a PWD's natural environment in home health), negative (e.g., not having enough time), or neutral (e.g., specific procedures required for a specific home health company). All examples of how this category existed for interviewees are shown in Table 3.16 in Appendix N.

Funding impacts. SLPs also work in the context of being impacted by funding. In this study, this ranged from participants discussing insurance impacts (*n* = 2), Medicare impacts (*n* = 4), charging or reimbursement in general (*n* = 2), and the funding of their setting itself (*n* = 1).

Other professionals. Like in evaluation, other professionals can exist within the context of dementia treatment (*n* = 7). Sometimes the other professionals are other SLPs and their differing opinions. For example, two participants described how many SLPs have opposite feelings about treating PWD, with one stating, "Still some people like in the speech therapy community who are more of a mindset of, well this is progressive; this person's going to worsen, is it really warranted as far as providing intervention?."

Other examples of this concept included more negative examples, including: poor communication between professionals (*n* = 1), having to compete for time with patient (*n* = 1), high © turnaround (*n* = 1), colleagues who are "scared" to treat dementia (*n* = 1), and other therapists implementing an "ineffective approach" (*n* = 1).

Caseload. Similar to dementia evaluation, dementia treatment also exists in the context of an SLP's caseload (*n* = 9). The range of this concept varied and primarily contained individual responses that could not be subcategorized (grouped). However, three interviewees noted that their caseload involves either a variety of severities or types of dementia. For a list of all examples of this concept, refer to Table 3.17 in Appendix N.

Terminology. An SLP's terminology can also serve as context and may be influenced by various factors, such as their setting. Three SLPs either used a variation of the term "Functional Maintenance Plan" or were unfamiliar with that specific term but knew the purpose of the plan. Two participants indicated uncertainty of a label for strategies they use. One participant could not recall the term for the therapy when utilizing oils. Another SLP was uncertain if a strategy they utilize could be considered "cognitive stimulation" and stated:

> I would assume that it's cognitive stimulation. I do a lot of engaging the patient in different tasks to, to stage their cognitive level. To see, how complex I can go versus how simple I can go with the different activities…I don't really know what else I would call it.

Finally, one participant specified the specific term they would use in documentation for an external memory aid as a "daily memory notebook."

Dysphagia and proportion dysphagia. Dementia treatment can also be present in the context of dysphagia therapy, which was brought up by many interviewees (*n* = 6). The proportion of dysphagia therapy for PWD was found to exist on a continuum from being “a lot of the focus” (*n* = 2), “mostly dysphagia” (n = 1), to “all of the focus” (*n* = 1). This idea was also judged to be closely related to participants’ settings, with the tendency for hospital-based or acute care settings to be more focused on swallowing for PWD.

EBP. Treatment can also exist in the context of an SLP’s awareness of EBP (*n* = 5). The range of discussion that fell under this category was vast. One example that fell under EBP was an interviewee who commented on the lack of research in the area of dementia. All direct quotes from this category are provided in Table 3.18 in Appendix N.

Actions/strategies

There was a total of 15 categories/subcategories which can be defined as the actions or strategies that SLPs may take in response to dementia treatment. These actions are influenced by the causal conditions described in the previous section. These actions of dementia treatment include the following: (a) top 5 strategies, (b) description of caregiver training, (c) non-top 5 strategies, (d) cognitive targets, (e) language/communication targets, (f) safety/behavior targets, (g) treatment materials, (h) collaboration, (i) trend at specific level (early vs. later stage), (j) outcome measures and source (caregiver vs. patient), (k) group therapy, (l) functional maintenance plans and initiation, (m) schedule, (n) reasoning behind schedule, and (o) frequency (treatment).

Top 5 strategies. All the SLPs specified that they implement at least one of the top 5 strategies identified in the literature review previously discussed in this paper during dementia treatment. The number of SLPs who utilize each technique included:

caregiver training (*n* = 9), external memory aids (*n* = 7), cognitive stimulation (*n* = 4), spaced retrieval (*n* = 3), and reminiscence (*n* = 3).

Description of caregiver training. For SLPs who utilize caregiver training or education as actions for dementia treatment, they often (*n* = 9) have specific skills or information they provide to the caregiver. This might range from named strategies, such as validation therapy, to general principles, such as how to communicate with a PWD. Four participants described teaching caregivers ways to continue stimulation (e.g., a list of cognitive-stimulating activities), four participants give information on how to provide assistance or cue PWD, and four participants provide information about dementia. Table 3.19 in Appendix O lists all skills and information reported in this study.

Non-top 5 strategies. Often the actions taken by SLPs fall outside of those "top five" strategies (*n* = 9). Within this study, this action existed across a wide range of possible general strategies and named approaches. Table 3.20 in Appendix O outlines all strategies. The strategies that were reported by more than one participant each included: memory techniques (*n* = 3), internal memory strategies (*n* = 2), environmental modifications (*n* = 2), Montessori (*n* = 2), general cueing systems (*n* = 2), and patient education (*n* = 2).

Cognitive targets. Establishing cognitive targets is often an action of dementia practice. Specific skills targeted included: problem solving/reasoning (*n* = 5), establishing routine (*n* = 5), orientation (*n* = 5), memory (*n* = 2), attention (*n* = 2), and processing skills (*n* = 1).

Language/communication targets. Another action that can emerge during dementia treatment is targeting language or communication (*n* = 8). Some of the SLPs, discussed targeting language in general terms. Four SLPs specified skills they target that fall under the umbrella of language, including: following directions (*n* = 2), reading (*n* = 1), word retrieval (*n* = 1), and picture matching (*n* = 1). Six SLPs target communication in general and two stated they target social communication in therapy.

Safety/behavior targets. An action that all participants reported taking was targeting safety or managing behaviors in dementia treatment. The ways this target was represented included: medication management (*n* = 5), negative behaviors (*n* = 5), general safety targets (*n* = 3), using walker or preventing falls (*n* = 2), utilizing call button (*n* = 2), remembering to stay hydrated and eat (*n* = 2), and home safety, such as remembering to turn off the stove (*n* = 1).

Treatment materials. Treatment materials also emerged as a causal condition but can also be considered an action for dementia treatment (*n* = 9). Three interviewees reported using calendars, followed by two interviewees who implement photographs (e.g., family photos), and two interviewees who utilize technology (e.g., Echo Dots). Refer to Table 3.21 in Appendix O for a breakdown of all materials reported by interviewees.

Collaboration. Similar to dementia assessment, SLPs may engage in collaboration in treatment. For six interviewees, this was reflected by having regular contact with other professionals regarding the care for PWD (i.e., medical teams, activities staff, physicians, restorative aids, and Ots). Some SLPs may collaborate and have specific actions for other professionals to perform, such as in the case of educating staff (*n* = 1) or having staff monitor a PWD's accuracy (*n* = 1). Another participant described engaging in a co-treatment group with physical therapists. Finally, the concept of collaboration in this study also occurred when an SLP provided an in-service to their co-workers on what SLPs can do, to increase awareness among colleagues.

Trend at specific level (early stage vs. later stage). As previously stated, the causal condition of "treatment decisions based on level" influences specific actions depending on the level of the PWD. In the current study, these trends were found to either occur at the early (e.g., taking advantage of preserved procedural memory) or later (e.g., implement a memory book) stages of dementia. Examples that fell under this concept was especially individualized; thus, all examples are depicted in Table 3.22 in Appendix O.

Outcome measures and source (patient versus caregiver). SLPs also determine outcome measures for PWD. However, the specifics of those outcomes depend on the SLP's decision making and reasoning behind outcomes. To capture the individualized nature, descriptions of outcome measures can be found in Table 3.23 in Appendix O. However, some overlapping themes occurred. Three participants reported using caregivers' understanding and use of strategies. Other outcome measures that were described by two interviewees included: (a) decreasing levels of assistance, (b) increasing participation in activities, (c) decreasing behaviors/outbursts, and (d) patient use of strategies. An additional way to organize outcome measures is by the source of those measures (i.e., PWD or caregivers). Most participants (*n* = 8) specified they measure the behaviors of PWD for outcomes. Five participants disclosed using caregiver's actions as outcome measures, such as them utilizing strategies. Overlap did occur between both sources, with four participants using a combination of patient and caregiver behaviors as outcomes.

Group therapy. Group therapy can also be conducted as a treatment for dementia therapy (*n* = 5). However, the SLP's ability to provide group therapy is very heavily reliant on their specific context, such as funding situations (e.g., Medicare regulations) and specifics of the setting (i.e., not typically part of home health). The two most frequently reported actions of group therapy were: (a) reminiscence based (*n* = 3) and (b) social or communication based (*n* = 3).

Functional Maintenance Plans and initiation. Another action that is often (*n* = 9) taken for treatment is setting up a Functional Maintenance Plan (FMP). This action seems to occur or not occur within the context of an SLP's setting and may exist under various terminology, such as "Functional Communication Profile." The timing of setting up FMPs was found to range from the beginning of therapy (*n* = 3) to near the time of discharging the patient (*n* = 2). One participant indicated they initiate plans in the middle of a treatment course, stating, "We set those up kind of once we've tried the restorative. If that's not working, then we kind of focus on more of a maintenance program."

Schedule. Establishing a treatment schedule is another action that SLPs take in dementia treatment. This action appears to exist largely in the context of an SLP's setting and the needs of the PWD. In general, home health, outpatient, and university settings involved a lower number of sessions per week (i.e., 1 to 2), while skilled nursing, subacute, and LTAC involved a higher number of weekly visits (i.e., 3 to 5). All scheduling described by participants are outlined in Table 3.24 in Appendix O.

Reasoning behind schedule. In addition to describing the therapy schedule for a PWD, participants oftentimes provided reasoning for the schedule. Most frequently, the reasoning was based on the severity of the patient (*n* = 4) or the specific caregiver situation (*n* = 3) (e.g., may be more sessions if caregivers are not present). All other reasoning provided by interviewees and specific examples are in Table 3.25 in Appendix O.

Frequency (treatment). Actions of dementia treatment are completed at a certain frequency by SLPs. This was found to range from "don't do" (e.g., never do group therapy) to "always" (e.g., always do caregiver training) complete. Though frequency is similar to "schedule", schedule belongs in its own section due to the inability to compare "often" doing something to "doing something 1x per week" (e.g., an SLP may consider "often" doing something as once per month, while another SLP considers once per week "often"). This category yielded a plethora of examples from participants and are shown in Table 3.26 in Appendix O.

Consequences

For the phenomenon of dementia treatment, there were nine concepts that can be categorized as "consequences" of the actions and included: (a) negative approaches and reasoning against, (b) extent of success, (c) change in approach, (d) interviewee wants,

(e) adjusting plans, (f) specific patient situations, (g) feedback/reactions, (h) SLP role, and (i) extent of expertise.

Negative approaches and reasoning against. One potential consequence of dementia treatment is determining that some actions completed are not effective for PWD or choosing not to engage in certain therapy procedures (*n* = 8). That consequence may be accompanied by specific reasoning against using an approach (*n* = 8). Spaced Retrieval and using worksheets both were negative approaches named by two interviewees each. With spaced retrieval, one interviewee found the approach ineffective as a whole, while the other found it ineffective in her setting of home health, due to seeing clients less frequently. For a complete look at all negative approach examples and the reasoning against, see Table 3.27 in Appendix P.

Extent of success. Another consequence may be an SLP gauging or rating the extent of success of an action of treatment (*n* = 7). This was found to exist on a continuum ranging from extremely successful (*n* = 1) (e.g., being a PWD's partner/coach) to not or minimally successful (*n* = 6) (e.g., improving memory), with "can make progress" falling in between (*n* = 4) (e.g., targeting communication). Table 3.28 in Appendix P outlines the procedures that fell on the continuum.

Change in approach. An action of treatment can cause an SLP to change their approach or the actions they take in the future (*n* = 10). Two SLPs described how family input can cause them to change approach in the treatment phase. For example, one SLP stated:

> If I think I'm going to follow a sort of approach or do a certain kind of activity and I get feedback either from the patient or the caregivers that that particular activity just is really not important in their life, I don't follow it anymore.

Another SLP described changing approach mid-treatment when therapy gains are not occurring, remarking:

> If I don't see any functional gains, you know within the first I'd say four weeks, I usually then focus more on…just like how using external aids and how to assist the caregiver with like safety and just functioning at home.

Interviewee wants. SLPs' actions of dementia treatment can give rise to specific wants or questions SLPs would like answered. For example, two interviewees described their "want" for SLPs to learn more about dementia and/or spread word about the role SLPs can play in dementia. Another two interviewees mentioned future outcome measures they wish to implement for PWD. All instances of this concept can be read in Table 3.29 in Appendix P.

Adjusting plans. For three SLPs, a consequence of the action of implementing FMP was deciding to modify or adjust them throughout the treatment process. Two of the SLPs disclosed that they do not tend to adjust the plans once they are created.

Specific patient situations. Participants often described specific patient situations as a way of describing their clinical practice. For seven of the participants in this study, they described the details of a specific patient situation to represent an example of their practice, with the following as an example:

> I have a patient right now who will, has those echo dots like all over their house and will just like has programed the dots that to remind her, you know in ten minutes remind me to do this. Or in 15 minutes remind me to do that.

Feedback/reactions. Feedback or patient reactions also emerged as a potential consequence of dementia treatment (*n* = 4). Again, this consequence was found to exist on a continuum from positive (*n* = 4) to negative (*n* = 2). The two negative reactions were from PWD and involved them being “resistant” and “frustrated” within a therapy task. On the positive end, positive reactions and feedback by PWD were described by three participants. For example, an interviewee described patient’s reactions to a co-treatment group with PT, stating, “They just loved it…they didn’t realize it was therapy.”

Two participants mentioned positive reactions and feedback from family or caregivers, such as one interviewee who discussed implementing a memory book, “We’ve gotten some really nice feedback from the families. Like a lot of families will say, “I never knew that about my mom” or “I never knew that about my grandma.””

SLP role. SLP role also exists as a consequence of providing dementia therapy in the cases in which SLPs may advocate to others their role or potential role in the lives of PWD (*n* = 3). An example of this from one participant is as follows:

> I'm working really hard within my own little team and my own little community to expand our role and I'm having some real success with that. I have a colleague who works with me in the home health agency and we just did an in-service a few weeks ago on all the things that speech can do. And we've been starting to get a lot more referrals for voice issues…for more cognitive issues. And so, I think it's just, we just need to be telling our colleagues always what we can do.

Extent of expertise. The actions of treatment can also cause an SLP to reflect on the extent that they have expertise in the area of dementia (*n* = 5). Within this study, participants ranged from "not an expert" (*n* = 3) to "area of specialty" (*n* = 2) in the realm of dementia practice. One participant described starting out as not an expert, but through independent research selected dementia as a "special interest" when they transitioned to the home health setting. For all examples, refer to Table 3.30 in Appendix P.

Selective Coding

The next step of qualitative analysis following axial coding is selective coding. According to Strauss and Corbin, selective coding is defined as "the process of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development" (1990, p. 116). Coding was completed by first "explicating the storyline" (p. 119) or selecting the most salient phenomenon from the data (Strauss & Corbin, 1990). According to Strauss and Corbin, researchers determine which category could be considered broad enough to encapsulate the overall storyline of the data. This category can be labeled the "core category" or "central phenomenon." In selective coding, Strauss and Corbin emphasized that the researcher must decide one core category, even when two seem equally important (1990). The researcher could not determine a single category that fit the breadth of both dementia assessment and treatment. Thus, the researcher followed Strauss and Corbin's advice when this occurs and created a new name for the central phenomenon (1990).

The terminology selected for the central phenomenon of this study was "Dementia Practice." Following the selection of this central phenomenon, the researcher began to write the "storyline" or narrative of the phenomenon. The researcher utilized Strauss and Corbin's description of "process" to motivate the understanding that the phenomenon occurs in a sequence of two phases (1990). In the initial narrative of the phenomenon, the researcher only included the categories that were represented by all 10 participants. Once this foundation was set, the researcher added less frequently identified categories to provide further detail and examples to add depth to the theory. The researcher also considered intervening conditions, or things that "explain why one person has a certain outcome or chooses another set of strategies, while another person doesn't" (Strauss & Corbin, 1990, p. 125).

Once a narrative was constructed, the researcher "validated" the emerging theory against the data within all ten interviews to ground its content (Strauss & Corbin, 1990). The researcher did this by reading through each interview and ensuring that the theory held true across all discussion from all interviewees.

The Theory of SLP Dementia Practice

The proposed theory that arose from the data collected from the interviews is as follows (categories are in bold to better demonstrate how the categories relate to each other):

"The phenomenon and process of dementia practice can be understood to occur in two broad phrases: evaluation (Phase 1) and treatment (Phase 2). In Phase 1, SLPs have specific **evaluation** and/or **formal testing reasoning** that give rise to the actions of their evaluation. An SLP may have formal testing reasoning that is grounded in the specific content of the test (i.e., what skills they want to test) or the properties of the test (e.g., short or thorough). Evaluation reasoning can also be based in the anticipated level of the PWD. An SLP's **reasoning based on the level** of a PWD can result in a change to the eventual actions of formal testing or informal procedures. In the case of formal testing, SLPs select a different test or choose not to do a standardized test because of a PWD's level. Reasoning that guides an SLP's actions can stem from a hope to make therapy functional for a PWD or based on their remaining abilities. This also may take the shape of asking PWD and their families what is important to them. For some SLPs, this is also done by having a mindset of building rapport with the client during evaluation.

The actions of Phase 1 of dementia practice all occur within the context of an SLP's **setting**, which in the evaluative phase, can be impacted by **other professionals**, the **caseload** of their given setting, and **funding impacts** (e.g., Medicare regulations). If an SLP's setting and funding situation have guidelines, this can create different causal conditions that give rise to eventual actions. For example, this may occur in a situation when a standardized test score is required to bill for an evaluative session. Other professionals also exist in the context of an SLP’s specific setting in Phase 1. This may occur when an SLP is skeptical of a physician or neurologist’s diagnosis. When an SLP encounters a situation where they question a medical diagnosis of a client, they will continue to be skeptical in future circumstances. In addition to impacts of other professionals, there may also be setting-related differences in availability to interview caregivers and amount of time to assess PWD.

The actions that rise from the phenomenon of dementia practice in Phase 1 include **formal testing/screening** measures and receiving **caregiver input**. Formal measures in this sample most often included the MOCA, SLUMS, and Allen Cognitive Levels. If SLPs interview the family or caregivers, then they typically have **specific questions or** areas of interest that guide their interview, which may include asking about: (a) concerns or problems, (b) behaviors, or (c) the change in communication regarding the PWD. Caregiver input falls under the realm of “informal assessment measures,” and can contain other actions such as **interviewing the patient** and **considering safety and/or the behaviors** of the patient. When an SLP describes doing a chart review or reads background history of a patient, they use terminology such as “of course” or “definitely”, indicating it to be a necessity of the evaluative process. Actions of evaluation are completed at a certain **frequency** which is determined by the SLP and ranges from “never” to “always.” These actions of Phase 1 cause the consequences of **treatment strategies**, **targets of therapy**, **outcome measures,** and establishing a **schedule** of treatment with a patient.

Phase 2 of dementia practice includes the dementia treatment process. One condition that gives rise to dementia practice in Phase 2 includes an SLP's **theory or guiding principles**. In this sample, all SLPs' theories included an emphasis on **functional treatment**. Functional or individualized approaches often focus on determining patient interests or activities that are important for them or helping them maintain their independence. If an SLP has a preconceived notion about the **expected progress** for a PWD, it includes an understanding of dementia as a degenerative disease and adjusts the expected progress accordingly. Another aspect that influences treatment actions for an SLP is the **level** of the PWD (i.e., the severity of the dementia). Similarly, the **type of dementia** influences treatment decisions for some SLPs but not others. The extent that the type of dementia influences treatment this exists on a dimension ranging from "does not change" to "definitely changes." For example, if an SLP believes that a diagnosis of PPA should change the treatment approach, it usually results in an approach more focused on language than cognition. If an SLP believes that a diagnosis of Lewy Body is present, their approach changes to an increased focus on negative behaviors and/or hallucinations, impacting the actions of Phase 2 (treatment). Dementia practice in Phase 2 is also often influenced by the **formal testing** and/or **caregiver input** that were revealed as actions during Phase 1. This can occur as the SLP utilizes formal testing to stage the PWD and/or uses the information provided by the caregiver to select targets for therapy. An SLP's **treatment reasoning** and **outcome measure reasoning** also give rise to the eventual actions they take. This reasoning is judged to be unique and highly individualized based on the SLP.

As in Phase 1, Phase 2 exists in the context of an SLP's **setting**. The way the setting impacts an SLP can range from being negative to positive. SLPs from rural settings more often report negative consequences of living in a rural area than positive impacts due to resource availability. An SLP's setting is often impacted or even guided by funding, either through billing or insurance regulations or funding within their facility itself. An SLP's dementia practice can be defined by the **caseload** of individuals they see, which adds a uniqueness to their situation, such as in the case of treating PWD with a wide range of severities. The context of an SLP's setting also can include the views of other professionals who the SLP works with. One example occurs when an SLP's colleague does not believe in treating dementia. This professional difference impacts treatment decisions of other SLPs. **Family impacts** or the concept of **follow-through** in general is yet another concept in the context of an SLP's setting. For some SLPs, impacts from the family are positive, while other family impacts are negative. The SLP role is also frequently part of a clinician's setting, meaning that their practice is influenced by the perceived role in a given workplace.

Another factor of an SLP's setting is the emphasis put on **dysphagia** within the realm of dementia practice. If an SLP works in an acute or hospital-based setting, they are much more likely to be treating dysphagia (i.e., ranging from "a lot of the treatment" to "all of treatment") in the realm of dementia or hospital-induced delirium. Dementia practice is also revealed in the context of an SLP's understanding or awareness of **EBP**, which can range from unknowingly doing actions that are not evidence-based to having considerable amounts of knowledge of the evidence-base. **Terminology** utilized by an

SLP can influence the context for their dementia practice. The realm of terminology in dementia practice can range from not having a clear label for an approach to having a specific name for an action, such as a "daily memory notebook."

During Phase 2, SLPs engage in treatment strategies, which most frequently fall under the **top-five strategies** (i.e., caregiver education/training, cognitive stimulation, reminiscence therapy, external memory aids, and errorless learning), but may be accompanied by **non-top five strategies** (e.g., memory techniques, internal memory strategies, environmental modification, and Montessori). One top five strategy is caregiver training. When an SLP engages in caregiver training, they discuss specific skills or topics they educate and/or train caregivers about. Common and specific strategies discussed included: ways to continue stimulation, how to provide assistance, information about the disease, and/or how to understand behaviors. SLPs also select targets of therapy, which include **cognitive** and/or **language/communication**, and always **safety/behaviors**. The realm of cognitive targets can include problem solving, establishing routine, orientation, memory, attention, and processing skills. Language and/or communication targets can include a variety of expressive and receptive targets. Safety targets can take many different forms, such as medication management, preventing falls, or managing negative behaviors. These actions of Phase 2 are also typically done alongside implementing various treatment materials. If the materials are to target orientation, they might involve either calendars, a whiteboard, notebook, or printed schedule. The previously described concept of decisions based on the level of the client can cause a variety of actions in Phase 2. These actions are clinician-specific and range from certain treatment actions for PWD in **early stages** to PWD in **later stages** of the disease process. SLPs most typically see PWD individually, however, under the right contexts and settings, they may engage in group therapy with PWD. If SLPs conduct group therapy for PWD, they most often discuss engaging in reminiscence based or social-communication groups.

SLPs also determine a **schedule** for the treatment plan (e.g., three times per week for 8 to 12 weeks) and often discussed their reasoning for a frequency of schedule for PWD. Schedule is very closely aligned to the setting of the SLP (e.g., insurance-based) and often the specifics of the client's situation (e.g., severity of dementia, degree of progress, and caregivers). If an SLP works in a home health or outpatient setting, then they typically see PWD 1 to 2 times per week. If an SLP works in a skilled nursing or subacute facility, they typically see PWD more times per week (i.e., 3 to 5 times per week). In addition to determining a schedule, SLPs may engage in **collaboration** with other professionals during Phase 2, which can include medical teams, activities staff, physicians, restorative aids, and occupational therapists. The extent of collaboration can range from minimal (e.g., professional frequent communication) to more in-depth, such as in the case of co-treatment groups with physical therapists or training staff.

Another action SLPs take in Phase 2 (treatment) is selecting **outcome measures.** These outcome measures are selected depending on the SLP's **reasoning behind measures**, which may also be influenced by insurance or funding (e.g., using an "outcome score" for Medicare purposes). These outcome measures exist either with PWD being the source of data (e.g., use of strategies) or their caregivers (e.g., caregiver report).

Some SLPs utilize a combination of sources to measure outcomes (e.g., measuring if the caregiver and PWD are utilizing taught strategies). In addition to outcome measures, SLPs also may complete **functional maintenance plans** which are written specific to the PWD's needs. This action occurs or does not occur based on the setting of the SLP. If an SLP works in acute care, they likely do not engage in functional maintenance plans. Additionally, these plans may be initiated across a wide timeline. Plans may be started the first time the SLP meets with a PWD, after some intervention has been done, or near the end of the intervention/discharge of the patient. These plans can exist under various terms, such as "Functional Communication Profile." Like in Phase 1, actions of Phase 2 are done at a selected frequency, which range from "do not do" to "always" do. If an SLP indicates the frequency in which they provide caregiver education or training, it includes terminology such as "a lot" or "always" using that strategy.

There are several potential consequences of implementing the previously described actions of Phase 2. The concept of "change" is a frequent consequence in Phase 2 (treatment). A common example of "change" is an SLP implementing a **change in approach** or a treatment procedure. Often this change in approach is caused by **input from caregivers** or a family member. In some instances, this may be from discovering a **negative approach**, which the SLP does not find successful. On these occasions, the SLP then has **reasoning against** why they would not do that action in the future. A perceived "negative approach" can include a top-five strategy, such as spaced retrieval. If SLPs receive **negative feedback** or a **negative reaction** from a PWD or their family in regard to an action taken, then this also can bring about a change in the actions for a current or future dementia client. SLPs may also adjust a PWD’s functional maintenance plan to better meet their needs. SLP actions in dementia practice may change based on their experiences. This may result in them adjusting or expanding their behavior or seeking information in the future. Examples of this were SLPs discussing the need to spread the word about the role of the SLP in PWD treatment or wanting more research done in the area. Some SLPs may take steps to put those wants into action, such as by advocating the **SLP role** to colleagues.

When the results of an action are positive it may not bring about change. In the instances when the SLP judges an action to be extremely successful or having potential, they may not make changes to their actions. This is likely to occur if SLPs receive positive feedback from caregivers that reinforce a practice resulting in them continuing a specific action of dementia practice. Additionally, engaging in dementia practice can cause an SLP to reflect on the **extent of their expertise** in dementia, which can range from “not an expert” to “an area of specialty.” Nonetheless, each time an SLP works with an PWD, they have a new **specific patient situation** to refer to and reflect on.”

In summary, the results of axial coding led to the proposition of the Theory of SLP Dementia Practice. Some of these results may be considered general or to be expected as components of dementia practice (e.g., that SLPs use formal testing for PWD) while others provided more specific input (e.g., that some SLPs question the medical diagnosis of PWD). The qualitative portion of the study was at times supported by the survey data (e.g., an open-ended question asking how SLPs measure outcomes for

PWD), but at other times provided additional information that could not be extracted from the survey results (e.g., interviewees' step-by-step process of dementia evaluation).

CHAPTER 4: QUANTITATIVE RESULTS

A quantitative component was included in this research to increase the robust nature of the data obtained. To that end, a survey was conducted of SLPs in dementia practice across the United States. A total of 125 surveys were submitted through Qualtrics. Of the 125 surveys that were started, 37 did not complete the survey, creating an attrition rate of 30%. Six surveys were eliminated from the data, due to participants not meeting the study qualifications (i.e., fewer than four years of experience) and five participants withdrew from the study by question seven (i.e., asking how many years of experience). This left a total of 114 surveys for analysis. Despite the number of participants who withdrew from the survey, the researcher decided to include and report all data that were provided by these 114 participants (i.e., including participants who withdrew).

Survey Demographics

The first step in the survey analysis was to determine the survey demographics. Table 4.1 depicts the results of the following survey demographics: (a) gender, (b) highest degree obtained, (c) years of experience as an SLP, (d) years of experience as an SLP for PWD, (e) percentage of their caseload containing PWD for cognitive-linguistic therapy, (f) whether they took a dementia-focused class in graduate school, (g) the degree they felt prepared by their graduate program to assess and treat PWD, (h) work setting/settings, (i) region of the U.S., (j) population density (i.e., rural vs. urban), (k) number of CEUs they had received in the past five years that addressed dementia assessment/treatment, and (l) number of hours of training they had received by their employer regarding dementia practice.

The researcher used two separate resources as a guide for parameters of geographic areas and population density. Geographically; regions of the country were determined based on the U.S. Census Bureau (*n.d.*). The following criteria were used in a multi-select format to extract data regarding population density: (a) urbanized area (50,000+ people), (b) urban cluster (2,500- 50,000 people), and (c) rural (town/city less than 2,500 people) (Health Resources & Services Administration, 2018).

In addition to previously described demographic data, the researcher also asked participants to select which certifications they held from a provided list. Due to the extensiveness of the results, a complete breakdown of certifications reported by participants can be found in Table 4.2 in Appendix Q.

Table 4.3 compares the demographics of the survey participant sample to the population of certified SLPs. Overall, the sample (i.e., survey participants) was similar to the population in terms of gender, geographical location, several work settings (i.e., home health, university, and other non-residential facilities), and educational background (i.e., percentage of doctoral degrees) (ASHA, 2018c; ASHA 2018d). There were some notable differences between the groups based on work setting. The sample contained a higher percentage of SLPs working in SNF and home health settings, and a lower representation of hospital-settings (ASHA, 2018c). However, these differences are expected based on

Table 4.1

Demographic Data of Survey Participants

Parameter	*n* (%)	Parameter	*n* (%)
Gender		Highest Degree Obtained	
Female	107 (93.9)	Master of Science	71 (62.3)
Male	6 (5.3)	Master of Arts	33 (29)
Prefer not to respond	1 (0.9)	Doctoral Ph.D.	4 (3.5)
		Other [a]	6 (5.26)
# of Years as SLP		# of Years as SLP with PWD	
4-10 years	43 (27.7%)	4-10 years	52 (45.6)
11-20 years	28 (24.6%)	11-20 years	38 (33.3)
21-30 years	17 (14.9%)	21-30 years	13 (11.4)
31-40 years	18 (15.8%)	21-40 years	7 (6.1)
41-50 years	7 (6.1%)	40+ years	4 (3.5)
51-60 years	1 (0.9%)		
M = 19.20, SD = 12.71		**M = 14.81, SD = 9.97**	
% of Caseload PWD		Dementia Focused Course in Graduate School	
1-20%	27 (24.1)	Yes	6 (5.4)
21-40%	23 (20.5)	No	50 (45.1)
41-60%	28 (25)	Dementia covered in different class	55 (49.6)
61-80%	26 (23.2)		
81-100%	8 (7.1)		
Preparedness by Graduate Program for Assessment/Treatment of PWD		Work Setting	
Very Prepared	3 (2.7)	Skilled Nursing Facility	60 (36.4)
Moderately Prepared	15 (13.5)	Home Health Agency	35 (21.2)
Neutral	24 (21.6)	Outpatient	27 (16.4)
Moderately Unprepared	44 (39.6)	General Medical Hospital	17 (10.3)
Very Unprepared	25 (22.5)	Rehabilitation Hospital	11 (6.7)
		LTAC	5 (3)
		Other[b]	5 (3.6)
		University Setting	4 (2.4)
Region of U.S.[c]		Population Density	
South	44 (38.6)	Urban Cluster	53 (41.1)
Midwest	25 (21.9)	Urbanized Area	52 (40.3)
West	24 (21.1)	Rural	24 (18.6)
Northeast	21 (18.4)		
# of CEUs that Addressed Dementia		# of Hours of Employer Training in Dementia Practice	
0	5 (4.5)	0 hours	44 (39.6)
1-10	38 (34.2)	1-10 hours	48 (43.2)
11-20	34 (30.6)	11-20 hours	15 (13.5)
21-30	12 (10.8)	20-30 hours	4 (3.6)
31-40	15 (13.5)		
41-50	2 (1.8)		

51-60	2 (1.8)
60+	3 (2.7)

[a] Master of Communication Disorders, Masters of Natural Science, Masters of Speech Language Pathology, MBA

[b] Assisted/Independent Living Facility, ICF/ID Facility, Mobile MBSS

[c] West: WA, OR, ID, WY, MT, CA, NV, UT, AZ, NM, CO
Midwest: ND, SD, NE, KS, MN, IA, MO, WI, IL, IN, OH, MI
Northeast: PA, NY, NJ, CT, MA, RI, VT, NH, ME
South: OK, TX, AR, LA, DE, MS, TN, AL, KY, GA, FL, SC, NC, VA, WV, MD

Table 4.3

Comparison Between Demographics of Survey Participants and Certified ASHA Members

Demographic Element	**Survey Participants**	**Certified ASHA Members**
Gender	Female: 93.9% Male: 5.3% Prefer not to respond: 0.9%	Female 96.3% Male 3.7% (ASHA, 2018c)
Work Setting [a]	Home Health: 21.2% SNF: 36.4% Hospital: 17% University: 2.4% Other non-residential facility [b]: 23%	Home Health: 13.6% SNF: 19.5% Hospital: 29.8% University: 6.4% Other nonresidential facility [b] : 27.5% (ASHA, 2018c)
Geographic Region	Southern: 39% Midwest: 22% Northeast: 18% Western: 21%	Southern 36% Midwest: 22% Northeast: 24% Western: 18% (ASHA, 2018c)
SLPs with Doctoral Degrees	Ph.D. 3.5%	Ph.D: 1.8% (ASHA, 2018d)

Note. [a] ASHA percentages were adjusted for this component to only account for settings where SLPs would work with PWD (i.e., excluded Birth-12th grade school-based settings)

[b] Includes: private physician's office, SLP's/AUD's Office/Speech & Hearing Center, and "other"

the population being studied. There is a greater focus on dementia care in home health and skilled nursing facilities than in hospital settings. While PWD are seen in hospitals, it is unlikely to be because of the primary diagnosis of dementia but rather for a fall, pneumonia, or other medical issue. The data on the work setting of SLPs who report working with PWD is not known and therefore extrapolations are difficult to make.

General Dementia Questions

Researchers asked survey participants several questions that can be categorized as "general dementia questions", because they were not specific to assessment and/or treatment. For the first general dementia question, participants rated the extent to which the type of dementia (e.g., Lewy Body or Alzheimer's) changes the way they engage in assessment and/or treatment of dementia. The following represents the number of people who reported that the type of dementia influenced their practice: 38% somewhat changes 31% changes, and 11% substantially changes. Twenty percent of the respondents reported that the type of dementia did not change their dementia practice.

In addition to learning the reasoning behind how the type of dementia changes, the researcher wanted to better understand the resources that guide SLPs' practice for PWD. To better understand this, participants selected the resources (i.e., predetermined list) they had utilized within the past year to help guide their dementia practice. Refer to Table 4.4 below for complete percentages of participants for each resource.

Table 4.4

Resources Used by Survey Participants in Past Year for Dementia (n = 110)

Resource	*n* =	Percentage of Participants
Conferences/CEUs	90	82%
Peers/other professionals	86	78%
Research journals	49	45%
Comprehensive textbooks	44	40%
Social Media	36	33%
Facebook	10	9%

Pinterest	2	2%
"Other " (Write-in Option)		
Resource books	1	<1%
Educational websites	1	<1%
Personal online research	1	<1%
No resources	1	<1%

To gain more information than just which resources participants had utilized within the last year, researchers asked participants to rate the likelihood that they would use the same resources listed in Table 4.4 to guide their practice for a PWD. Participants answered this question based on a Likert scale ranging from one (being extremely likely) to five (being extremely unlikely). Table 4.5 below depicts the mean and standard deviations of each resource.

Table 4.5

Likelihood of Survey Participants Using Resources for Dementia (n =110)
Scale: 1 (Extremely Likely) to 7 (Extremely Unlikely)

Resource	Mean	Standard Deviation
Conference/continuing education units	1.65	0.79
Consulting with peers/other professionals	1.65	0.79
Research journals	2.35	1.26
Comprehensive textbooks/literature	2.45	1.24
Social media (Pinterest, Facebook Groups)	3.17	1.47

Results for likelihood of resource use were also categorized by percentages of participants in Table 4.6. Ninety-one percent of participants selected being likely (i.e., either extremely or somewhat likely) to use conferences or continuing education units. The same percentage of participants indicated being likely to utilize peers or other professionals. Research journals were rated to be likely used by 64% of participants and comprehensive textbooks by 69%. Utilization of social media was only chosen by 42% of participants.

Table 4.6

Resource Use by Number/Percentage of Survey Participants (Shaded Regions = Highest Frequency of Participants)

Resource	Extremely Likely	Somewhat Likely	Neither Likely nor Unlikely	Somewhat Unlikely	Extremely Unlikely
Conference/continuing education units	53 (48.18%)	47 (42.73%)	7 (6.36%)	1 (.91%)	2 (1.82%)
Consulting with peers/other professionals	54 (49.09%)	46 (41.82%)	4 (3.64%)	6 (5.45%)	0 (0%)
Research Journals	34 (30.91%)	36 (32.73%)	15 (13.64%)	17 (15.45%)	8 (7.27%)
Comprehensive textbooks/literature	23 (20.91%)	51 (48.36%)	12 (10.91%)	12 (10.91%)	12 (10.91%)
Social Media (Pinterest, Facebook Groups)	16 (14.5%)	30 (27.27%)	16 (14.55%)	15 (13.64%)	33 (30%)

In addition to where resources were obtained, questions about the availability of resources were asked to determine if there was an urban to rural disparity. Participants rated the degree to which they agreed with various statements about the availability of resources for treatment overall and for assessment and treatment of dementia. The results of a rural versus urban statistical comparison are discussed later in the “Statistical Results” section. However, the general results of these questions (i.e., the mean and standard deviation) based on all participants can be found in Table 4.7.

Assessment Questions

While general dementia questions provided insightful information into participants' overall guidance of dementia practice, the researcher also asked questions specific to the area of assessment. For the first question, participants categorized the evaluative tasks they would and would not complete given a hypothetical scenario of having an hour to complete an evaluation for a PWD. A breakdown of the responses can be found in Table 4.8.

Table 4.7

Average Reports of Agreement to Resource Questions by Survey Participants (n = 85)

Resource Question	Min (Strongly Disagree)	Max (Strongly Agree)	Mean	Standard Deviation
Have colleagues (i.e., other SLPs) with whom I can consult with to give me input in my practice	1	7	5.11	1.69
Have enough resources to treat my clients with dementia	1	7	4.52	1.56
Have enough opportunities to receive in-person continuing education credits	1	7	4.49	1.73
Have enough resources to assess my clients with dementia	1	7	4.24	1.66
Overall, I have enough resources (e.g., materials and funding for assessment/therapy, access to current literature, access to colleagues/other professionals, time, access to continuing education) available to me to enhance my daily practice	1	7	4.05	1.67

Participants who selected they would complete standardized tests, informal tests, or screeners were asked to disclose which ones they use. The Ross Informal Processing Assessment (RIPA) (*n* = 17), the Cognitive-Linguistic Quick Test (CLQT) (*n* = 14), the Saint Louis University Mental Status (SLUMS) (*n* = 12), the Arizona Battery for Communication Disorders of Dementia (ABCD) (*n* = 11), and the Montreal Cognitive

Assessment (MOCA) (*n* = 10) were the top five standardized tests reported. A full list of standardized assessments can be found in Table 4.9 in Appendix Q.

Table 4.8

Procedures Survey Participants Would Complete in 60 Minute Dementia Evaluation

Evaluation Task	Yes (I Would Do This)	No (I Would Not Do This)
Review medical history	90	0
Review case history	82	3
Family interview	77	5
Interview family with patient	71	9
Standardized tests	67	11
Observation in natural environments	67	12
Complete dynamic testing	56	17
Informal tests	56	7
Interview patient alone	53	22
Differential diagnosis	38	37
Screeners	35	24
Refer for hearing evaluation/provide hearing screen	31	49

The MOCA (n = 12), SLUMS (n = 11), and Mini Mental State Examination (n = 7) were the most frequently reported screening instruments. Two participants listed screening measures outside of the cognitive-linguistic or dysphagia realm: vision and depression. For a complete list of screeners, see Table 4.10 in Appendix Q. Participants also had the option to write-in informal tests they use. As can be seen in Table 4.11 in Appendix Q, many participants listed formal measures under informal tests. However, problem solving (*n* = 5), interviewing (*n* = 3), and orientation (*n* = 3) were the three most frequently reported truly non-formal measures.

To gain more specific information about the evaluative process, the researcher implemented a question asking what concerns interviewees have outside of dementia when evaluating a person with possible dementia. For example, the researcher wanted to learn if participants consider factors such as a PWD’s hearing or vision. For a complete breakdown of all considerations, reference Table 4.12 in Appendix Q. Safety considerations, such as falls, were the most frequent element (*n* = 27), followed by caregiver support and availability (*n* = 23). Medical considerations were also often disclosed, such as hearing (*n* = 21), vision (*n* = 15), pharmacology (*n* = 8), possible stroke or TBI (*n* = 7), and nutrition or weight loss (*n* = 7). Many participants disclosed elements within the area of communication, including language (*n* = 13), communication ability and needs (*n* = 9), and degree of socialization (*n* = 7). Another theme in the responses were information about the overall welfare of the PWD, such as their behaviors (*n* = 10), their personal well-being or quality of life (*n* = 7), and discharge location/place of residence (*n* = 7).

Treatment Questions

In order to gain a complete perspective of participants’ practice, several questions were written specific to the area of dementia treatment. The first question that fell under that category involved gaining insight into what the targets of dementia treatment include. In a multiselect format, participants selected from a list of options which targets they frequently implement for PWD. Table 4.13 shows the detailed numbers for the question, in addition to what participants wrote in under “other.”

While the previous results provided information about general targets, the researcher incorporated a question to better understand the dynamic of dementia treatment (i.e., if PWD are seen individually or in a group). Eighty-two percent of participants selected they do not conduct group therapy for dementia, while 18% do. Participants who indicated “yes” were asked to specify the type of group(s).

Communication or social language-based groups were mentioned by nine participants. Six participants conducted a general cognitive group or cognitive stimulation group. Five participants specified which cognitive targets are emphasized in their group (i.e., orientation, planning, decision making, and memory). Language was an additional target for two participants who engage in word-finding groups. Less frequently written groups included: cognitive reminiscence, discharge planning, activities of daily living, and living with dementia.

Table 4.13

Behaviors/Cognitive Functions Targeted by Survey Participants

Behaviors/Cognitive Function	*n* = (%)
Safety	98 (89.9%)
Social	84 (77.1%)
Executive Functioning	78 (71.6%)
Memory	76 (69.7%)
Attention	76 (69.7%)
Reality/orientation	71 (65.1%)
Other:	12 (11%)
Behavior	3 (2.8%)
Caregiver education	2 (1.8%)
Compensatory strategies	2 (1.8%)
Language/word finding	2 (1.8%)
Speech	1 (0.92%)
Maintain current level	1 (0.92%)
Cognitive level staging	1 (0.92%)
Visual cues	1 (0.92%)

Although results in later sections will describe results specific to the top-five strategies found the literature review, the researcher wanted to learn if participants utilize the “less frequently” indicated strategies from the literature review. To do this, participants selected which strategies they had utilized within the past year for PWD when provided the list of strategies that emerged from the literature review but were not a “top five strategy.” Reality orientation was the most frequently selected strategy (66.2%), followed by communication aids/other AAC (59.6%), multidisciplinary approaches (53.9%), vanishing cues (47.2%), validation therapy (46.1%), computerized cognitive intervention (29.2%), Montessori intervention (25.8%), and simulated presence (7.9%). However, these results should be interpreted with extreme caution, as it was determined after surveys were collected that there was not a “none of the above” option for this question. This combined with the fact that SLPs were required to select at least one option to move on is problematic. Thus, these results will not be considered in the discussion of this paper.

Short Answer Responses

Researchers asked participants several short answer responses to gain more qualitative information and determine if themes emerged from the answers. For one question, researchers asked participants to specify how they measure outcomes for individuals with dementia in a short answer format. Though participant responses varied from general (e.g., data) to specific (e.g., specific goals), some themes emerged in the data. The most frequently reported outcome measures included: cueing/reduction in cues or assistance (*n* = 19), percentages and accuracy (*n* = 18), caregiver feedback or report (*n*

= 15), data or weekly data (*n* = 14), and decreased behaviors (*n* = 11). Refer to Table 4.14 in Appendix Q for an itemized report of outcome measures.

A free-response format was also deemed an appropriate way to understand one of the main purposes of this study: SLP's perceived barriers to dementia practice. Participants typed in their perceived barriers to dementia practice and their answers can be viewed as an itemized list in Table 4.15 in Appendix Q. The top three indicated barriers all referenced the source as the caregiver or family: lack of support or buy-in (*n* = 24), lack of carryover or follow through (*n* = 18), and lack of training or understanding (*n* = 15). The next three most frequently written barriers surrounded the PWD: poor patient insight (*n* = 13), severity (*n* = 12), and behaviors/frustration (*n* = 12). Many barriers were outlined outside of PWD and their caregivers, such as insurance or Medicare limitations (*n* = 8) and time (*n* = 7). Many participants specified facility-related barriers, such as caregiver availability or understaffing (*n* = 7), under-utilization of speech services (*n* = 6), and lack of resources or funding (*n* = 5).

To receive an additional perspective of perceived barriers, the researcher also incorporated a free-response question for participants to report their perceived barriers to implementation of EBP as a whole. See Table 4.16 in Appendix Q for a complete look at all reported barriers. The most frequently written barrier was time limits or productivity requirements by their workplace (*n* = 21). Like the responses to the barriers to dementia question, a lack of family support or carryover (*n* = 15) was also frequently mentioned. Another trend in the responses was the research itself as a source: lack of applicability of research to their patients (*n* = 11), limited evidence (*n* = 7), and lack of access to research (*n* = 6). Funding was another frequent theme in the data, such as a lack of materials/resources (*n* = 11), limited budget (*n* = 5), and insurance limitations (*n* = 4). Patient limitations, such as motivation, inconsistency, and comorbidities (*n* = 7), also received notable mention. Facility-related barriers, such as lack of staff or other professional support (*n* = 7) and the therapeutic environment (*n* = 6) also emerged from the data. It should be noted that many participants' answers mentioned dementia, which indicates the question may have been interpreted to be related to dementia instead of EBP in general.

Since differences in dementia-related terminology were found both in Buhr et al. (2015) and Mount and Weissling (2017), the researcher asked participants two separate free-response questions about memory aids: (a) what participants call the memory aids they use in their documentation and (b) provide an example of a memory aid they frequently use. Question (a) is discussed in the text first. Since there was a wide variety of responses, Table 4.17 in Appendix Q lists the memory aid terminology that received more than one mention and Table 4.18 in Appendix Q specifies the terminology that was only reported by one individual. For Table 4.18, the researcher organized unique memory aid terminology into several categories: picture-based, aids/devices, technology, written supports, books/notebooks, external memory or memory terms, and other.

To gain better visualization of results from the first memory aid question, the second memory aid question asked participants to write in an example of a memory aid they frequently use for PWD. Some participant responses were brief (e.g., "signs"), while others included specific information regarding the aid (e.g., "use a patient's phone or tablet to keep track of appts”). To encapsulate the description and individuality within each category, Table 4.19 in Appendix Q lists all categories and bullet points of participants’ responses. Calendars were also the most frequently mentioned example of a memory aid (*n* = 36), and based on the specific responses of participants, they are used to remind of future appointments, document daily events, or mark days that have passed for PWD. Seventeen participants detailed using various signage or visual supports, which often serve the purpose of safety awareness (e.g., call light sign). Fourteen participants either mentioned or described using memory books as their example of a memory aid. In general, the types of “memory books” participants described included both pictures and written information, such as important demographic and contact information, pictures of staff, facility information, and sign-ins for visitors.

EBP and Dementia Confidence Questions

To gauge participants’ degree of confidence in completing EBP principles and dementia-specific procedures, participants ranked their confidence in completing various procedures on a scale from 0 to 100. The researcher used Salbach and Jaglal’s (2011) EPIC scale to gauge EBP-confidence and questions written specifically for this study for dementia-related confidence. For a complete dissection of results from the EPIC and dementia confidence questions, reference Table 4.20 (Salbach & Jaglal, 2011). Altogether, survey participants rated higher confidence levels in dementia (M = 75.53, SD = 15.97) than for EPIC general EBP questions (M = 86.91, SD = 5.74) (Salbach & Jaglal, 2011). For the EPIC questions, participants rated the lowest confidence (i.e., 40 to 50% confident) with interpreting study results from statistical tests and interpreting study results obtained using statistical procedures (Salbach & Jaglal, 2011). Participants reported the highest confidence (i.e., 85 to 100% confident) with identifying a gap in knowledge related to a client situation, asking clients about their needs and treatment preferences, deciding on an appropriate course of action based on EBP, and continually assessing the effect of the course of action.

For confidence in the realm of dementia, participants indicated the strongest confidence (i.e., 85% confident or above) in assessing a PWD, treating a client with mild dementia, treating a client with moderate dementia, and providing family counseling for dementia. Participants had less confidence (i.e., 75 to 85% confidence) in treating severe dementia and treating a PWD with severe behaviors.

Table 4.20

Survey Participants' Degree of Confidence (n = 95)

Question	Min	Max	M	SD
Identify a gap in your knowledge related to a client situation?	30	100	85.03	16.12
Formulate a question to guide a literature search based on a gap in your knowledge?	2	100	80.53	22.47
Effectively conduct an online literature search to address the question?	3	100	78.17	23.56
Critically appraise the strengths and weaknesses of study methods (e.g., appropriateness of study design, recruitment, data collection and analysis)?	3	100	68.57	23.99
Critically appraise the measurement properties (e.g. reliability and validity, sensitivity and specificity) of standardized tests?	3	100	69.01	24.53
Interpret study results obtained using statistical tests such as t-tests or chi-square tests?	0	100	48.04	31.01
Interpret study results obtained using statistical procedures such as linear or logistic regression?	0	100	47.12	30.90
Determine if evidence from the research literature applies to your client's situation?	15	100	80.90	18.77

Ask your client about his/her needs, values and treatment preferences?	35	100	93.46	11.61
Decide on an appropriate course of action based on integrating the research evidence, clinical judgement and patient or client preferences?	20	100	88.23	14.64
Continually evaluate the effect of your course of action on your client's outcomes?	59	100	91.75	10.59
EPIC Average			**75.53**	
Assess an individual with dementia?	40	100	90.14	11.65
Clinically treat an individual with mild dementia?	50	100	92.50	10.48
Clinically treat an individual with moderate dementia?	61	100	90.63	10.89
Clinically treat an individual with severe dementia?	5	100	82.16	21.02
Treat an individual with dementia presenting with severe behaviors (i.e., aggressive and combative)	6	100	77.71	22.03
Provide counseling to family members of an individual with dementia	25	100	88.32	16.67
Dementia-Related Confidence Average			**86.91**	

Familiarity with Treatment Approaches

A notable question of the survey that coincided with an important question of this study asked participants whether they were familiar with the top-five treatment strategies from the literature review. Results from this question can be found in Table 4.21. Additionally, Table 4.22 breaks down participant's familiarity once they were provided with a definition of the approach (i.e., only if they initially indicated being unfamiliar). All participants were familiar with external memory aids and caregiver training. Errorless learning was the strategy with the highest amount of unfamiliarity among participants. While 90.2% of participants were familiar with errorless learning strategies, 9.8% of participants were unfamiliar (M = 1.10, SD = .30). When the nine unfamiliar participants were provided a definition of the treatment, seven participants selected they do engage in errorless learning, but never had a name for it. The other two participants were still unfamiliar with the strategy.

Ninety-two percent of participants were familiar and 7.6% of participants were unfamiliar with reminiscence therapy (M = 1.08, SD = .27). Of the nine unfamiliar participants, five disclosed they utilize this strategy without having a name for it and one participant remained unfamiliar with the approach. One participant specified they instead calls reminiscence therapy "memory therapy." Finally, 94.6% of participants were familiar with cognitive stimulation (M = 1.05, SD = .23). Five percent of participants were unfamiliar. Three of the unfamiliar participants disclosed using this strategy following a definition, while one participant indicated that they were still unfamiliar. One participant utilized a different term for the approach but did not report the specific name.

Table 4.21

Survey Participants' Familiarity with Top-Five Dementia Strategies

Strategy	1 Yes Familiar (% Participants)	2 Not Familiar (% Participants)	M	SD
Caregiver Training	91 (100%)	0	1.00	0
External Memory Aids	90 (100%)	0	1.00	0
Cognitive Stimulation	87 (94.6%)	5 (5.4%)	1.05	0.23
Reminiscence Therapy	85 (92.4%)	7 (7.6%)	1.08	0.27
Errorless Learning	83 (90.2%)	9 (9.8%)	1.10	0.30

Table 4.22

Survey Participants' Familiarity after Provided Definition/Other Terminology

Strategy	No, still unfamiliar (% participants)	I do this but did not have a name for it	I do this and call it by a different name • Other terminology
Errorless Learning	2 (2.2%)	7 (7.6%)	0
Reminiscence	1 (1%)	5 (5.4%)	1 (1%) • Memory Therapy
Cognitive Stimulation	1 (1%)	3 (3.3%)	1 (1%)

Frequency of Use of Treatment Approaches

Not only was it important to understand participants' familiarity with the top approaches, it was equally as important to know the frequency (i.e., ranging from "never" to "always") SLPs use them. Table 4.23 shows the breakdown of frequency for all five strategies. Overall, caregiver training was the most frequently used treatment method, followed by external memory aids, cognitive stimulation, reminiscence therapy, and errorless learning. Caregiver training, external memory aids, and cognitive stimulation were the strategies with the highest percentage of participants who "always" use them (76%, 64.4%, and 58.7%, respectfully). Frequency of use for errorless learning and reminiscence therapy were more equally distributed across frequency options (i.e., always, often, sometimes). Errorless learning had the highest frequency of participants who reported they "never" use it (5.3%). For all the other strategies, "never" was only selected by 0 to 2% of participants. Errorless learning and cognitive stimulation both had one participant label the strategies as “not applicable” to their setting. For the other participants who chose never, they indicated that it could be applicable to their setting.

As a follow up question to frequency of use of caregiver training, participants selected the approximate amount of time it takes to provide caregiver education in total for a PWD. Nearly half of the participants agreed that caregiver education requires 60 or more minutes to complete. Twenty percent of participants reported 30 minutes, 13.3% reported 15 minutes, 13.3% reported 45 minutes, and 4.4% reported five minutes.

Table 4.23

Survey Participants’ Frequency of Use of Top-Five Treatment Strategies

Strategy	1 Always (% Participants)	2 Often	3 Sometimes	4 Never, Could Be Applicable	5 Never, Not Applicable	M	SD
Caregiver Training	70 (76%)	16 (17.4%)	5 (5.4%)	0	0	1.29	0.56
External Memory Aids	58 (64.4%)	24 (26.7%)	7 (7.8%)	1 (1%)	0	1.46	0.69
Cognitive Stimulation	54 (58.7%)	16 (17.4%)	15 (16.3%)	1 (1%)	1 (1%)	1.61	0.89
Reminiscence	29 (31.5%)	30 (32.6%)	25 (27.1%)	1 (1%)	0	1.98	0.83
Errorless Learning	28 (30.4%)	22 (23.9%)	28 (30.4%)	4 (4.3%)	1 (1%)	2.13	0.98

CHAPTER 5: STATISTICAL RESULTS

Additional statistical analysis was completed on the survey data. Specifically, several non-parametric tests were performed on multiple sections of the survey. The first source of data was taken from participant responses to the EPIC (i.e., general EBP) and dementia-related confidence questions (Salbach & Jaglal, 2011). Other sets of data analyzed were the participants' familiarity with the top-five treatment strategies determined from the literature review and how frequently they used those strategies.

Since a total of 22 participants dropped out of the study by the first "familiarity" question of the survey (i.e., question 38 out of 54), the researcher completed statistical tests to determine if any significant differences existed between participants who answered question 38 ($n = 93$) and participants who had already dropped out ($n = 22$). The researcher calculated unpaired t-tests to determine differences between continuous variable groups (e.g., years as an SLP) and chi-square tests to determine differences between categorical groups (e.g., rural versus urban). The researcher then calculated a "standardized mean difference" or "*d*" for each test. What Works Clearinghouse (n. d.) was used to gauge whether or not the groups were equivalent based on the effect size (*d*), using their following criteria:

- Effect size ≤ 0.05 = Satisfies equivalence
- $0.05 <$ effect size ≤ 0.25 = Statistical adjustment required to satisfy equivalence
- Effect size > 0.25 = Does not satisfy equivalence

Though these parameters described by WWC were suggested to determine *baseline* equivalence between groups, it was deemed as an appropriate resource to judge the equivalence between participants who completed the question and the attrition group. Table 5.1 summarizes the results of these calculations organized by demographic variable. Overall, no significant differences were found between demographic groups (alpha level of 0.05). However, none of demographic groups could be deemed equivalent based on the WWC parameters. Thus, the results of the survey questions used to complete group statistical comparisons may differ from the results that would have occurred if none of the participants had withdrawn from the study.

Table 5.1

Demographic Differences: Participants Who Answered Question #38 (n = 92) vs. Drop Out (n = 22)

Demographic Variable	T-test	*p*	Effect Size (Standardized Mean Difference)	Groups Equivalent? (WWC, n.d.)
Years as an SLP	1.11	.27	.27	Does not satisfy
Years with PWD	0.76	.45	.18	Needs statistical adjustment
CEUs	1.01	.31	.25	Needs statistical adjustment
Preparedness	1.1	.27	.28	Does not satisfy
Demographic Variable	Chi Square	*p*	Effect Size	
Gender	0.91	.34	.18	Needs statistical adjustment
Education (Masters vs. Ph.D.)	1.0	.32	.19	Needs statistical adjustment
Urban vs. Rural	1.54	.22	.25	Needs statistical adjustment
Percentage of Caseload PWD (0-40%) vs. (40-100%)	0.28	.59	.1	Needs statistical adjustment
Geographic Region	1.05	.79	.19	Needs statistical adjustment

The remaining content of this chapter reports the statistical findings of demographic group comparisons based on survey participants' answers from confidence questions, familiarity of strategy questions, and frequency of use of strategy questions. Since all participants were familiar with caregiver training and external memory aid strategies, results for those approaches are only shown in Table 5.4, as inclusion in all tables would not expand the results. Finally, the frequency of use of the top-five strategies was also analyzed. The researcher selected a per-test a priori alpha level of 0.05 to determine the level of significance across statistical tests. Since a total of 307 statistical tests were completed on the data, the researcher also judged any significant findings at an adjusted level of .00017 to account for the limitations of multiple testing. However, significant findings at the alpha level of 0.05 are discussed within the text.

Group Comparisons with Chi-Square and Mann-Whitney U Testing

The researcher completed chi-square testing for comparisons across several demographic groups for the EPIC questions, dementia-confidence questions, familiarity with approaches, and frequency of use (Salbach & Jaglal, 2011). Chi-square testing was calculated for each individual question between groups. For confidence-related questions, the researcher categorized participants' confidence ratings that were 75 or lower (out of 100) as "low confidence". Participants who reported confidence above 75 were considered to have "high confidence." Table 5.2 shows a visualization of these parameters within an example chi-square diagram.

Table 5.2

Chi-Square Set-up from an Example Confidence Question

	Confidence Level	
Demographic Group	**Low (<76)**	**High (≥76)**
Rural	2	12
Urban	15	58

Relative Risk (RR) ratios were also completed to gauge the effect size for each individual chi-square test, regardless whether the *p* value was statistically significant. According to Zhang and Yu (1998), relative risk is a ratio of probability that a certain outcome will happen in one group compared to another group. For the purposes of this study, the "outcome" for confidence questions was having less than 75% confidence. The outcome for familiarity questions was not being familiar with an approach. Lastly, the outcome for frequency of use of strategies was the likelihood of using an approach at a certain frequency (e.g., are participants from rural or urban areas more likely to use cognitive stimulation "always"?). To highlight this with a specific example outlining each outcome, the researcher was trying to determine if participants' who took a dementia course were more likely to have the outcome of: (a) less than 75% confidence in treating dementia, (b) less familiarity with cognitive stimulation, and (c) use of cognitive stimulation "sometimes".

The researcher computed the RR formula based on which group had the higher proportion. For example, if the proportion of rural participants unfamiliar with a strategy was .10 and the proportion of urban participants unfamiliar was .05, the researcher divided .05 from .10. The researcher would have completed the same calculation if the two demographic categories were switched (i.e., Urban = .10, Rural = .05). Table 5.3 shows another example with the formula.

Table 5.3

Example of Relative Risk Ratio Calculation

	Group A (Higher Proportion)	**Group B (Lower Proportion)**
Number of Events (less confident participants)	15 (AE)	2 (BE)
Number of Non-Events (more confident participants)	58 (AN)	12 (BN)
RR = $\frac{AE/(AE+AN)}{BE/(BE+BN)}$	RR = $\frac{15/(15+58)}{2/(2+12)}$ = 1.44 Interpretation: Group A was 1.44x more likely than Group B to be less confident	

RR was classified based on parameters recommended by Ferguson (2009) ranging from RMPE to strong:

- “RMPE (recommended minimum effect size representing a “practically” significant effect for social science data) = 2.0
- Moderate effect = 3.0
- Strong effect = 4.0 (p. 533)”

Due to frequent small sample sizes within groups (e.g., *n* = 4), there were many times when zeros made computing the RR impossible (e.g., $\frac{5/(12+10)}{0(0+9)}$). In those circumstances, the researcher utilized Deeks and Higgins’ (2010) suggested procedure of adding 0.5 to all variables of the equation (i.e., AE, AN, BE, BN).

Since the researcher dichotomized the confidence ratings of survey participants to complete chi-square testing, the researchers also performed Mann-Whitney U testing for each confidence question. This additional perspective allowed for sensitivity analysis to determine if similar trends were found across both statistical tests. A Common Language (CL) Effect Size statistic was also calculated for each Mann-Whitney U test completed. McGraw and Wong (1992) proposed the CL Effect Size statistic and defined it as “the probability that a score sampled at random from one distribution will be greater than a score sampled from some other distribution” (p. 361). The researcher used Liu’s (2015) conversion table of CL Effect Size to Cohen’s δ, which ranged from Cohen’s δ (0.1) = CL (0.53) to Cohen’s δ (1.0) = CL (0.76) (p. 240). From there, the researcher then utilized Cohen (1988) to assist in judging the extent of the effect, with 0.2, 0.5, and 0.8 being small, medium, and large effect size, respectfully.

Due to the presence of groups with small sample sizes (i.e., which RR values are sensitive towards) and the occasional need to manipulate the variables to calculate RR ratio values, results should be interpreted with appropriate caution. A complete item by item breakdown can be found in the respective tables throughout this chapter, thus, only significant (i.e., $p < .05$) and notable (moderate RR/medium effect size or higher) results are discussed within the text to contextualize the magnitude.

Years of clinical experience. Table 5.4 depicts the results of level of confidence for participants with less than 10 years of clinical experience ($n = 27$) versus 10 or more years of clinical experience ($n = 69$). There was a statistically significant difference between the groups for both chi-square and Mann-Whitney testing on two out of 11 EPIC questions, including: identifying a gap in knowledge related to a client situation and formulating a question to guide a literature search (Salbach & Jaglal, 2011). One out of six of the dementia-related confidence questions was statistically significant through the two tests (i.e., counseling family members of a PWD), which also received a medium/moderate effect size. In the context of this study, this finding was grounded upon a small difference in participants (i.e., 5 participants versus 8 participants not confident from both groups). Despite this, the proportion of participants was 7% not confident versus 30% not confident and the group means differed by 10 confidence intervals, which is notable. For all statistically significant results, the less than 10 years group was less confident.

There was a total of nine confidence questions where one statistical test indicated a significant difference, but the other test did not. In seven of these instances, Mann-Whitney testing yielded the significant results: (a) conducting an online literature search, (b) asking a client about his/her needs, values, and treatment preferences, (c) valuating the effect of a course of action on a client's outcomes, (d) assessing a PWD, (e) treating mild dementia, (f) treating moderate dementia, and (g) treating severe dementia. Questions (b) and (e) received a moderate RR variable and a small or medium CL effect size, which further supports the possibility of a true difference between participants with more than 10 years and less than 10 years as an SLP. However, this should be considered within the context that it was still a small proportion of participants (5% and 15%) and the means of the two groups were still within 8 confidence values of each other. Overall, the occurrences of Mann-Whitney testing yielding significant results when chi-square testing may suggest that dividing confidence data at 75% confidence for chi-squares underestimated the extent of effect between the two groups. More specifically, in chi-square calculations, if a participant rated their confidence level for one item at 0% confident, this number was put in the same category as a participant who was 73% confident.

No statistically significant results were found between these groups for familiarity with any top five treatment strategy (see Table 5.5). However, a moderate RR was found for errorless learning, with participants with more than 10 years three times more likely to be less familiar. This finding is not overwhelmingly remarkable since the percentage of unfamiliar participants for each group involved a small number (i.e., 4% and 12%).

There was a statistically significant difference between groups for frequency of use of errorless learning (Table 5.6). Participants with less than 10 years' experience were three times more likely to "often use" errorless learning than participants with more experience (i.e., who more frequently indicated they "always" use it). This result involved a higher proportion of participants, which strengthens its credibility. Participants with more than 10 years' experience were six times more likely to use external memory aids sometimes (i.e., compared to participants with fewer years who utilize them more frequently). This result is especially meaningful in that none of the SLPs in the less than 10 years group marked "sometimes."

Years of experience practicing dementia. Table 5.7 displays results from chi-square and Mann Whitney comparison testing between participants with less than 10 years of clinical experience practicing with PWD (*n* = 32) versus participants with more than 10 years (*n* = 63). A total of six out of 11 EPIC questions and two out of six dementia-focused confidence questions were significantly different per chi-square and Mann-Whitney tests, with participants with less experience again rating lower confidence levels (Salbach & Jaglal, 2011). These questions included: (a) identifying a gap in knowledge, (b) formulating a question to guide a literature search, (c) effectively conducting an online literature search, (d) determining if evidence applies to a client, (e) asking a client about their needs, (f) deciding an appropriate course of action based on EBP, (g) treating a PWD with severe behaviors, and (h) counseling family members. These previous items listed (a-g) items had a variety of effect sizes/RR variables, ranging from small/RMPE to strong. Questions (e), (f), and (h) involved RR variables based on less than 10 participants for each group, causing the researcher to be careful on overestimating these effects.

Table 5.4

Less than 10 Years (n = 27) vs. More Than 10 Years (n = 69) as an SLP: Confidence

Question	Chi Square	*p*	Relative Risk Ratio (Group more likely to be less confident, extent of effect)	Mann-Whitney U	*p*	Common Language Effect Size (Group with Lower Mean)
1. Identify gap in knowledge to a client situation?	5.05	.03*	2.31 (↓ 10, RMPE)	635	.02*	0.62 (↓ 10) [a]
2. Formulate question to guide a literature search based on gap?	5.73	.02*	2.1 (↓ 10, RMPE)	646	.02*	0.66 (↓ 10) [b]
3. Conduct an online literature search to address the question?	3.71	.05	1.71 (↓ 10)	662	.03*	0.63 (↓ 10) [a]
4. Appraise strengths and weaknesses of study methods?	1.66	.20	1.29 (↓ 10)	819	.36	0.58 (↓ 10) [a]
5. Appraise test measurement prop. (e.g. reliability)?	3.93	.05	1.56 (↓ 10)	738.5	.12	0.60 (↓ 10) [a]
6. Interpret results obtained by statistical tests (t-tests)?	1.10	.29	1.14 (↓ 10)	807.5	.31	0.57 (↓ 10) [a]
7. Interpret results using statistical procedures (e.g. linear regression)?	2.96	.09	1.24 (↓ 10)	869.5	.61	0.54 (↓ 10)
8. Determine if evidence from research applies to client?	11.27	.0008*	2.33 (↓ 10, RMPE)	722	.15	0.58 (↓ 10) [a]
9. Ask client about needs, values, treatment preferences?	2.90	.09	3 (↓ 10, moderate)	604	.008*	0.63 (↓ 10) [a]
10. Decide action based on research, clinical judgement, patient preferences?	0.65	.42	1.58 (↓ 10)	657.5	.05	0.61 (↓ 10) [a]
11. Valuate effect of action on client's outcomes?	1.87	.17	2.5 (↓ 10, RMPE)	617	.02*	0.60 (↓ 10) [a]
12. Assess PWD?	2.39	.12	2.5 (↓ 10, RMPE)	639	.03*	0.67 (↓ 10) [b]

13. Treat mild dementia?	2.90	.09	3 (↓ 10, moderate)	560.5	.003*	0.70 (↓ 10) [b]
14. Treat moderate dementia?	2.7	.10	2.17 (↓ 10, RMPE)	585.5	.01*	0.66 (↓ 10) [b]
15. Treat severe dementia?	2	.16	1.61 (↓ 10)	586	.01*	0.60 (↓ 10) [a]
16. Treat severe behaviors?	5.13	.02*	2.17 (↓ 10, RMPE)	683.5	.08	0.62 (↓ 10) [a]
17. Counsel family members?	7.75	.01*	3.75 (↓ 10, moderate)	606	.01*	0.66 (↓ 10) [b]

*Significant at *p* <.05

[a] Small effect size as converted by Liu (2015)

[b] Medium effect size as converted by Liu (2015)

Table 5.5

Less than 10 Years (n = 27) vs. More Than 10 Years as an SLP (n = 66): Familiarity

Strategy	Chi Square	*p*	Relative Risk Ratio (Group more likely to be less familiar, extent of effect)
1. Errorless Learning	1.55	.21	3 (↑10, moderate)
2. Reminiscence	0.001	.98	1.14 (↑10)
3. Cognitive Stimulation	0.31	.58	1.75 (↓ 10)
4. Caregiver Training	Equal	Equal	N/A
5. External Memory Aids	Equal	Equal	N/A

*Significant at *p* <.05

Table 5.6

Less than 10 Years (n = 27) vs. More Than 10 Years as an SLP (n = 66): Frequency of Use

Strategy (Items Compared)	Chi Square	*p*	Relative Risk Ratio (Group more likely to use, extent of effect)
1. Errorless Learning (Always, Often, Sometimes, Never)	11.74	.01*	Always: 2.59 (↑10, RMPE) Often: 3 (↓10, moderate) Sometimes: 1.31 (↑10) Never: 1.6 (↓10)
2. Reminiscence (A/O/S)	3.76	.15	Always: 1.58 (↑10) Often: 1.73 (↓10) Sometimes: 1.33 (↑10)
3. Cognitive Stimulation (A/O/S)	0.71	.70	Always: 1.21 (↑10) Often: 1.26 (↓10)

			Sometimes: 1.17 (↓10)
4. Caregiver Training (A/O/S)	0.42	.81	Always: 1.01 (↓10) Often: 1.2 (↑10) Sometimes: 1.4 (↓10)
5. External Memory Aids (A/O/S)	3.65	.16	Always: 1.07 (↑10) Often: 1.27 (↓10) Sometimes: 6.67 (↑10, strong)

*Significant at *p* <.05

Again, there were a total of six questions that were significant for one statistical test, but not the other. In three of these occasions, Mann-Whitney testing showed significant results (i.e., (a) valuating the effect of an action on client's outcomes, (b) treating mild dementia, and (c) treating severe dementia) and demonstrated either small or medium CL effect sizes and RR variables. When considering these results within the context of this study, question (a) and (b) both involved small proportions of participants (5% versus 13% and 16%), which can easily skew perceptions. Question (c), on the other hand, involved a higher proportion and participants (22% versus 41%) and shows stronger evidence of a true difference between groups. Like previously discussed, the three instances where chi-square testing revealed significant results (i.e., but not Mann-Whitney) suggest that categorizing the groups overestimated the differences between the groups and should hold less weight than the significant Mann-Whitney tests.

There were no significant differences between groups for familiarity of treatment (Table 5.8), though errorless learning received a strong RR value. Participants with more than 10 years were four times more likely to be unfamiliar with the approach, though this is another finding that is supported by only a small proportion of participants (i.e., 3%

versus 13%). There were also no statistically significant differences indicated by *p* values for frequency of use (Table 5.9). The less than 10 years group was three times more likely to only sometimes engage in caregiver training, compared to the more than 10 years group who had higher frequency. Since this finding was based upon a small number of participants (i.e., 2 participants for more than 10 years and 3 participants for less than 10 years), it should be interpreted with appropriate caution. Finally, participants with more than 10 years' experience were over eight times more likely to "only sometimes" use external memory aids. Though this result was found from a small number of participants (i.e., 0 and 8), the fact that the less than 10 years' experience group had no participants "sometimes" use it is worth considering as evidence towards a difference between the two groups.

Dementia focused course. Reference Table 5.10 for complete results of testing between participants who completed a dementia-focused graduate course (*n* = 4) and those who did not (*n* = 44). Chi-square and Mann-Whitney U testing did not reveal any significant *p* values for any confidence-related question. Participants who took a dementia course were three times more likely to be less confident in: (a) asking their clients about their needs, values, and treatment preferences and (b) continually valuating the effect of a selected course of action on a client's outcomes. Finally, those who took a dementia course were also four times more likely to report lower confidence counseling family members of PWD. These findings should be interpreted with particular caution since they are based on a very low number of participants for one group (*n* = 4) and that they were not further supported by significant CL effect sizes, with the group means only differing by 2 to 3 confidence intervals.

Table 5.7

Less than 10 Years (n = 32) vs. More than 10 Years (n = 63) Practicing Dementia: Confidence

Question	Chi Square	*p*	Relative Risk Ratio (Group more likely to be less than 75% confident)	Mann-Whitney U	*p*	Common Language Effect Size (Group with Lower Mean)
1. Identify gap in knowledge related to client?	4.22	.04*	2.13 (↓10, RMPE)	673	.01*	0.66 (↓10) [b]
2. Formulate question to guide a literature search based on a gap?	11.62	.001*	2.79 (↓10, RMPE)	670	.01*	0.66 (↓10) [b]
3. Conduct online literature search to address question?	5.75	.02*	2 (↓10, RMPE)	719.5	.02*	0.63 (↓10) [a]
4. Appraise strengths and weaknesses of methods?	2.79	.10	1.35 (↓10)	862	.25	0.58 (↓10) [a]
5. Appraise test measurement properties (e.g. reliability)?	5.7	.02*	1.60 (↓10)	775	.07	0.61 (↓10) [a]
6. Interpret results obtained by statistical tests (t-tests)?	1.08	.30	1.14 (↓10)	900	.40	0.55 (↓10)
7. Interpret results using statistical procedures (e.g. linear regression)?	1.54	.22	1.15 (↓10)	969.5	.76	0.52 (↓10)
8. Determine if research evidence applies to client?	11.17	.001*	2.67 (↓10, RMPE)	689	.03*	0.66 (↓10) [b]
9. Ask client about needs, values & treatment preferences?	4.49	.03*	5 (↓10, strong)	733.5	.04*	0.61 (↓10) [a]
10. Decide action based on research, clinical judgement & patient preferences?	4.59	.03*	3.67 (↓10, moderate)	670	.02*	0.66 (↓10) [b]
11. Valuate effect of action on client's outcomes?	2.97	.10	3 (↓10, moderate)	643	.01*	0.67 (↓10) [b]

12. Assess PWD?	6.13	.01*	4.4 (↓10, strong)	730.5	.06	0.64 (↓10) [b]
13. Treat mild dementia?	1.67	.20	2.5 (↓10, RMPE)	694.5	.02*	0.66 (↓10) [b]
14. Treat moderate dementia?	5.02	.03*	2.95 (↓10, RMPE)	731	.06	0.63 (↓10) [a]
15. Treat severe dementia?	3.7	.05	2 (↓10, RMPE)	689	.03*	0.59 (↓10) [a]
16. Treat severe behaviors?	7.28	.01*	2.21 (↓10, RMPE)	685.5	.02*	0.61 (↓10) [a]
17. Counsel family members?	7.92	.01*	4.67 (↓10, strong)	655.5	.01*	0.67 (↓10) [b]

*Significant at *p* <.05

[a] Small effect size as converted by Liu (2015)

[b] Medium effect size as converted by Liu (2015)

Table 5.8

Less than 10 Years (n = 32) vs. More than 10 Years (n = 60) Practicing Dementia: Familiarity

Strategy	Chi Square	*p*	Relative Risk Ratio (Group more likely to be less familiar, extent of effect)
1. Errorless Learning	4.06	.26	4.33 (↑10 years, strong)
2. Reminiscence	0.22	.64	1.29 (↓10 years)
3. Cognitive stimulation	0.06	.80	1.2 (↓ 10 years)

Table 5.9

Less than 10 Years (n = 32) vs. More than 10 Years (n = 60) Practicing Dementia: Frequency of Use

Strategy (Items Compared)	Chi Square	*p*	Relative risk (Group more likely to use, extent of effect)
1. Errorless Learning (Always, Often, Sometimes, Never)	4.27	.23	Always: 1.46 (↑10 years) Often: 2.05 (↓10 years, RMPE) Sometimes: 1.28 (↑10 years) Never: EQUAL
2. Reminiscence (A/O/S/N)	2.45	.48	Always: 1.03 (↑10 years) Often: 1.43 (↓10 years) Sometimes: 1.7 (↑10 years) Never: 3 (↓10 years, moderate)
3. Cognitive Stimulation (A/O/S/N)	1.34	.72	Always: 1.8 (↑10 years) Often: 2.26 (↓10 years, RMPE) Sometimes: 1.25 (↓10 years) Never: 2.6 (↑10 years, RMPE)
4. Caregiver Training (A/O/S)	1.48	.48	Always: 1.04 (↑10 years) Often: 1.19 (↑10 years)

			Sometimes: 3 (↓10 years, moderate)
5. External Memory Aids (A/O/S)	5.02	.08	Always: 1.02 (↑10 years) Often: 1.59 (↓10 years) Sometimes: 8.13 (↑10 years, strong)

As seen in Table 5.11, participants who took a dementia course were also significantly less familiar with errorless learning. Based on the RR, participants who took a dementia course were nine times more likely to be unfamiliar with the approach. Despite the high RR, the low number of participants (i.e., 2 out of 4, in this case) prevents strong conclusions from the data. No significant results emerged through *p* values in frequency of use of strategies (Table 5.12). Participants who took a dementia course (and who were familiar with the strategies) were three times more likely to “often” use reminiscence and external memory aids, compared to the other group who more frequently use them “always.” Participants from the dementia course group who were familiar with errorless learning were five times more likely to often use errorless learning than the group who did not take a dementia course. However, the same issue of a low number of participants also extend to these results.

Rural versus urban. Table 5.13 contains results from chi-square and Mann-Whitney testing between the following groups: participants who strictly work in rural areas (*n* = 14) and participants who strictly work in urban areas (*n* = 73). According to chi-square results, participants working in urban areas had a significantly higher amount of low confidence scores in interpreting study results using statistical procedures and determining if evidence from the research literatures applies to a client. More specifically, participants from urban areas were over five times more likely to report lower confidence in determining if evidence from the research applies to a client.

Table 5.10

Yes Dementia Course (n = 4) vs. No Course (n = 44): Confidence

Question	Chi Square	*p*	Relative Risk Ratio (Group more likely to be less than 75% confident)	Mann-Whitney U	*p*	Common Language Effect Size (Group with Lower Mean)
1. Identify a gap in knowledge related to a client situation?	0.05	.83	1.25 (Yes)	69.5	.482	0.56 (Yes) [a]
2. Formulate question to guide literature search based on gap?	0.05	.83	1.25 (Yes)	63.5	.35	0.56 (Yes) [a]
3. Conduct an online literature search to address the question?	0	1	Equal	84	.88	0.51 (No)
4. Appraise strengths and weaknesses of study methods?	0.01	.93	1.84 (Yes)	72	.55	0.63 (Yes) [a]
5. Appraise test measurement properties (e.g. reliability)?	0.20	.66	1.28 (Yes)	68.5	.47	0.53 (Yes)
6. Interpret results obtained using statistical tests (t-tests)?	0	1	Both groups as likely	70.5	.51	0.59 (Yes) [a]
7. Interpret study results using statistical procedures (e.g. linear regression)?	0.01	.92	1.03 (No)	77	.68	0.56 (Yes) [a]
8. Determine if evidence from research applies to client?	0.80	.37	1.76 (No)	54.5	.70	0.61 (No) [a]
9. Ask client about needs, values & treatment preferences?	0.10	.79	3.68 (Yes, moderate)	52	.56	0.58 (No) [a]
10. Decide on action based on research, clinical judgement & patient preferences?	0.40	.53	1.02 (No)	48.5	.50	0.53 (Yes)
11. Valuate effect of action on client's outcomes?	0.10	.79	3.68 (Yes, moderate)	42.5	.32	0.55 (Yes)
12. Assess PWD?	0.23	.63	1.56 (Yes)	58	.82	0.50 (Yes)

13. Treat mild dementia?	0.15	.70	2.08 (Yes,	58.5	.83	0.64 (No) [b]
14. Treat moderate dementia?	0.36	.55	1.74 (Yes)	59.5	.87	0.52 (Yes)
15. Treat severe dementia?	0.03	.86	1.14 (Yes)	56	.75	0.52 (No)
16. Treat severe behaviors?	0.14	.71	1.38 (Yes)	55.5	.73	0.5 (Yes)
17. Counsel family members?	2.37	.12	4.71 (Yes, strong)	62	.96	0.55 (Yes)

[a] Small effect size as converted by Liu (2015)
[b] Medium effect size as converted by Liu (2015)

Table 5.11

Yes Dementia Course (n = 3) vs. No Course (n = 42): Familiarity

Strategy	Chi Square	*p*	Relative Risk Ratio (Group most likely to be less familiar, extent of effect)
1. Errorless Learning	10.04	.002*	9.43 (Yes, strong)
2. Reminiscence	0.31	.58	1.25 (Yes)
3. Cognitive Stimulation	0.07	.79	3.57 (Yes, moderate)

*Significant at $p < .05$

Table 5.12

Yes Dementia Course (n = 3) vs. No Course (n = 42): Frequency

Strategy (Items Compared)	Chi Square	*p*	Relative Risk Ratio (Group most likely to use, extent of effect)
1. Errorless Learning (A/O/S)	3.98	.14	Always: 1.48 (No) Often: 5.56 (Yes, strong) Sometimes: 1.8 (No)
2. Reminiscence (A/O/S)	5.41	.07	Always: 3.44 (No, moderate) Often: 3.13 (Yes, moderate) Sometimes: 2 (No, RMPE)
3. Cognitive Stimulation (A/O/S)	0.61	.74	Always: 1.03 (Yes) Often: 1.65 (Yes) Sometimes: 1.07 (No)
4. Caregiver Training (A/O)	0.51	.48	Always: 1.18 (Yes) Often: 1.2 (No)
5. External Memory Aids (A/O/S)	3.97	.14	Always: 2.24 (No, RMPE) Often: 3.67 (Yes, moderate) Sometimes: 1.39 (Yes)

Additionally, participants from urban areas were five times more likely to be less confident on deciding an appropriate course of action based on EBP. However, significant results were not found through Mann-Whitney testing for these questions, which makes these findings less significant. The urban group was also three times more likely to be less confident in evaluating the effect of a course of action on a client's outcomes. For dementia-related confidence questions, participants from urban areas were four times more likely to have lower confidence in dementia assessment and treating severe dementia than those in rural areas. Though the urban group had a relatively decent number of participants, the rural group only contained 14 participants, which means strong conclusions about the differences between the groups should not be made based on these results.

There were no significant results indicated by *p* values for familiarity with (Table 5.14) or frequency of use (Table 5.15) of treatment strategies. Urban area participants were seven times more likely to use caregiver training "often" than the rural group who all reported "always" using it. Despite the lower number of participants in the rural group, the fact that no one in the rural group marked any other frequency other than "always" may be a meaningful finding.

Number of CEUs in dementia. Participants who had received more than 10 CEUs (*n* = 58) within the past five years that covered dementia topics were compared to those who received fewer than 10 CEUs (*n* = 37). Confidence results are shown in Table 5.16. The two groups significantly differed in two confidence questions based on chi-

Table 5.13

Rural (n = 14) vs. Urban (n = 73): Confidence

Question	Chi Square	*p*	Relative Risk Ratio (Group most likely to be less confident, extent of effect)	Mann-Whitney U	*p*	Common Language Effect Size
1. Identify gap in knowledge related to a client situation?	0.29	.59	1.50 (Urban)	468.5	.62	0.55 (Urban)
2. Formulate question to guide a literature search based on a gap?	.047	.83	1.10 (Urban)	410	.24	0.59 (Urban) [a]
3. Conduct online literature search to address question?	1.06	.30	1.71 (Urban)	354.5	.07	0.64 (Urban) [b]
4. Appraise strengths & weaknesses of methods?	0.67	.41	1.28 (Urban)	473	.66	0.52 (Urban)
5. Appraise test measurement properties (e.g. reliability)?	0.20	.66	1.14 (Urban)	377	.12	0.66 (Urban) [b]
6. Interpret results obtained by statistical tests (t-tests)?	3.22	.07	1.48 (Urban)	345	.06	0.66 (Urban) [b]
7. Interpret results using statistical procedures (e.g. linear regression)?	4.76	.03*	1.56 (Urban)	376	.12	0.63 (Urban) [a]
8. Determine if research evidence applies to client?	5.57	.02*	5.71 (Urban, strong)	467	.78	0.59 (Urban) [a]
9. Ask client about needs, values and treatment preferences?	0.03	.86	1.29 (Urban)	461.5	.70	0.52 (Rural)
10. Decide action based on research, clinical judgement, patient preferences?	2.8	.09	5.45 (Urban, strong)	413.5	.35	0.63 (Urban) [a]
11. Valuate effect of action on client's outcomes?	1.53	.22	3.33 (Urban, moderate)	462	.73	0.58 (Urban) [a]

12. Assess PWD?	2.02	.16	3.94 (Urban, moderate)	379.5	.12	0.62 (Urban) [a]
13. Treat mild dementia?	1.29	.26	2.73 (Urban, RMPE)	469	.79	0.57 (Urban) [a]
14. Treat moderate dementia?	1.10	.29	2.71 (Urban, RMPE)	414	.35	0.59 (Urban) [a]
15. Treat severe dementia?	3.46	.06	4.43 (Urban, strong)	356	.11	0.65 (Urban) [b]
16. Treat severe behaviors	0.10	.75	1.14 (Urban)	421.5	.41	0.59 (Urban) [a]
17. Counsel family members	0	1	1 (Equally likely)	427.5	.44	0.55 (Urban)

*Significant at $p < .05$

[a] Small effect size as converted by Liu (2015)

[b] Medium effect size as converted by Liu (2015)

Table 5.14

Rural (n = 14) vs. Urban (n = 69): Familiarity

Strategy	Chi Square	*p*	Relative Risk Ratio (Group most likely to be less familiar, extent of effect)
1. Errorless Learning	0.03	.86	1.29 (Urban)
2. Reminiscence	1.29	.26	2.79 (Urban, RMPE)
3. Cognitive stimulation	1.06	.30	2.33 (Urban, RMPE)

Table 5.15

Rural (n = 14) vs. Urban (n = 69): Frequency

Strategy	Chi Square	*p*	Relative Risk Ratio (Group more likely to use, extent of effect)
1. Errorless Learning (A/O/S/N)	1.64	.65	Always: 1.16 (Urban) Often: 1.73 (Rural) Sometimes: 1.03 (Rural) Never: 2.36 (Urban, RMPE)
2. Reminiscence (A/O/S/N)	2.06	.56	Always: 1.39 (Rural) Often: 1.19 (Rural) Sometimes: 2.14 (Urban, RMPE) Never: 1.15 (Urban)
3. Cognitive Stimulation (A/O/S)	0.55	.76	Always: 1.18 (Rural) Often: 1.43 (Urban) Sometimes: 1.29 (Urban)

4. Caregiver Training (A/O/S)	5.70	.06	Always: 1.41 (Rural) Often: 7.27 (Urban, strong) Sometimes: 2.82 (Urban, RMPE)
5. External Memory Aid (A/O/S)	1.30	.52	Always: 1.03 (Rural) Often: 1.24 (Rural) Sometimes: 2.58 (Urban, RMPE)

square and Mann-Whitney testing, with participants with fewer than 10 CEUs reporting lower confidence: appraising the measurement properties of tests and counseling family members of PWD. The two groups also significantly differed on three confidence questions based on Mann-Whitney U testing (i.e., but not chi-square testing): identifying a gap in knowledge related to a client situation, appraising the strengths and weaknesses of methods, and treating severe dementia. Similar to the previous group comparisons, these instances (i.e., when Mann-Whitney U testing was significant, but chi-square was not) should not be disregarded, since the Mann-Whitney calculation utilized participant's exact confidence values. More specifically, the Mann-Whitney testing results took into account very low confidence ratings (e.g., 40% confident), while a confidence of 40% was simply put in the "less than 75% confident group" when calculating the chi-squares.

As seen in Table 5.17, participants with fewer CEUs had significantly higher rates of unfamiliarity with errorless learning and reminiscence strategies. In fact, these participants were thirteen times more likely to be unfamiliar with errorless learning and twenty-four times more likely to be unfamiliar with reminiscence therapy. Despite that the number of participants who were unfamiliar with these strategies were still under 10 participants, the differences in proportions between groups (i.e., 0 to 2% unfamiliar versus 18 to 21% unfamiliar) is of significant note.

The groups also significantly differed in how frequently they use external memory aids (see Table 5.18). Those with fewer CEUs were nine times more likely to only "sometimes" use external memory aids. Participants with fewer than 10 CEUs were six times more likely to never use reminiscence and eight times more likely to never use cognitive stimulation strategies. Despite the moderate differences in proportions of participants' use, these results should be interpreted with considerable caution, as these items involved a low number of participants (i.e., 0 participants versus 2 participants).

Table 5.16

Less Than 10 CEUs (n = 37) vs. More Than 10 CEUs (n = 58): Confidence

Question	Chi Square	*p*	Relative Risk Ratio (Group more likely to be less than 75% confident, extent of effect)	Mann-Whitney U	*p*	Common Language Effect Size
1. Identify gap in knowledge related to a client situation?	3.75	.05	2.09 (↓10, RMPE)	751	.01*	0.61 (↓10) [a]
2. Formulate question to guide literature search based on gap?	2.87	.09	1.68 (↓10)	869	.12	0.61 (↓10) [a]
3. Conduct online literature search to address question?	1.28	.26	1.38 (↓10)	884	.15	0.61 (↓10) [a]
4. Appraise strengths and weaknesses of methods?	2.84	.09	1.32 (↓10)	804	.04*	0.62 (↓10) [a]
5. Appraise test measurement properties (e.g. reliability)?	6.20	.013*	1.59 (↓10)	752.5	.01*	0.64 (↓10) [b]
6. Interpret results obtained using statistical tests (t-tests)?	1.29	.26	1.15 (↓10)	881.5	.14	0.58 (↓10) [a]
7. Interpret results by statistical procedures (e.g. linear regression)?	0.61	.43	1.09 (↓10)	918	.24	0.57 (↓10) [a]
8. Determine if evidence from the research applies to client?	.05	.83	1.54 (↑10)	924	.55	0.56 (↓10) [a]

9. Ask client about needs, values, treatment preferences?	3.58	.06	4.09 (↓10, strong)	887.5	.29	0.60 (↓10) [a]
10. Decide an action based on research, clinical judgement, patient preferences?	1.60	.21	1.90 (↓10)	930.5	.58	0.56 (↓10) [a]
11. Valuate the effect of action on client's outcomes?	2.22	.14	2.70 (↓10, slight)	880.5	.33	0.56 (↓10) [a]
12. Assess PWD?	2.29	.13	2.44 (↓10, slight)	805.5	.12	0.59 (↓10) [a]
13. Treat mild dementia?	1.17	.28	2.15 (↓10, slight)	799.5	.10	0.59 (↓10) [a]
14. Treat moderate dementia?	3.67	.06	2.48 (↓10, slight)	857	.25	0.60 (↓10) [a]
15. Treat severe dementia?	2.20	.14	1.63 (↓10)	748	.04*	0.62 (↓10) [a]
16. Treat severe behaviors	.678	.41	1.27 (↓10)	802	.12	0.61 (↓10) [a]
17. Counsel family members	10.69	.01*	1.90 (↓10)	713.5	.02*	0.61 (↓10) [a]

*Significant at $p < .05$

[a] Small effect size as converted by Liu (2015)

[b] Medium effect size as converted by Liu (2015)

Table 5.17

Less than 10 CEUs (n = 35) vs. More than 10 CEUs (n = 57): Familiarity

Strategy	Chi Square	*p*	Relative Risk Ratio (Group more likely to be less familiar, extent of effect)
1. Errorless Learning	10.94	.0009*	13.08 (↓10, strong)
2. Reminiscence	12.34	.0004*	24.42 (↓10, strong)
3. Cognitive stimulation	0.01	.93	1.07 (↓10)

*Significant at $p < .05$

Table 5.18

Less than 10 CEUs (n = 35) vs. More than 10 CEUs (n = 57): Frequency

Strategy (Items Compared)	Chi Square	*p*	Relative risk ratio (Group more likely to use, extent of effect)
1. Errorless Learning (A/O/S/N)	6.67	.08	Always: 2.87 (↑10, RMPE) Often: 1.76 (↓10) Sometimes: 1.16 (↓10) Never: 2.75 (↓10, RMPE)
2. Reminiscence (A/O/S/N)	3.09	.38	Always: 1.23 (↑10) Often: 1.12 (↑10)

			Sometimes: 1.42 (↓10) Never: 6.05 (↓10, strong)
3. Cognitive Stimulation (A/O/S/N)	3.28	.35	Always: 1.03 (↓10) Often: 1.69 (↑10) Sometimes: 1.53 (↓10) Never: 8.13 (↓10, strong)
4. Caregiver Training (A/O/S)	.375	.83	Always: 1.07 (↑10) Often: 1.31 (↓10) Sometimes: 1.2 (↓10)
5. External Memory Aids (A/O/S)	11.72	.008*	Always: 1.56 (↑10) Often: 1.43 (↓10) Sometimes: 9 (↓10, strong)

*Significant at $p < .05$

Percentage of caseload for dementia. The researcher also compared participants who treat PWD for 0 to 40% of their caseload ($n = 42$) versus participants whose caseload is 40 to 100% PWD ($n = 53$). A complete breakdown of results can be found in Table 5.19. Overall, the groups were only significantly different for one confidence item (i.e., appraising the measurement properties of tests), with the less than 40% group having less confidence. However, this significant result was only found for chi-square testing, which may limit the credibility of the result. As seen in Table 5.20, the less than 40% caseload group also reported significantly lower familiarity with errorless learning and were four times more likely to be unfamiliar with it. Though the *p* value was not statistically significant for reminiscence therapy, the less than 40% group was three times more likely to be unfamiliar with the strategy. Additionally, the less than 40% group was five times more likely to be unfamiliar with cognitive stimulation. Just as in previous familiarity comparisons, the number of unfamiliar participants was still below eight for both groups, meaning these results involved a small sample size.

No statistically significant *p* values were found in frequency of use (Table 5.21) between the groups. However, the less than 40% group was five times more likely to never use reminiscence, seven times more likely to never use cognitive stimulation, and nearly four times more likely to never use external memory aids. For all three of these items, it was a difference of either 1 or 2 participants between groups, which limits the significance.

Table 5.19

0-40% of Caseload Dementia (n = 42) vs. 40-100% of Caseload Dementia (n = 53): Confidence

Question	Chi Square	*p*	Relative Risk Ratio (Group more likely to be less than 75% confident, extent of effect)	Mann-Whitney U	*p*	Common Language Effect Size
1. Identify gap in knowledge to client situation?	1.83	.18	1.68 (0-40%)	1036	.56	0.54 (0-40%)
2. Formulate question to guide a literature search?	0.28	.60	1.18 (0-40%)	1099.5	.92	0.58 (0-40%) [a]
3. Conduct an online literature search to address the question?	0.66	.42	1.26 (0-40%)	1023.5	.50	0.56 (0-40%) [a]
4. Critically appraise method strengths & weaknesses?	1.70	.19	1.26 (0-40%)	1019	.48	0.54 (0-40%)
5. Critically appraise test measurement properties (e.g. reliability)?	5.17	.02*	1.84 (0-40%)	975	.30	0.58 (0-40%) [a]
6. Interpret results obtained by statistical tests (t-tests)?	0.03	.85	1.02 (40-100%)	1087	.85	0.51 (40-100%)
7. Interpret results using statistical procedures (e.g. linear regression)?	0.02	.89	1.02 (40-100%)	1049	.63	0.53 (0-40%)
8. Determine if evidence from the research applies to client?	0.46	.50	1.22 (0-40%)	1001	.76	0.55 (0-40%)
9. Ask client about needs, values, treatment preferences?	0.003	.95	1.04 (0-40%)	1016	.84	0.52 (0-40%)

10. Decide action based on research, clinical judgement, patient preferences?	0.66	.42	1.52 (0-40%)	988.5	.68	0.55 (0-40%)
11. Valuate effect of action on client outcomes?	0.15	.70	1.30 (0-40%)	941.5	.42	0.55 (0-40%)
12. Assess PWD?	0.19	.66	1.30 (0-40%)	883	.21	0.54 (0-40%)
13. Treat mild dementia?	0.001	.97	1.03 (40-100%)	855.5	.13	0.57 (0-40%) [a]
14. Treat moderate dementia?	0.07	.79	1.14 (0-40%)	932	.38	0.54 (0-40%)
15. Treat severe dementia?	0.37	.54	1.24 (40-100%)	1027	.92	0.54 (0-40%)
16. Treat severe behaviors	0.23	.63	1.15 (0-40%)	1000	.75	0.56 (0-40%) [a]
17. Counsel family members	2.01	.16	2.08 (0-40%, RMPE)	882.5	.20	0.57 (0-40%) [a]

*Significant at *p* < .05

[a] Small effect size as converted by Liu (2015)

Table 5.20

0-40% of Caseload Dementia (n = 40) vs. 40-100% of Caseload Dementia (n = 52): Familiarity

Question	Chi Square	*p*	Relative Risk Ratio (Group more likely to be unfamiliar, extent of effect)
1. Errorless Learning	4.78	.03*	4.61 (0-40%, strong)
2. Reminiscence	2.41	.12	3.29 (0-40%, moderate)
3. Cognitive stimulation	2.87	.09	5.26 (0-40%, strong)

*Significant at *p* < .05

Table 5.21

0-40% of Caseload Dementia (n = 40) vs. 40-100% of Caseload Dementia (n = 52): Frequency

Strategy (Items Compared)	Chi Square	*p*	Relative Risk Ratio (Group more likely to use, extent of effect)
1. Errorless Learning (A/O/S/N)	0.84	.84	Always: 1.2 (40-100%) Often: 1.25 (0-40%) Sometimes: 1.2 (40-100%) Never: 2.25 (0-40%, RMPE)
2. Reminiscence (A/O/S/N)	2.10	.55	Always: 1.05 (0-40%) Often: 1.09 (0-40%) Sometimes: 1.57 (0-40%) Never: 4.29 (0-40%, strong)
3. Cognitive Stimulation (A/O/S/N)	4.24	.24	Always: 1.42 (40-100%) Often: 1.38 (0-40%)

			Sometimes: 1.57 (0-40%) Never: 7.08 (0-40%, strong)
4. Caregiver Training (A/O/S)	1.17	.56	Always: 1.13 (40-100%) Often: 1.4 (0-40%) Sometimes: 2 (0-40%, RMPE)
5. External Memory Aids (A/O/S/N)	3.90	.27	Always: 1.16 (40-100%) Often: 1.04 (40-100%) Sometimes: 3.25 (0-40%, moderate) Never: 3.96 (0-40%, moderate)

Types of resources. The researcher also compared participants based on their response to what resources they had used within the past year to guide their practice in dementia. Participants who strictly indicated using journals and/or CEUs (*n* = 9) were compared to participants who strictly reported using social media, peers, and/or textbooks (*n* = 11) Participants who use social media, peers, and/or textbooks are referred in this text as "social media group" for conciseness.

Compete results for confidence questions, familiarly, and frequency of use are listed in Tables 5.22, 5.23, and 5.24, respectfully. In general, no significant *p* values were found for any question for either statistical test. However, the social media group was four times more likely to be less confident in treating an individual with severe dementia (also a medium CL effect size) and counseling family members of a PWD (small CL effect size). For familiarity of treatment strategies, the journal/CEU group was three times more likely to be less familiar with errorless learning. On the other hand, the social media group was five times more likely to be unfamiliar with reminiscence therapy. The journal/CEU group was three times more likely to always use errorless learning and reminiscence strategies. The social media group was over four times more likely to use reminiscence therapy “often,” However, these results based on RR values are prone to inflated findings based on low numbers of participants in both groups.

Table 5.22

Journals or CEUs (J) (n = 9) vs. Social Media, Peers or Textbooks (SM) (n = 11): Confidence

Question	Chi Square	*p*	Relative Risk Ratio (Group more likely to be less than 75% confident, extent of effect)	Mann-Whitney U	*p*	Common Language Effect Size (Group with Lower Mean)
1. Identify gap in knowledge related to a client situation?	0.05	.82	1.22 (J)	45.5	.75	0.52 (J)
2. Formulate question to guide literature search based on a gap?	0.47	.49	1.64 (SM)	41	.51	0.51 (J)
3. Conduct an online literature search to address the question?	1.63	.20	2.47 (J, RMPE)	40	.50	0.62 (J) [a]
4. Appraise the strengths and weaknesses of study methods?	2.15	.14	1.71 (J)	37.5	.36	0.58 (J) [a]
5. Appraise the test measurement properties (e.g. reliability)?	0.9	.34	1.47 (J)	33.5	.22	0.64 (J) $_m$
6. Interpret results obtained using statistical tests (t-tests)?	0.05	.82	1.05 (SM)	37.5	.36	0.56 (SM) [a]
7. Interpret results using statistical procedures (e.g. linear regression)?	0.19	.66	1.08 (J)	49.5	1.0	0.56 (J) [a]
8. Determine if evidence from the research applies to client?	0.19	.66	1.64 (SM)	48.5	.94	0.53 (SM)
9. Ask client about needs, values and treatment preferences?	0.02	.88	1.22 (J)	39	.29	0.53 (J)
10. Decide an action based on research evidence, clinical judgement, patient preferences?	0.19	.66	1.64 (SM)	37.5	.35	0.62 (SM) [a]
11. Continually valuate the effect of action on client’s outcomes?	0.02	.88	1.22 (J)	37	.30	0.52 (SM)

12. Assess PWD?	0.02	.88	1.22 (J)	41	.50	0.59 (SM) [a]
13. Treat mild dementia?	EQUAL			41	.51	0.60 (SM) [a]
14. Treat moderate dementia?	0.81	.37	2.45 (SM, RMPE)	43	.61	0.58 (SM) [a]
15. Treat severe dementia?	2.78	.10	4.13 (SM, strong)	33.5	.22	0.66 (SM) [b]
16. Treat severe behaviors	0.81	.37	2.45 (SM, RMPE)	30.5	.14	0.66 (SM) [b]
17. Counsel family members	1.82	.18	4.2 (SM, strong)	45	.72	0.63 (SM) [a]

[a] Small effect size as converted by Liu (2015)

[b] Medium effect size as converted by Liu (2015)

Table 5.23

Journals or CEUs (n = 9) vs. Social Media, Peers or Textbooks (n = 11): Familiarity

Strategy	Chi Square	*p*	Relative risk ratio (Group more likely to be less familiar, extent of effect)
1. Errorless Learning	1.82	.18	3.7 (Journal, moderate)
2. Reminiscence	2.89	.09	5.8 (Social Media, strong)
3. Cognitive stimulation	EQUAL	EQUAL	N/A

Table 5.24

Journals or CEUs (n = 9) vs. Social Media, Peers or Textbooks (n = 11): Frequency

Strategy (Items Compared)	Chi Square	*p*	Relative risk ratio (Group more likely to use, extent of effect)
Errorless Learning (A/O/S)	2.99	.22	Always: 3.05 (Journal, moderate) Often: 2.59 (Social Media, RMPE) Sometimes: 1.94 (Social Media)
Reminiscence (A/O/S)	3.7	.16	Always: 3.38 (Journal, moderate) Often: 4.55 (Social Media, strong) Sometimes: 1.16 (Journal)
Cognitive Stimulation (A/O/S)	0.34	.85	Always: 1.22 (Journal) Often: 1.23 (Social) Sometimes: 1.64 (Social)
Caregiver Training (A/O/S)	0.88	.65	Always: 1.07 (Journal) Often: 1.22 (Journal) Sometimes: 2.5 (Social, RMPE)
External Memory Aids (A/O/S)	0.67	.71	Always: 1.19 (Social) Often: 1.23 (Social)

Sometimes: 2.44 (Journal, RMPE)

Mann-Whitney U Testing

The researcher completed Mann-Whitney U testing to investigate differences between groups defined by ordinal data. Unlike procedures for chi-square testing, data for the Mann-Whitney U tests were based on participant averages of scores (e.g., the mean of Participant A's frequency of use for all strategies) for each data source. The researcher also calculated a CL Effect Size statistic for each Mann-Whitney U test completed. For complete results of Mann-Whitney testing and CL effect sizes, reference Table 5.25.

Level of preparedness. Mann-Whitney testing was completed to investigate differences between participants who reported being prepared (i.e., very or moderately prepared) by their graduate program to engage in dementia practice versus participants who were unprepared (i.e., very or moderately unprepared). There were no statistically significant differences between the groups for dementia-related confidence questions, familiarity of treatments, or frequency of use. A small effect size was found for all measures of this group, with the prepared group having higher means in their confidence, familiarity, and frequency of strategy use. However, the mean values used to calculate these effect sizes were based on a small number of participants from the prepared group (n = 13) and should be considered within that context.

Level of confidence. The researcher also completed Mann-Whitney tests to determine if differences existed between participants who were less confident (i.e., 75% confident or less) in treating mild, moderate, and severe dementia (n = 4) versus participants who were confident (i.e., 76% confident or greater) (*n* = 62*)*. No significant results were found based on the *p* values for familiarity and frequency of use with treatment approaches. However, a notable result was found based on the CL effect size (i.e., large) for frequency of use between the two confidence groups. More specifically, this result means that if a less confident participant was randomly selected, there would be a 71% chance that their frequency of treatment approaches score would be higher than someone from the more confident group. This means that participants with less confidence are more likely to use the top 5 strategies than participants with more confidence in treating dementia. Despite this large effect, it was again found from a very small sample size (*n* = 4) and does not hold as much power as the same result from a higher number of participants.

Rural and urban resources. A Mann-Whitney test was also completed to compare the agreement scores for availability of resources between rural and urban-setting participants. There were no statistically significant differences between groups and the CL effect size was essentially equivalent to random chance (51%).

Kruskal-Wallis Testing

The researcher also completed Kruskal-Wallis testing to compare data between demographic groups with three or more variables. Similar to Mann-Whitney U testing, data were analyzed based on individual participants' average of responses. Epsilon squared (ε^2) was calculated for each Kruskal-Wallis test completed to gauge the effect size of the results. The effect size gives the researcher information regarding the extent of an effect, with the coefficient ranging from 0 to 1, where 0 suggests no relationship

Table 5.25

Mann-Whitney U Testing

Variables	Questions	*p*	Common Language Effect Size (Group with Higher Mean)
Rural vs. Urban	Resource Availability	.87	0.51 (Urban)
Level of Preparedness: Prepared (P) vs. Unprepared (UP)	Dementia-Related Confidence	.10	0.61 (P) [a]
Level of Preparedness: P vs. UP	Familiarity	.20	0.57 (P) [a]
Level of Preparedness: P vs. UP	Frequency	.84	0.57 (P) [a]
Level of Confidence: Less confident (LC) vs. confident (C)	Familiarity	.39	0.57 (C) [a]
Level of Confidence: LC vs. C	Frequency	.39	0.71 (LC) [b]

[a] Small effect size as converted by Liu (2015)
[b] Large effect size as converted by Liu (2015)

between variables and 1 suggests a "perfect relationship" (Tomczak & Tomczak, 2014, p. 24). The researcher implemented Rea and Parker's (1992) interpretation of *r* for this study:

- < 0.01 – Negligible
- 0.01 < 0.04 – Weak
- 0.04 < 0.16 – Moderate
- 0.16 < 0.36 - Relatively strong
- 0.36 < 0.64 – Strong
- 0.64 < 1.00 - Very strong

Table 5.26 shows the results of all Kruskal-Wallis and epsilon squared effect sizes.

Regional differences. The first Kruskal-Wallis test was calculated to examine differences between participants based on their region of the United States (i.e., West, Midwest, Northeast, and South). No statistically significant differences were found between the groups for any data (i.e., confidence, familiarity, and frequency of use), though a moderate effect size was calculated for both familiarity and frequency of use of treatment strategies. This finding holds slightly more weight than some other group comparisons in this study, as the number of participants in each group was slightly larger (i.e., ranged from 18 to 33).

Setting differences. Kruskal-Wallis testing was also completed for a comparison of participants by work setting (i.e., hospital, skilled nursing facility, home health, and outpatient). Again, no statistically significant differences were found between groups for any data. Moderate effect sizes were found for dementia-related confidence questions and frequency of use of treatment approaches. Unlike the region comparison, this group comparison involved two groups under 10 (i.e., 6 and 8) and may not reflect true differences between groups.

Table 5.26

Kruskal-Wallis Testing

Variables	Data	Kruskal-Wallis H	*p*	ε^2	Effect Size
Region	Dementia-Related Confidence	0.21	.98	.002	Negligible
Region	Familiarity	4.23	.24	0.05	Moderate
Region	Frequency of use	4.26	.24	0.05	Moderate
Work Setting	Confidence EBP	0.77	.86	0.01	Weak

Work Setting	Dementia-related Confidence	4.56	.21	0.07	Moderate
Work Setting	Familiarity	0.75	.86	0.01	Weak
Work Setting	Frequency of Use	3.87	.28	0.06	Moderate

CHAPTER 6: DISCUSSION

Since the content of the data gained from both qualitative and quantitative portions of this study was extensive, the focus of this discussion will be on the proposed hypotheses and research questions. Since this discussion includes a combined analysis of both the qualitative and quantitative research, the researcher uses the phrase “all participants” when participants of the survey and the interviewees are described together. When only describing participants from one portion of the study, distinctive terminology is used (e.g., “survey participants” versus “interviewees”).

Clinical Practice Aligned with Literature Reviews

Evaluation. The first hypothesis (i.e., SLPs are engaging in dementia assessment and treatment procedures found within the extant literature) proposed by the researcher was minimally supported by the qualitative and quantitative results. There was some evidence of areas of assessment and treatment where there was not a gap between clinical practice and the extant literature. Altogether, survey participants and interviewees generally engaged in four out of five of the most frequently indicated evaluation procedures by the literature review: (a) standard cognitive assessment, (b) interviews (i.e., with PWD and/or family), (c) analyzing or gathering case history information, and (d) reviewing medical history. The fifth procedure from the assessment literature, screening to rule out other diagnoses (e.g., depression, sensory impairments), was not as prominently reported by participants. This is an area of potential development for future training of SLPs for either continuing education or graduate course work.

How often participants reported engaging in assessment procedures from the literature review also provide insight into support of the hypothesis. All interviewees and a majority (87%) of survey participants either described or marked that they use formal measures or screeners in the assessment process. However, this should be considered within the context that only 53% of the formal tests or screeners reported by all participants were indicated through the literature review (e.g., MMSE and the ABCD). Thus, even though participants reported engaging in formal testing procedures, they may be implementing assessments that were not normed with populations of PWD (e.g., Scales of Cognitive Assessment of Traumatic Brain Injury (SCATBI)). Using a test that was not normed on PWD may affect an SLP’s ability to understand the extent of deficits for a PWD depending on how it is interpreted. Further research may want to investigate why SLPs chose to use instruments not normed on the dementia population. In addition to formal testing, all participants reported interviewing the PWD and/or their caregivers/family members. The additional three assessment procedures (i.e., reviewing case history, medical history, and engaging in differential diagnosis) from the literature review are discussed further in the “Gaps Between Literature Reviews and Clinical Practice” section.

In addition to findings that overlapped with the five most prominent assessment procedures from the literature review, many evaluative procedures were reported by participants that aligned with less prominent procedures from the literature review. Informal evaluation procedures reported by participants that aligned with at least one source in the literature review included: natural observation, considering behavioral problems, a collaborative approach to evaluation, informal sequencing task, informal reading task, counseling caregivers, orientation questions, memory questions, and consideration of language. Altogether, these results provide support that SLPs are engaging in several of the prominent processes identified in the literature for evaluation of dementia but may not be closely aligned in the use of specific formal tests recommended by the literature.

Treatment. The survey and interviews supported that SLPs are utilizing at least one of the top five strategies in their day to day practice. More specifically, the majority of survey participants (i.e., greater than 60%) reported implementing caregiver training, external memory aids, and cognitive stimulation "always" in their practice. Interestingly, the order of popularity or frequency of use of the approaches were the same between participants from the qualitative and quantitative sections (from most frequently used to less frequently used): caregiver training, external memory aids, cognitive stimulation, reminiscence, and errorless learning/spaced retrieval.

Caregiver training or education was mentioned by nearly all interviewees and was found to be used at least "sometimes" by all survey participants. These results suggest that caregiver training plays a prominent role in dementia treatment for SLPs. Despite the key role of caregiver training, the survey results indicated a wide variety of how long caregiver training takes for each PWD, as 37.7% of survey participants marked it could be done in 30 minutes or less, while 62% selected at least 45 minutes. Future studies may consider investigating the reasoning behind this variance, though it’s likely that an SLP’s setting plays a role (e.g., time constraints). The qualitative results also suggested a trend for training use of cognitive stimulation within caregiver training, as half of the interviewees who described cognitive stimulation stated that they use it within caregiver training (e.g., giving them a list of cognitive stimulation activities). This suggests that SLPs may consider cognitive stimulation as more of a supplemental approach to reinforce other interventions.

These results on the frequency of use of cognitive stimulation and caregiver training from the survey can be directly compared to Paul and Mehrhoff (2015). Overall, participants in Paul and Mehrhoff were more likely to never use cognitive stimulation (13% of participants) than participants in the current study (2%) but were nearly as likely to “sometimes” use it (24% versus 27% in the current study). Since Paul and Mehrhoff (2015) did not include an “always” option, the researcher combined the “always” and “often” percentages in the current study to make the data more comparable. More participants in the current study (76%) indicated at least “often” using cognitive stimulation than participants in Paul and Mehrhoff (65%). Percentages of use of caregiver training were very similar between the current study and Paul and Mehrhoff, with 91 to 93% of participants of both studies using it at least often, 5 to 9% sometimes using it, and 0 to 0.6% never using it. Overall, despite the occasional disparity in percentages of participants between Paul & Mehrhoff and the current study (e.g., 65% versus 76%), the order of frequency of use between cognitive stimulation and caregiver training remained consistent between both studies (e.g., for caregiver training, the highest percentage of participants used it at least often, followed by sometimes, and never) (Paul & Mehrhoff, 2015).

Errorless learning (e.g., spaced retrieval) received the least amount of responses from the qualitative results and was also the least frequently used strategy from survey results. The interviews provide potential reasoning behind infrequent use of the strategy, as spaced retrieval was labeled “not successful” by two interviewees. One interviewee mentioned having no success with the strategy at all; though, they did not provide specific details. One interviewee talked positively about the approach itself but indicated it is not always applicable to their setting. Another interviewee stated that they do not use spaced retrieval for information that changes frequently (e.g., the date). Thus, the degree of success and frequency of use of spaced retrieval may be considered context dependent. The meaning of the results about low incidence of use of spaced retrieval is unclear. It may be that: (a) it has a role at a specific time in the progression of the disease (which was not identified by the SLPs), (b) SLPs need additional supports to successfully use this strategy, and/or (c) the strategy itself is not as useful as others.

As previously listed, the treatment literature review completed by the researcher yielded many treatment approaches that did not fall under the “top five.” Interviewees mentioned using three strategies that overlapped with these “non-top five” strategies. A Montessori approach was described by two interviewees. Validation therapy and multidisciplinary approaches (i.e., co-treatment groups with PTs) were also reported by one participant. Although these approaches were less frequently indicated in the literature, their use by clinicians still provide support for the first hypothesis.

Gaps Between Literature Reviews and Clinical Practice

Evaluation. Despite the support for the hypothesis that SLPs are doing what aligns with the external literature, there were some results of the study (both quantitative and qualitative) which did not support this hypothesis. These data provide evidence of the existence of a gap between some of the practices of SLPs and the external literature in the realm of dementia. As previously discussed, 47% of the formal tests or screeners participants reported from both qualitative and quantitative studies were not indicated by the literature review (e.g., Cognistat and SCATBI). However, it is reasonable to suggest that the resources used for the literature review did not provide an exhaustive list of all tests that could be used to assess PWD. Additionally, the availability of specific formal measures may be out of the control of the SLP (e.g., SLP has to utilize the tests available in their setting). Despite this, there are negative implications to using formal measures not normed on PWD. For example, using the SCATBI to measure the cognitive functioning of a PWD would not give an SLP a way to stage the dementia (e.g., mild dementia), which can be considered an important part of a dementia evaluation (i.e., the test would only give information how the PWD performed in relation to people who sustained brain injuries).

Similarly, there were several informal measures described by interviewees that were not found in the literature review. Despite the fact that they did not emerge from the literature review, the procedures can be categorized into two different groups: (a) reasonable general evaluation procedures and (b) reasonable dementia evaluation procedures. The first group includes measures or procedures that are typically “assumed” to be part of any evaluation for an SLP: introducing yourself, describing the SLP role, and building rapport. The second group of informal procedures that did not align with the literature review included more dementia-specific procedures. These included informal measures targeting skills, such as naming, auditory comprehension, safety awareness/considerations, alertness, and writing. All of these skills were listed by Bourgeois (2011) as abilities to test for using standardized measures. It is reasonable to suggest that these skills would also be gathered informally by an SLP, especially because these measures are completed alongside formal testing. Finally, the procedures of referring PWD for other services, collecting qualitative information from tests, and using a non-threatening approach also appear to be reasonable practice principles.

It is also important to discuss the trend of participants not engaging in evaluation procedures that were suggested across multiple sources in the literature. For example, only three interviewees described reviewing a PWD’s medical history/case history information. However, the fact that all survey participants marked that they would review medical history and/or case history information (i.e., on the hypothetical evaluation question) suggests that the seven interviewees who did not bring up reviewing medical history information may consider this an assumed procedure of evaluation. Similarly, despite that ruling out hearing and vision problems were indicated by five out of seven of the literature review sources, only one interviewee explicitly stated that they ask about sensory abilities (i.e., hearing and vision). Additionally, on the hypothetical evaluation question, more survey participants reported that they would not refer for/preform a hearing screening for PWD than participants who reported they would do that. However, this trend is confounded by the fact that “vision” and “hearing” were two of the most frequently mentioned additional evaluative considerations reported by survey participants. This suggests addressing perceptual components of PWD may be perceived as an evaluation “consideration” rather than an evaluation “procedure,” which also may explain why it was not prominently discussed by interviewees.

The assessment literature review completed by the researcher also often indicated to engage in differential diagnosis to rule out certain diagnoses (e.g., screen for depression and differentially diagnose a vascular component of the dementia). It is notable that none of the interviewees reported using specific measures for differential diagnosis (e.g., depression screeners) and only 51% of survey participants indicated they would engage in differential diagnosis activities in the hypothetical evaluation question. However, the process of differential diagnosis was implied through one interviewee’s description of her tendency to contact physicians if a client’s symptoms are not matching their diagnosis (i.e., symptoms of LBD). This finding suggests that SLPs may not be completing differential diagnosis by using screening procedures. Overall, there is moderate evidence to support a gap between the dementia evaluation literature and clinical practice in regard to two primary procedures (i.e., differential diagnosis and considering/screening for sensory abilities). If an SLP is not engaging in consideration or screening for sensory abilities or engaging in differential diagnosis, this can be quantified as a gap between clinical practice and the external evidence. Such a finding indicates that an SLP was not engaged in all five prominent evaluation procedures.

Treatment. An additional result that does not fully support the first hypothesis is the number of SLPs who are engaging in a minimal number of the top five strategies in their daily practice. When considering how many survey participants marked that they “always” implement one of the top-five strategies, only 51% of survey participants and 70% of interviewees reported implementing at least three out of five of the approaches into their daily practice. More concerningly, 23% of survey participants reported only engaging in 2 out of 5 strategies, 16% use 1 out 5, and 8% do not use any of the five in their daily or weekly practice. Although it is possible that these participants instead use “non-top five” strategies from the literature in their daily practice, these percentages alone show an often substantial gap between the most prominent treatment strategies and clinical practice. One aspect for consideration in future research is the decision making utilized to select treatment strategies that are not as prevalent in the literature.

Results from the qualitative measures also provided information that contrasted with the first hypothesis in that there were 19 “non-top five strategies” reported by interviewees that did not align with the any strategies determined from the literature review. These strategies can be categorized into four groups: (a) not enough information to gauge the evidence-base, (b) supported by literature in dementia in the realm of speech pathology, (c) studied outside the realm of speech pathology, and (d) determined to be not or minimally supported.

Not enough information. The first group of unlisted strategies were determined to be too vague to judge the practicality of using them. These included: memory techniques, general cueing systems, auditory cues, talk therapy, circumlocution strategies, and communication strategies. Thus, no true conclusions can be drawn to gauge whether these would be considered evidence-based without knowing the explicit procedures.

Supported by literature within speech pathology. The second group of unlisted treatment strategies overlapped with literature provided by Bayles and Tomoeda (2014). One strategy described by Bayles and Tomoeda and two interviewees was environmental manipulation, which overall results in a "creation of a safe, peaceful, and organized environment that evokes positive mood and behavior" (2014, p. 236). Additionally, one interviewee described focusing on PWD's procedural memory abilities to complete functional tasks. This procedure was suggested by Bayles and Tomoeda (2014), when they described that new behaviors can be taught through spared non-declarative memory systems.

One SLP also described observing a PWD's behavior by determining what occurs before a negative behavior (i.e., antecedent). Though investigating antecedents was not specifically outlined by Bayles and Tomoeda, they did delve into the possible causes of negative behaviors (e.g., emotional distress) and provided ways to decrease those behaviors. Two interviewees also mentioned ways they modify their own behavior (i.e., talking to PWD like any typical adult and monitoring their own non-verbal behavior). Similar suggestions were provided by Bayles and Tomoeda (2014) when they wrote, "use a pleasant, accepting vocal tone of voice," because the tone of a person can still be comprehended by a PWD.

Two interviewees disclosed utilizing internal memory strategies in general or specific memory strategies (e.g., chunking). One of the interviewees specified that they utilize internal memory strategies for individuals with MCI or in the early stages of dementia, which parallels Bayles and Tomoeda's discussion of research of the strategy (2014). One interviewee also described using patient education, especially early in the disease process. This procedure falls under the scope of practice of SLPs to "educate the individual, family, and related community members" (ASHA, 2016, p. 9) about communication disorders. There also has been research that suggests that an increase in education of PWD by health care professionals is warranted (Grill, Apostolova et al., 2017; Loi & Lautenschlager, 2015; Tay, Davison, Jin, & Yap, 2015).

***Strategies studied outside of speech pathology*.** The third group of strategies that did not coincide with the literature review include approaches that have been studied outside of speech pathology and were reported by one interviewee (i.e., touch therapy and using oils). Raetz (2013) discussed that differences in opinions exist in the efficacy of touch therapy, though it has yielded some overall positive results (Hulme, Wright, Crocker, Oluboyede, & House, 2010; Jain & Mills, 2010). The interviewee also reported using oils "for stimulation" with PWD, which falls under the definition of aromatherapy (Scales, Zimmerman, & Miller, 2018). Aromatherapy has some research that indicates it may decrease agitation in people with severe dementia (Holmes et al., 2002) and increase orientation for people with AD (Jimbo, Kimura, Taniguchi, Inoue, & Urakami, 2009).

Despite this, Scales et al. (2018) reported that overall evidence is considered mixed. Though some may question if aromatherapy falls under the scope of practice of an SLP, it can be argued that using oils for cognitive stimulation (i.e., reported by interviewee) fall within the scope. In Paul and Mehrhoff (2015), 31% of SLPs reported that aromatherapy is used in their setting(s) and 19% selected that SLPs play a role in recommending the intervention (Paul & Mehrhoff, 2015). This demonstrates that SLPs are playing a role within the realm of aromatherapy, which has minimal but some documented evidence.

***Unsupported strategy*.** One interviewee stated they use “agree and redirect,” especially with PWD in a later stage. Though this interviewee did not call this “validation therapy,” their description of “agree and redirect” contained similarities to validation principles. Dourado and Laks (2016) described some of the reasoning behind validation therapy as, “listening and validating feelings build trust, reduces anxiety, and restores dignity” (p. 1108). Dourado and Laks’ description aligns with the interviewee’s strategy of validating what a PWD is saying and then redirecting them to something else (2016). However, since the procedures of validation therapy are more complex than “agree and redirect,” this cannot be defined as validation therapy per se.

Terminology Differences

The second hypothesis proposed in this study stated that there are procedures that SLPs are completing within the realm of dementia that fall under differing terminology, which was supported by qualitative and quantitative data. The first example of support was in the multiple, yet similar labels for the term “memory books” reported by participants from both sides of a study (i.e., nine variations from quantitative and two variations from qualitative). Based on the descriptions provided by survey participants the components of memory books were found to have similar features (i.e., combination of pictures and written information that often includes either personal demographic, family, or facility-based information). However, the interviews revealed differing terminology for memory books (i.e., memory book versus daily memory notebook) that contained very different components and had varying uses. More specifically, the "memory book" for one interviewee was utilized to write down important stories and information for a PWD before they lose language skills, with family members the target audience. The "daily memory notebook" described by a second interviewee was written in by PWD to keep them orientated to daily activities. It can be concluded that in addition to the various terminology to describe similar external memory aids, that the content of some SLP's memory aids may be vastly different, despite having similar terminology. There may be room within the profession to create a more consistent terminology for the type, content, and originator of content for memory books.

The second hypothesis was also supported by findings specific to qualitative and quantitative sections. "Functional Maintenance Plans" (FMPs) were found to exist under two additional terms from two interviewees. One percent of survey participants had different names for reminiscence and cognitive stimulation therapy. These findings were based upon a small percentage of participants. However, they do indicate the presence of varying terminology for FMPs, which was not found by Buhr et al. or Mount and Weissling. The findings also further support what was suggested in Buhr et al. and Mount and Weissling's studies (i.e., SLPs often have differing terminology for prominent treatment strategies) (2015; 2017).

Not only were differences in procedure labels present, but both the survey and interview participants indicated a trend that some SLPs implement the procedures of a named approach without having specific term for it. This trend is represented by two interviewees who indicated they were uncertain about what to call strategies they use. One of these interviewees was describing the natural oils they use but was unable to come up with the name of the strategy itself. It is possible that the SLP genuinely forgot the name of the approach and would have used a standard label for it (i.e., aromatherapy). The second interviewee who showed uncertainty regarding terminology to use for procedures they "assumed" they would call "cognitive stimulation". A similar finding was found in the survey, where many participants did not have a name for a strategy for either errorless learning (7% of participants), reminiscence (5%), or cognitive stimulation (3%). The presence of this phenomenon (i.e., implementing treatment procedures without a term for it) can pose problems for SLPs, especially if they were questioned by someone in a management position (i.e., within their company or from an insurance-based company), a family, or asked to provide reasoning behind the approaches they are utilizing. It also may make finding external literature on an approach difficult. This also creates the question of where are SLPs learning about these approaches if they do not have a label or if they have forgotten the terminology that originally went with the approach.

Extent of Statistical Differences across Demographic Groups

The researcher proposed a total of four initial hypotheses based on anticipated statistical tests that were completed on the data, including:

3. SLPs who have (a) more years of clinical experience, (b) more dementia-related continuing education units, (c) a higher percentage of PWD on their caseload, and/or (d) taken a dementia-related course are more: confident in working with PWD, familiar with top five treatment approaches, and frequently using those top five strategies.

4. SLPs who report: (a) strictly using journals/CEUs to guide their dementia practice and/or (b) being prepared to treat dementia are more: familiar with top five treatment approaches, frequently using those top five treatment approaches, and are more confident in working with PWD than those that use other sources post-graduate learning or felt unprepared to treat dementia.

5. SLPs' from different geographical regions, work settings, and population densities (i.e., rural versus urban) will report similar levels of confidence in working with PWD, familiarity with top-five strategies, frequency of use of those top five strategies, and access to resources.

6. SLPs who report higher confidence in treating dementia are more familiar and use the top five strategies more frequently in their practice than SLPs who report lower confidence.

There were no significant differences between dementia-related confidence scores for groups based on area (i.e., rural versus urban), percentage caseload of dementia (i.e., 0-40% versus 40-100%), completing a dementia-related course, geographical region, setting, or level of preparedness. Three of these group comparisons provide support for hypothesis 5 which predicted similarity between groups: (a) rural vs. urban, (b) geographical region, and (c) setting. However, three of these group comparisons provide evidence against what was hypothesized (i.e., hypothesized that differences would be found): (a) percentage caseload of dementia, (b) completing a dementia-related course, and (c) level of preparedness. These results suggest that SLPs may be more alike than different in their confidence-levels regardless of these variables.

Significant results were prominent in three group analyses for confidence results, including: years as an SLP, years as an SLP practicing with PWD, and number of dementia related CEUs. Statistical analyses based on the demographic variable of number of years' experience (i.e., as an SLP and practicing with PWD) yielded the highest number of statistically significant results in confidence levels (i.e., 10 to 11 out of 17 total questions). For both comparisons, the group with fewer than 10 years' experience rated lower confidence. This trend suggests that these variables have a positive relationship with number of years' experience. Alongside years of experience, participants who received fewer than 10 dementia-related CEUS within the past five years were significantly less confident in completing three EPIC procedures and two dementia-related procedures (i.e., treating severe dementia and counseling family members of PWD) (Salbach & Jaglal, 2011). A possible explanation in differences in confidence providing counseling to families and treating severe dementia is that these topics are covered in CEUs. Thus, SLPs who take more CEUs within the realm of dementia may be more exposed to material that covers counseling and treating severe dementia. However, this is not possible to truly conclude, since SLPs can earn CEUs from a vast range of resources and participants were not asked how they received their CEUs (e.g., ASHA convention, state conventions, and online). Overall, these significant results described (years of experience and number of CEUs) provide support to hypothesis 3 that SLPs with more years of experience and more dementia-related CEUs indicated higher degrees of confidence.

Moving from confidence questions to familiarity of top-five strategies, errorless learning was the most unfamiliar strategy to participants. Overall, participants with fewer CEUs and a smaller percentage of PWD on their caseload reported significantly lower degrees of familiarity with the strategy, which supports hypothesis 3. It is possible that the more CEUs an SLP takes in the realm of dementia, the more likely the exposure to approach names, such as errorless learning. The less than 10 CEU group was also significantly less familiar with reminiscence therapy, which provides further support to this possible conclusion (i.e., CEUs give SLPs exposure to terminology). Significant differences also existed between participants' familiarity with errorless learning based on the percentage of their caseload containing PWD (i.e., 0 to 40% versus 40% to 100%). A potential explanation of this finding is that when an SLP has a higher percentage of PWD on their caseload, they engage in more research about appropriate treatment strategies than an SLP who only has a small portion of PWD (e.g., 10%).

Interestingly, individuals who took a dementia-related course were also significantly less familiar with errorless learning, which contrasts with what was hypothesized (i.e., SLPs would gain familiarity of approaches in a dementia course). The difference could be attributed to the wide variation in when the SLPs attended graduate school, which ranged from 5 to 30 years ago. It is likely that not only the content covered in a dementia course has changed over that time frame, but that there would be university-based differences in the content covered to begin with. It should also be noted that the dementia course group contained only four participants and may not be representative of a larger sample of SLPs who took a dementia course.

There were two group comparisons that resulted in statistically significant differences between the frequency of use of treatment strategies. Participants with less than ten years' experience as an SLP were more likely to use errorless learning "often," compared to the more than 10-year group who were more likely to "always" use it. Secondly, participants with fewer than 10 CEUs were significantly more likely to only "sometimes" use external memory aids, compared to the more than 10 CEU group who indicated more frequent use. This result provides further evidence that the content of CEUs may make a difference for SLPs (i.e., SLPs who take more dementia focused CEUs may be exposed to content that causes them to implement external memory aids more often). These findings (i.e., differences based on years of experience and number of CEUs) support hypothesis 3 which predicted SLPs with more experience and more CEUs would engage in the top five strategies more frequently.

Despite these significant results based on familiarity of errorless learning and reminiscence therapy, most group comparisons (i.e., 8 out of 11) did not indicate a difference in SLPs' familiarity of treatment strategies. This was also the case when considering the frequency of use of top-five strategies, where 9 out of 11 group comparisons did not indicate significant results. There are instances where these findings support what was originally hypothesized (i.e., no differences would be found): (a) population density, (b) geographical region, and (c) work setting. However, a majority of these findings go against what was hypothesized (i.e., differences would be found): (a) level of preparedness, (b) dementia-related confidence, (c) years of experience with PWD, (d) journals/CEUs vs. social media, peers, and/or textbooks, (e) percentage of caseload PWD, and (f) taking a dementia related course.

Finally, the statistical results suggest that SLPs in rural or urban areas may not differ in their perception of availability of resources in their practice in general and within the realm of dementia, which does not support hypothesis 5 (i.e., rural SLPs will report having an inadequate amount of resources compared to urban SLPs). However, this finding contrasts with what was found in the qualitative portion of this study. For all interviewees who mentioned an impact of living in a rural area, all had negative connotations in relations to resources (i.e., availability of a neuropsychologist and support for families). Thus, though it could not be statistically concluded from the survey, discrepancies may still exist between rural and urban settings in the availability of dementia resources in general and not necessarily specific to the field of speech pathology.

EBP and Perceived Barriers

As previously described, one purpose of this study was to determine the potential sources of a gap between SLPs and their ability to engage in EBP. This research question can be partially answered when analyzing the results of the (a) EPIC EBP questions, (b) resource questions, and (c) barriers to practice questions. Out of all EPIC questions, SLPs rated the lowest confidence in completing and analyzing details of external literature (e.g., analyzing the statistical properties of tests done in research studies) (Salbach & Jaglal, 2011). Survey participants tended to rate higher confidence levels for client-centered or clinician-centered practices (e.g., asking a patient about his or her needs or evaluating the effects of intervention) (Salbach & Jaglal, 2011). The lack of confidence in participants' ability to analyze external literature may be due to many SLP's lack of utilizing the external literature for their dementia practice to begin with. Only 45% of survey participants reported using research journals as a resource for dementia practice in the past year. This result was noticeably less than the 62% of participants from Paul and Mehrhoff (2015) who used published research evidence to influence the treatments they use, but significantly more than the 17% of SLPs in Zipoli and Kennedy (2005). Survey participants' reported barriers to implementing EBP provide some potential insight to the low use of external literature. Many participants disclosed that a lack of applicability of the research to clients and lack of access to the literature as a whole are barriers. This suggests that some SLPs wish to see different research than what is currently published or want to have simpler ways to access articles (e.g., access to articles without payment required).

Though not a large portion of participants reported referencing research journals, 91% of participants used CEUs and/or conferences and their colleagues to help guide their practice for PWD. These two resources were also the most frequently marked in Paul and Mehrhoff's study, where 82% of participants marked CEUS/conferences and a smaller portion of participants selected “peers/coworkers” (62%) (2015). One possible reason for such a high percentage of participants selecting CEUs/conferences as a resource is the CEU requirement for maintaining certification through ASHA. Additionally, perhaps CEU/conference speakers present information in ways that are more directly applicable for SLPs (e.g., using “case examples” or video demonstrations of strategies). Since another EBP barrier identified by survey participants in the current study was a lack of applicability of research to clients, presenters who explain application of principles may be a solution for this issue. The high number of participants who used colleagues as a resource highlights that SLPs often have access to colleagues and trust their input. However, the negative implication of this is that SLPs may be over-relying on colleague’s input without verifying accuracy of the information they received.

Additional data gathered on participants’ perceived barriers to dementia practice also informed what affects SLPs’ practice. The most frequently reported source of a barrier were caregivers (e.g., caregiver follow-through), followed by patient-centered (e.g., severity of dementia) barriers, and limitations outside of the patient and caregivers (e.g., Medicare limitations or lack of time). Barriers such as family impacts and funding impacts were also prominent enough in the qualitative data to warrant their own categories. These listed barriers further support Paul and Mehrhoff’s study (2015), where the following types of barriers were most frequently reported: (a) caregiver issues, (b) implementation of therapy (e.g., dementia severity), and (c) funding, billing, and productivity (Paul & Mehrhoff, 2015). These results suggest that barriers to dementia practice for SLPs are multifactorial and may be heavily influenced by the setting of the

SLP. Unfortunately, this illustrates the complexity of perceived barriers, which may limit the ability to make universal improvements for SLPs (i.e., there is not one "perfect solution" that solves the problems raised by SLPs).

CHAPTER 7: CONCLUSIONS AND FUTURE DIRECTIONS

Conclusions

Since the extent of this study was vast, it is important to conclude with a summary of findings as they relate to the hypotheses and research questions. Although the data from this study suggest that SLPs are implementing evaluation and treatment procedures found in the dementia literature, the extent to which they are implementing multiple literature-based procedures is often limited (e.g., only 51% of survey participants use at least three out of the top five treatment strategies in their daily practice).

There are cases in which SLPs are either implementing evaluation procedures that do not align with the external literature or are not frequently implementing evaluation procedures indicated by the literature. In the case in which participants reported using evaluation procedures that were not present in the literature, they often fell within reasonable realm of the scope of practice for SLPs (e.g., considering a PWD's safety). In the cases of SLPs not frequently implementing procedures indicated by the literature in evaluation, it involved a lack of reporting regarding engagement in differential diagnosis and/or a lack of consideration for vision and hearing. This creates an area for concern, as it suggests the presence of a gap between the literature and clinical practice in areas known to affect dementia outcomes (diagnosis and sensory status). A total of 19 treatment strategies were reported that did not arise from the literature. These strategies were organized within four categories: (a) described too broadly know the evidence base (e.g., memory techniques), (b) supported within the realm of speech pathology (e.g., internal memory strategies), (c) supported by some external literature outside of speech pathology (i.e., touch therapy and aromatherapy), or (d) did not have an evidence-base from the terminology provided (i.e., “agree and redirect”).

SLPs with more years of experience (as an SLP and working with PWD) and dementia-related CEUs were significantly less confident in completing two to five dementia-related procedures, suggesting a positive relationship between having more CEUs/years of experience and confidence in practicing with PWD. Statistical analysis also indicated that SLPs with fewer dementia-related CEUs and with fewer PWD on their caseload were significantly more likely to be unfamiliar with 1 to 2 of the top five approaches. The statistical tests completed on the data from the survey indicate that most groups of participants (e.g., rural versus urban SLPs) were similar in their frequency of use of the top-five treatment strategies. However, participants with fewer than 10 years of experience used errorless learning less frequently. Additionally, participants with less than 10 CEUs in the realm of dementia used external memory aids less frequently, which suggests that taking more dementia CEUs may influence SLPs’ practice. Statistical analysis did not indicate any significant differences between urban and rural survey participants in their perception of resource availability of resources to guide their practice (e.g., having access to materials for dementia assessment). However, input from interviewees suggested that there may be a discrepancy between resources available outside the realm of speech pathology (e.g., not having access to a neuropsychologist).

Finally, the qualitative and quantitative results do support that SLPs may be implementing procedures from the literature but are using varying terminology (e.g., reminiscence therapy). Multiple terms for external memory aids in general and more specifically, memory books, were found. There were cases where memory books with different names had similar content (e.g., personal information), but there were instances where content was different (e.g., writing day-to-day events versus writing life stories). The qualitative interviews indicated that SLPs may have differing terminology for Functional Maintenance Plans that are implemented for PWD. Both sections of this study also resulted in the phenomenon that many SLPs are implementing treatment procedures without having terminology to label them with.

Limitations and Future Directions

There were several notable limitations to this project when considering the project as a whole and the quantitative and qualitative portions separately. For both qualitative and quantitative methods, the researcher relied on a convenience sample due to the constraints of recruitment options. In a general sense, SLPs who choose to make themselves public on ASHA Profind, belong to the Neurogenic Communication Disorders SIG, and/or belong to private SLP Facebook groups may differ from other SLPs. The researcher was able to compare the samples (survey participants and interviewees) to the general population of ASHA-certified SLPs. The samples aligned with the population of certified SLPs in the representation of gender, and across many geographical regions (e.g., southern region) and work settings (e.g., “other” non-residential facilities”). However, there were notable differences in some work setting proportions (e.g., home health) and some geographical regions (e.g., Northeast region), which may limit the external validity of results from both sides of the study. Future studies may consider randomized sampling procedures, especially if a more systematic way of obtaining email addresses emerges.

There was a high attrition rate for the survey portion of the study, with 30% of participants who started the survey not completing it. The researcher engaged in statistical testing to determine if differences existed between participants who answered question 38 out of 54 and participants who had dropped out at that time. Although the statistical tests outlined in Table 5.1 did not yield any significant differences between the two groups, none of the demographic groups could be considered equivalent based on WWC guidelines for group equivalence (n.d.). Thus, results should be interpreted with caution, as threats to internal and external validity are applicable. Internal validity may be negatively affected because certain demographics of SLPs became less represented in the results of the survey as participants withdrew, changing the correlations of variables. External validity may also be affected since the sample that completed the entire survey (n = 85) differed from the sample of SLPs who began the survey (n = 114), decreasing the ability to generalize results to the general population of SLPs (Miller & Hollist, 2007). Another limitation from the survey is not knowing the reasoning behind why participants withdrew (e.g., too lengthy versus being uncertain how to respond). For a potentially lower attrition rate, future directions of this research may condense the survey.

Since an online survey method was selected, there is a possibility that participants did not provide meaningful responses (e.g., selecting choices at random), which would have skewed the results. Also, the content validity of the survey was completed with only five SLPs and only one of them has considerable background in dementia assessment and treatment. Thus, the reliability of the interpretation of questions may have been negatively impacted. To combat this, future studies should expand the content validity of the survey measures in terms of number and expertise of the validity experts.

Another limitation was the use of several non-parametric statistical tests completed on the survey data. Since participants' data were utilized for comparisons across multiple demographic variables, limitations of multiple testing are applicable. There was a total of 307 individual statistical tests (i.e., chi-square, Mann-Whitney U, and Kruskal Wallis) completed on the data. Thus, this study is prone to an inflated Type I error rate, or "false positives" due to multiple testing (Ranganathan, Pramesh, & Buyse, 2016). Since the purpose of this study was exploratory in nature, the researcher reported and discussed significant findings at the alpha level of .05. As discussed by Kirk (1984), the researcher wanted to limit the possibility of overlooking any promising findings by making type II errors (i.e., false negatives). Out of the 53 total significant results (alpha level of .05) found in this study, none of the p-values were significant at the adjusted rate of .00017 (i.e., this adjusted rate accounted for the high number of statistical tests completed on the data). Since none of the significant findings (alpha rate .05) remained significant at the adjusted rate, there was a 99.9% chance that at least one of the significant results of this study was merely due to chance (Goldman, 2008).

Moving from quantitative to qualitative limitations, the proposed theory was only based on a total of 10 participants. This may affect the population validity, as participants may not be completely representative of all SLPs who assess and treat PWD. However, saturation was reached in this study during data analysis, which suggests that prominent themes of practice were found from the ten interviewees. Future directions of this research should replicate the interview to determine the extent to which the theory remains grounded within a larger sample. Additionally, follow-up with participants to verify qualitative results was not completed in this study, meaning that participants' ideas may have been subject to misinterpretation by researchers during analysis.

Of additional significance is the natural variance of interviewee's responses or interpretations to interview questions. It is possible that a participant's procedures for dementia evaluation and treatment are more extensive than they described. For example, two participants discussed introducing themselves during an evaluation, but it is likely that the other participants also introduce themselves (i.e., but they did not see this significant enough to mention). Future studies may wish to implement interview procedures where specific follow-up questions are asked when not described by participants (e.g., asking the interviewee "Do you read over a PWD's medical history before the evaluation?" if not already stated by the interviewee).

References

Academy of Neurologic Communication Disorders and Sciences. (n.d.). *Evidence Based Clinical Research.* Retrieved from https://www.ancds.org/evidence-based-clinical-research

Alzheimer’s Association. (2017). 2017 Alzheimer’s disease facts and figures. *Alzheimer’s & Dementia: The Journal of the Alzheimer’s Association*, *13*(4), 325-375. doi:https://doi.org/10.1016/j.jalz.2017.02.001

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

American Speech-Language-Hearing Association. (2005). *Evidence-based practice in communication disorders [position statement]*. Retrieved from www.asha.org/policy.

American Speech-Language-Hearing Association. (2016). *Scope of practice in speech-language pathology*. Retrieved from https://www.asha.org/policy/SP2016-00343/#Definitions

American Speech-Language Hearing Association (2018a). *Dementia*. Retrieved from https://www.asha.org/PRPSpecificTopic.aspx?folderid=8589935289&section=Treatment

American Speech-Language-Hearing Association. (2018c). *Highlights and trends: Member and affiliate counts, year-end 2018*. Retrieved from https://www.asha.org/uploadedFiles/2018-Member-Counts.pdf

American Speech-Language-Hearing Association. (2018d). *Profile of ASHA members and affiliates with PhDs, year-end 2018.* Retrieved from https://www.asha.org/uploadedFiles/2018-Year-End-Counts-PhD-Tables.pdf

Anoop, A., Singh, P. K., Jacob, R. S., & Maji, S. K. (2010). CSF biomarkers for Alzheimer's Disease diagnosis. *International Journal of Alzheimer's Disease, 2010*, 606802. doi: 10.4061/2010/606802

Bahar-Fuchs, A., Clare, L., and Woods, B. (2013a). Cognitive training and cognitive rehabilitation for mild to moderate Alzheimer's disease and vascular dementia. *Cochrane Database Syst. Rev.* 6, CD003260. doi:10.1002/14651858.CD003260.pub2

Bayles, K. A., & Tomoeda, C. K. (2014). *Cognitive-communication disorders of dementia* (2nd ed.). San Diego: Plural Publishing.

Bourgeois, M. (2011). Dementia. In L. L. LaPointe (Ed.), *Aphasia and related neurogenic language disorders (*4th ed, pp. 233-243). New York, NY: Thieme Medical Publishers.

Bourgeois, M. S. (2014). *Memory & communication aids for people with dementia.* Baltimore: Health Professions Press Inc.

Buhr, H., Weissling, K., Fitzgerald-DeJean, D., Harvey, J., & McKelvey, M. (2015, November). *Speech-language pathologists' perspectives on assessment and treatment for individuals with dementia.* ASHA convention, Denver, CO.

Centre for Evidence-Based Medicine. (2001a). *Focusing clinical questions*. Retrieved from http://www.cebm.net/focus_quest.asp

Chapey, R. (2008). *Language intervention strategies in aphasia and related neurogenic communication disorders* (5th ed.). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ:

Lawrence Erlbaum.

Creswell, J. (2013). *Qualitative inquiry & research design* (3rd ed.). Los Angeles, CA: Sage Publishing.

Creswell, J. & Clark, P. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: SAGE Publishing.

Deeks J.J & Higgins J. P. T. (2010). *Statistical algorithms in review manager 5*. Retrieved from http://ims.cochrane.org/

Dodd, B. (2007). Evidence-based practice and speech-language pathology: Strengths, weaknesses, opportunities and threats. *Folia Phoniatrica et Logopaedica, 59*(3), 118-129. doi: 10.1159/000101770

Dollaghan, C. A. (2007). *The handbook for evidence-based practice in communication disorders.* Baltimore, MD: Paul H. Brookes Publishing.

Dourado, C. & Laks, J. (2016). Psychological interventions for neuropsychiatric disturbances in mild and moderate Alzheimer's disease: Current evidences and future directions. *Current Alzheimer Research, 13*(10), 1100-1111. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/27468911

Ferguson, C. J. (2009). An effect size primer: A guide for clinicians and researchers. *Professional Psychology: Research and Practice, 40*(5), 532-538. doi:10.1037/a0015808

Goldman, M. (2008). *Why is multiple testing a problem?* Retrieved from https://www.stat.berkeley.edu/~mgoldman/Section0402.pdf

Grill, J. D., Apostolova, L. G., Bullain, S., Burns, J. M., Cox, C. G., Dick, M., … Karlawish, J. (2017). Communicating mild cognitive impairment diagnoses with and without amyloid imaging. *Alzheimer's Research & Therapy*, 9, 1–8. https://doi-org.libproxy.unl.edu/10.1186/s13195-017-0261-y

Health Resources & Services Administration (2018). *Defining rural population.* Retrieved from https://www.hrsa.gov/rural-health/about-us/definition/index.html

Hegde, M. N. & Freed D. (2016). *Assessment of communication disorders in adults: Resources and protocols* (2nd ed.). San Diego, CA: Plural Publishing.

Holmes, C., Hopkins, V., Hensford, C., MacLaughlin, V., Wilkinson, D., & Rosenvinge, H. (2002). Lavender oil as a treatment for agitated behaviour in severe dementia: A placebo controlled study. *International Journal of Geriatric Psychiatry, 17*(4), 305–308. doi: 10.1002/gps.593

Hulme, C., Wright, J., Crocker, T., Oluboyede, Y., & House, A. (2010). Non-pharmacological approaches for dementia that informal carers might try or access: A systematic review. *International Journal of Geriatric Psychiatry*, *25*(7), 756–763. doi:10.1002/gps.2429

Jain, S., & Mills, P. J. (2010). Biofield therapies: Helpful or full of hype? A best evidence synthesis. *International Journal of Behavioral Medicine*, *17*(1), 1–16. doi: 10.1007/s12529-009-9062-4

Jimbo, D., Kimura, Y., Taniguchi, M., Inoue, M., & Urakami, K. (2009). Effect of aromatherapy on patients with Alzheimer's disease. *Psychogeriatrics*, *9*(4), 173–179. doi: 10.1111/j.1479-8301.2009.00299.x

Loi, S. M. & Lautenschlager, N. T. (2015). Dementia literacy in older adults. *Asia-Pacific Psychiatry*, 7(3), 292-297. doi:10.1111/appy.12153

Liu, X. S. (2015). Common Language Effect size for multiple treatment comparisons. *Measurement & Evaluation in Counseling & Development*, *48*(3), 238–243. https://doi-org.libproxy.unl.edu/10.1177/0748175615578739

Kirk, R. (1984) *Elementary statistics* (2nd Ed.). Monterey, CA: Brooks/Cole Publishing

Martella, R. C., Nelson, J. R., Morgan, R. L., and Marchand-Martella, N. E. (2013). *Understanding and interpreting educational research.* New York, NY: The Guilford Press.

McGraw, K. & Wong, S. P. (1992). A common language effect size statistic, *Psychological Bulletin, 111*(2) 361-365. Retrieved from http://core.ecu.edu/psyc/wuenschk/docs30/CL.pdf

McHugh, M. L (2012). Interrater reliability: the kappa statistic, *Biochem Medica*, 22(3), 276-282. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/23092060

Miller, R. B., & Hollist, C. S. (2007). Attrition bias. In N. J. Salkind (Ed.) *Encyclopedia of Measurement and Statistics, Volume 1* (pp. 57-60). Thousand Oaks, CA: Sage.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D.G., & The PRISMA Group. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med 6*(7): e1000097. doi:10.1371/journal.pmed1000097

Mount, A. & Weissling, K. (2017, April). *Speech-language pathologists' perspectives on assessment and treatment of individuals with dementia: An extended review*. Undergraduate Research Spring Fair, University of Nebraska-Lincoln.

National Institute on Aging. (2015). *Alzheimer's disease genetics fact sheet.* Retrieved from https://www.nia.nih.gov/health/alzheimers-disease-genetics-fact-sheet

Olswang, L. & Prelock, P. (2015). Bridging the gap between research practice: Implementation science. *Journal of Speech, Language, and Hearing Research, 58*(6), 181-26. doi: 10.1044/2015_JSLHR-L-14-0305.

Papathanasiou, I. & Coppens, P. (2016*). Aphasia and related neurogenic communication disorders* (2nd ed.). Sudbury, MA: Jones & Bartlett Learning.

Paul, N., & Mehrhoff, J. (2015). Descriptive analysis: Survey of direct and indirect interventions for persons with dementia-based communication disorders. *Perspectives on Neurophysiology & Neurogenic Speech & Language Disorders, 25*(4), 125-141. Retrieved from https://ajslp.pubs.asha.org/doi/full/10.1044/nnsld25.4.125

Paul, R. (2014). *Introduction to clinical methods in communication disorders* (3rd ed.). Baltimore, MD: Paul H. Brookes Publishing.

Raetz, J. (2013). A nondrug approach to dementia. *The Journal of Family Practice, 62*(10), 548-557. Retrieved from https://www.mdedge.com/familymedicine/article/77907/neurology/nondrug-approach-dementia

Ranganathan, P., Pramesh, C. S., Buyse, M. (2016). Common pitfalls in statistical analysis: The perils of multiple testing, *Perspectives in Clinical Research, 7*(2), 106-107. doi: 10.4103/2229-3485.179436

Ratner, N.B. (2006). Evidence-based practice: An examination of its ramifications for the practice of speech-language pathology. *Language, Speech, and Hearing Services in Schools, 27*(4), 257-267. doi: 10.1044/0161-1461(2006/029)

Rea, L. M., & Parker, R. A. (1992). *Designing and conducting survey research: A comprehensive guide*. San Francisco: Jossey-Bass Publishers.

Salbach, N. M., & Jaglal, S. B. (2011). Creation and validation of the evidence-based practice confidence scale for health care professionals. *Journal of Evaluation in Clinical Practice, 17*(4), 794-800. doi:10.1111/j.1365-2753.2010.01478.x

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., & Jinks, C. (2017). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Qual Quant, 52,* 1893-1907. Retrieved from https://link.springer.com/article/10.1007/s11135-017-0574-8

Scales, K., Zimmerman, S., & Miller, S. J. (2018). Evidence-based nonpharmacological practices to address behavioral and psychological symptoms of dementia. *Gerontologist*, *58*, S88–S102. doi:10.1093/geront/gnx167

Strauss, A. & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage Publishing.

Takeda, A., Watanuki, E., & Koyama, S. (2017). Effects of inhalation aromatherapy on symptoms of sleep disturbance in the elderly with dementia. *Evidence-Based Complementary & Alternative Medicine (ECAM)*, *2017*, 1–7. doi: 10.1155/2017/1902807

Tay, S. Y., Davison, J., Jin, N. C., & Yap, P. L. K. (2015). Education and executive function mediate engagement in advance care planning in early cognitive impairment. *Journal of the American Medical Directors Association*, *16*(11), 957–962. doi: 10.1016/j.jamda.2015.05.014

Tomczak, M. & Tomczak, E. (2014). The need to report effect size estimates revisited. An overview of some recommended measures of effect size. Trends in Sports Sciences, *1*(21), 19-25. Retrieved from http://tss.awf.poznan.pl/files/3_Trends_Vol21_2014__no1_20.pdf

United States Census Bureau. (n.d.). *Census regions and divisions of the United States*. Retrieved from https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf

Urquhart, C. (2013). *Grounded theory for qualitative research: A practical guide*. London, UK: Sage.

Werd, M.M., Boelen, D., Rikkert, M.G., Kessels, R.P. (2013). Errorless learning of everyday tasks in people with dementia. *Clinical Interventions in Aging*, 8, 1177–1190. doi: 10.2147/CIA.S46809

What Works Clearinghouse. (2017). *What works clearinghouse: Standards handbook version 4.0*. Retrieved from https://ies.ed.gov/ncee/wwc/Handbooks

What Works Clearinghouse (n.d.). *WWC standards brief: Baseline equivalence*. Retrieved from https://ies.ed.gov/ncee/wwc/Docs/referenceresources/wwc_brief_baseline_080715.pdf

Woods, B., Spector, A., Jones, C., Orrell, M., Davies, S. (2005). Reminiscence therapy for dementia. *Cochrane Database Syst.,* (2). doi: 10.1002/14651858.CD001120.pub2

Zhang, J. & Yu, K. F. (1998). What's the relative risk? A method of correcting the odds ratio in cohort studies of common outcomes. *Special Communications*, *280*(19), 1690-1691. Retrieved from https://jamanetwork.com/journals/jama/fullarticle/188182

Zipoli, R. P., & Kennedy, M. (2005). Evidence-based practice among speech-language pathologists: Attitudes, utilization, and barriers. *American Journal of Speech-Language Pathology*, *14*(3), 208-220. doi:10.1044/1058-0360(2005/021)

Appendix A

Interview Questions from Buhr et al. (2015) and Mount and Weissling (2017)

Background Information

1. What is your gender?
2. How old are you?
3. From where did you get your master's? Do you have a doctoral degree? If yes, where did you obtain it? What kind of doctoral degree is it?
4. What certifications do you hold? (CCC, ANCDS, etc.)
5. How many years of experience as a speech-language pathologist do you have in total?
6. How many years of years of experience do you have in dementia assessment and treatment?
7. In what region of the United States do you work? (Northeast, South, Midwest, or West)
8. Do you work in a rural or urban setting? Or both?
9. Approximately how many CEUs have you obtained in the last 5 years that address dementia assessment, intervention, techniques, etc.?
10. In what setting do you treat the majority of your dementia patients? (General Medical Hospital, long-term care hospital [LTAC], rehabilitation hospital, skilled nursing facility [SNF], home health agency, outpatient, or other.)
11. What sort of funding do you typically work with? Medicare A or Medicare B? Private insurance? Private fee for service?

Qualitative

1. What assessment and treatment resources do you most commonly use?
2. Overall, what would you say is your primary approach to dementia evaluation/intervention?

a. Possible follow-up questions if not addressed above:

i. What is your theory/philosophy?

ii. Do you conduct groups? If so, how often are people in group?

iii. Do you see people individually; if so, what is the average number of sessions per week and for how many weeks?

iv. Do you use functional maintenance plans; if yes, how often do you adjust plans or engage in monitoring activities?

v. Do you conduct standardized assessments or dynamic assessments?

3. Imagine you just received a referral for an individual with probable Alzheimer's, walk me through the steps of how you

would handle this assessment from a cognitive-linguistic perspective?

   i. If the participant asks for more specific information (e.g., age, setting, problems identified) provide an example, but encourage them to describe *how* the specifics may change their practice pattern. For example, if they ask for an age, provide an example (65), but ask *how* age changes the way they carry out treatment.

4. Can you think of an instance or situation where input from a patient (or member of their family) changed the way you engage in dementia practice? (If needed: Could you please give expand on how it changed your practice)?
5. Can you think of an instance or situation where input from a patient (or member of their family) changed your course of therapy?
6. Does the type of dementia someone has change the way your address assessment and treatment? If so, how?
7. Is there anything we have missed that you want to tell us about your clinical practice with people who have dementia?

Likert

1. How comfortable are you assessing an individual with dementia?

Very Uncomfortable   Uncomfortable   Not Applicable   Comfortable   Very Comfortable

2. Are you familiar with spaced retrieval practices (see descriptions, as needed)? (if yes continue to #3, if no continue to #4)

3. How often do you use spaced retrieval?

Never   Sometimes   Not Applicable   Often Always

4. Are you familiar with reminiscence therapy (see descriptions, as needed)? (if yes continue to #5, if no continue to #6)

5. How often do you use reminiscence therapy?

Never   Sometimes   Not Applicable   Often Always

6. Are you familiar with Montessori-based interventions (see descriptions, as needed)? (if yes continue to #7, if no continue to #8)

7. How often do you provide Montessori-based interventions?

Never   Sometimes   Not Applicable   Often Always

8. Are you familiar with simulated presence therapy (see descriptions, as needed)? (if yes continue to #9, if no continue to #10)

9. How often do you use simulated presence therapy?

Never Sometimes Not Applicable Often Always

10. Are you familiar with caregiver-administered cognitive stimulation (see descriptions, as needed)? (if yes continue to #11, if no continue to #12)

11. How often do you utilize caregiver-administered active cognitive stimulation?

Never Sometimes Not Applicable Often Always

12. Are you familiar with computer-assisted cognitive interventions (CACIs) (see descriptions, as needed)? (if yes continue to #13, if no continue to #14)

13. How often do you use computer-assisted cognitive interventions (CACIs)?

Never Sometimes Not Applicable Often Always

14. How often do you provide specific caregiver training (see descriptions, as needed)?
Never Sometimes Not Applicable Often Always

A. Can you estimate, in total (across all intervention sessions), the time it takes for you to provide caregiver training?

5 minutes ~15 minutes ~30 minutes ~45 minutes 60+ minutes

B. Can you describe what your caregiver training sessions look like? For example, what topics do you commonly cover? How often do you do caregiver training daily, weekly, once per client?

15. How often do you use memory aids when you treat people with dementia? If response to #15 is "often" or "always" proceed with A:

Never Sometimes Not Applicable Often Always

A. Please describe the memory aids that you use.

Appendix B
Coding Themes from Buhr et al. (2015)

- Assessment reasoning
- Standardized assessment
- Patient history
- Referral Process
- Treatment goals
- Treatment plans
- Treatment reasoning
- Staging
- Level
- Safety-fall prevention
- Perspective
- Safety
- Functional
- Patient needs
- Caregiver
- Family
- Collaborating
- Education
- SLP Advocate

<u>Open Coding</u>

Assessment

- Assessment reasoning
- Standardized assessment
- Patient history

Treatment (Direct)

- Referral process
- Treatment goals
- Treatment plans
- Treatment reasoning
- Staging
- Level
- Safety-fall prevention
- Perspective
- Safety
- Functional
- Patient needs

Treatment (Indirect)

- Caregiver
- Family
- Collaborating
- Education

Limitations

- SLP advocate

<u>Axial Coding</u>

Assessment

1. Criterion-references: Staging
    a. Why
2. Observation-informal-interviews-case history
    a. Why
3. Standardized Assessment
    a. Why

Treatment (Direct)

1. Individuality-Personalization
2. Referral Process
    a. Functional based
    b. Impairment-based
3. Safety: Fall prevention
4. Staging: Leveling
5. Treatment Reasoning (WHY)

Treatment (Indirect)

1. Collaborating
2. Education
3. Family

Limitations

1. SLP Advocate
2. Unfamiliar Terms

<u>Selective Coding</u>

Appendix C
Coding Themes from Mount and Weissling (2017)

1. Assessment
    a. Standardized Assessments
        i. Why
    b. Informal Assessments
        i. Why
        ii. Medical Records/Case History
        iii. Family/Caregiver/Patient Interviews
        iv. Observational Data
        v. Dynamic Assessment
2. Treatment Direct
    a. Individuality
    b. Refferal process
        i. Functional-Based
        ii. Impairment-Based
    c. Safety Promotion
        i. Safety-Fall
        ii. Other-Safety Promotion
    d. Staging-Leveling
    e. Treatment Reasoning
3. Treatment Indirect
    a. Collaborating
    b. Education
    c. Family Caregiver Training
    d. Family Input
4. Limitations
    a. Regulations
    b. Other Personnel Barriers
    c. SLP Advocate
    d. Unfamiliar Terms

Appendix D

Likert Scale results from Mount and Weissling (2017)

Therapy Type	**% Familiar****	**Frequency**
Reminiscence	90%	Often (3.1)
Spaced Retrieval	100%	Often (3.1)
Montessori-based	80%	Sometimes (2.6)
Caregiver Administered Cognitive Stimulation	30%	Sometimes (2.3)
Computer-Assisted Cognitive	60%	Never (1.7)
Simulated Presence (CACS)		
	30%	Never (1.3)

**the percentage of participants who were familiar with the therapy and did not need a definition read

Appendix E
Results from the Literature Review of Assessments

Number of Sources	Content
6	Mini Mental
5	Formal/Standardized Measures and Screens • Global Deterioration Scale • ABCD Other • Consider/rule out sensory impairments (hearing/vision)
4	Formal/Standardized Measures and Screens • Alzheimer's Disease Assessment Scale • Wechsler Memory Scale • Functional Linguistic Communication Inventory Other • Review medical history/changes in case history • Screen depression
3	Formal/Standardized Measures and Screens • MOCA • Clinical Dementia Rating Scale • Consortium to Establish a Registry for Alzheimer's Disease (CERAD) • Rivermead Behavioral Memory Test • Boston Diagnostic Aphasia Examination • Clock Drawing Test Other • Use of Hachinski Ischemic Scale to help differential diagnosis of vascular disease/dementia • Look at educational level • Look at current medications Engage in an interview with the family/caregiver and/or patient (subjective report of problems)
2	Formal/Standardized Measures and Screens • Western Aphasia Battery • Repeatable Battery for Assessment of Neuropsychological Status • Communication Abilities in Daily Living-2 • Activities of Daily Living Questionnaire • Assess generative naming/verbal fluency abilities • Controlled Oral Word Association Test • SLUMS • Wechsler Adult Intelligence Scale • Mini-Cog • Addenbrooke's Cognitive Examination Revised (ACE-R) • Rowland Universal Dementia Assessment Scale • Depression: Hamilton Rating Scale • Depression: Beck Depression Inventory • Dellis-Kaplan Executive Function System

	• Other • Consider Minimum Data Set • Collaborative diagnostic/evaluation is required • Consider cultural/linguistic diversity factors • Analyze discourse production to determine severity/potential type Screening/informal test of reading and reading comprehension
1	Formal/Standardized Measures and Screens • Burns Brief Inventory of Communication and Cognition • Alzheimer’s Quick Test • The Cambridge Cognitive Examination • Severe Impairment Battery • The Neuroassessment Battery • Ross Information Processing Assessment • Test of Everyday Attention • Digit Span • Telephone Test • Sentence Repetition Test • Pyramids and Palm Trees Test • Recognition Span Test • Doors and People • The Communication Outcome Measure of Functional Independence • ASHA-Functional Assessment of Communication Skills • Behavioral Pathology in Alzheimer’s Disease Rating Scale • Cohen-Mansfield Agitation Inventory • Nursing Home Behavior Problem Scale • Multi-Dimensional Observation Scale for Elderly Subjects • Alzheimer Disease- Related Quality of Life • Quality of Life Assessment Schedule • Dementia Quality of Life Scale • Quality of Life-AD • Geriatric Center Affect Rating Scale • FAS Verbal Fluency • Short Portable Mental Status questionnaire • Communication/Environment Assessment and Planning Guide • CLQT • Progressive Aphasia Severity Scale for PPA • Scales of Adult Independence, Language, and Recall • Buschke Selective Reminding Test • Memory Impairment Screen • 7 minute Screen • Wisconsin Card Sorting Test • California Verbal Learning Test (CLVT) • Informant questionnaire on Cognitive Decline in the Elderly (IQCODE) • Blessed Test of Information, Memory, and Concentration (BMIC) • Syndrom Kurtztest • Benton Revised Visual Retention Test • Brief-Cognitive Rating Scale • Dementia Deficits Scale • Discourse Abilities Profile

- Erlangen Test of Activities of Daily Living (ETAM)
- Memory Assessment Scales
- Progressive Deterioration Scale
- Rapid Cognitive Screen
- Rapid Dementia Screening Test
- Six Item Cognitive Impairment Test
- Visual Cognitive Assessment Test
- The Cognitive Abilities Screening Instrument- Short Form (CASI-S)
- Brief Cognitive Screening Battery
- Rey Auditory Verbal Learning Test (RAVLT)
- Functional Assessment Staging (FAST)
- Pleasant Events Schedule-AD, Discomfort Scale- Dementia of the Alzheimer Type (DS-DAT)
- Positive Response Schedule
- Zung Self-Rating Depression Scales
- Dementia Mood Assessment Scale
- Cornell Scale for Depression in Dementia
- Environmental & Communication Assessment Toolkit for Dementia Care
- Bedford Alzheimer Nursing Severity Scale (BANS-S)
- Language: Boston Naming Test or semantic verbal fluency test

Other

- Consideration: Data obtained to address levels of function (ICF)
- Differential Diagnostic factors: delirium, thyroid dysfunction, alcohol abuse, B12 deficiency, infection, Frontotemporal lobar degeneration, Lewy-Body, Vascular, Alzheimer's, Creutzfeidt-Jacob
- During case history: behavioral problems
- Dynamic Assessment
- Observation: informal yet systematic observation
- Counseling: conclude assessment with counseling of scores/answer questions
- Using writing to differentially diagnose language-variant PPA, AD, and MCI
- Assessment of recognition memory span to differentiate DLB and AD
- Pragmatics and discourse
- Inadequate use of referents
- Repetition of topics or questions
- Paucity of speech
- Difficulty with turn-taking
- Non-verbal skills
- Difficulties associated with topic maintenance or topic change
- Confabulation or evidence of memory disturbance
- Verbal fluency and visual confrontation naming
- Intelligibility
- Sequencing ability
- Verbal reasoning
- The environment
- Comprehension at the sentence and word level
- Usually examine: orientation, memory, praxis, and language
- Visit with PWD to give overview of session

Appendix F

Qualitative Interview Questions

1. Overall, how would you describe your approach to dementia evaluation?
    a. Possible follow-up questions if not addressed above:
        i. Do you conduct standardized assessments or dynamic assessments?
        ii. What assessment resources do you most commonly use?

2. Imagine you just received a referral for an individual with probable Alzheimer's, walk me through the steps of how you would handle this assessment from a cognitive-linguistic perspective?
        i. If the participant asks for more specific information (e.g., age, setting, problems identified) provide an example, but encourage them to describe *how* the specifics may change their practice pattern. For example, if they ask for an age, provide an example (65), but ask *how* age changes the way they carry out treatment.

3. Overall, what would you say is your approach to dementia intervention?
    a. Possible follow-up questions if not addressed above:
        i. What is your theory/philosophy?
        ii. Do you conduct groups? If so, how often are people in group?
        iii. Do you see people individually; if so, what is the average number of sessions per week and for how many weeks?
        iv. Do you use functional maintenance plans; if yes, how often do you adjust plans or engage in monitoring activities?
4. What are the most frequent treatment approaches or principles that you use?
    a. If needed, the researcher can email participant a list of treatment approaches.
    b. Are there treatment approaches that you specifically avoid, due to your client pool?
    c. How do you measure outcomes for individuals with dementia?

5. Can you think of an instance or situation where input from a patient (or member of their family) changed the way you engage in dementia practice? (If needed: Could you please expand on how it changed your practice)?
6. Does the type of dementia (Alzheimer's, Lewy Body, etc.) someone has changed the way you address assessment and treatment? If so, how?
7. Is there anything we have missed that you want to tell us about your clinical practice with people who have dementia?

Appendix G
Survey Questions

Demographic Questions:

1. What is your gender?

2. Which region of the United States do you currently practice in?

  - Northwest: WA, OR, ID, WY, MT, AK
  - Southwest: CA, NV, UT, AZ, NM, CO, HI
  - Midwest: ND, SD, NE, KS, MN, IA, MO, WI, IL, IN, OH, MI
  - Northeast: PA, NY, NJ, CT, MA, RI, VT, NH, ME
  - South: OK, TX, AR, LA, DE, MS, TN, AL, KY, GA, FL, SC, NC, VA, WV, MD

3. Which state do you currently practice in?

4. What is the highest degree that you have obtained?

- Master of Science (M.S.)
- Master of Arts (M.A.)
- Clinical Doctorate in Speech-Language Pathology (GCD-SLP)
- Doctoral PhD. (Research)
- Other (please specify): ______________________

5. What certifications do you hold? Select all that apply. If not listed, please indicate additional certifications under the “other” box.

- Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP)
- Board Certification in Neurologic Communication Disorders and Sciences (BC-ANCDS)
- Certified Brain Injury Specialist (CBIS)
- Lee Silverman Voice Therapy (LVST)
- Board Recognized Specialist in Swallowing and Swallowing Disorders (BRS-S)
- VitalStim Therapy
- Other: ____________________________

6. How many years have you been a practicing clinician (including clinical fellowship year)?

7. How many years have you assessed and treated individuals with dementia (including clinical fellowship year)?

8. Approximately what percentage of individuals with dementia on your caseload are seen for cognitive/linguistic therapy (i.e., don't include individuals with dementia that you see ONLY for dysphagia)?

- 1-20%
- 21-40%
- 41-60%
- 61-80%
- 81-100%

9. What setting do you currently serve the majority of your dementia patients? Please indicate all that apply:

- General Medical Hospital
- Long-term care hospital (LTAC)
- Rehabilitation hospital
- Skilled nursing facility (SNF)
- Home health agency
- Outpatient
- University
- Other.

10. Do you currently work in an urbanized area, urban cluster, or rural area? Select all that apply (i.e., select more than one if you travel to more than one of these settings).
Definitions:
Urbanized Area (50,000+ people)- Within a major city

Urban Cluster: (2,500- 50,000 people)

Rural- (Town/city less than 2,500 people)
11. Approximately how many CEUs have you obtained in the last 5 years that address dementia assessment, intervention, techniques, etc. that are OUTSIDE of training received through your employer? (Note: If your employer pays for CEUs, but does not provide the instruction, include them in this estimate)

- None
- 1-10
- 11-20
- 20-30
- 30-40
- 41-50
- 51-60

12 Approximately how many hours of training have you received FROM YOUR EMPLOYER in the last 5 years that address dementia assessment, intervention, and techniques? (Note: If your employer pays for CEUs, but does not provide instruction, do NOT include them in this estimate)

- None
- 1-10
- 11-20
- 20-30
- 30-40
- 40+

12. Did you take a dementia-focused course in your graduate program?

- Yes
- No
- I did not take a specific dementia course, but I learned about dementia in a more general course (e.g. cognitive-communication disorders)

13. To what extent did you feel prepared by your graduate program (i.e., classes and clinical experiences) to properly assess and treat patients with dementia?

Very unprepared Moderately unprepared Neutral Moderately prepared Very prepared

14. Identify how likely you are to use each of the following resources when you have an individual with dementia on your caseload, to help guide your practice?

Very unlikely Un-likely Neutral Likely Very Likely

- Conferences/Continuing Education Credits
- Research Journals
- Peers/other professionals
- Comprehensive textbooks/literature
- Social Media (Pinterest, Facebook groups)- specify

15. Select the resources that you have used within the past year to help guide your dementia treatment. You can select more than one option.

- Conferences/Continuing Education Credits
- Research Journals
- Peers/other professionals
- Comprehensive textbooks/literature
- Social Media (Pinterest, Facebook groups)- specify
- Other (write-in)

16. Do you ever conduct therapy in groups for individuals with dementia? ____ Yes ____ No

What kind of group is it (e.g., cognitive stimulation group)? Please list all types of groups if there's more than one. If the group has a variety of therapy goals, please briefly write the overarching goals of the group.

17. What behaviors/cognitive functions are you targeting in treatment for most patients with dementia? Select all that apply.

- Social- interacting with family members/helping family members interact with them
- Safety- Are they transferring safely; what are environmental risks?
- Reality- Helping the individual get oriented with the where/what/who/why/how of their situation
- Memory
- Executive functioning (e.g., problem solving)
- Attention
- Other

18. To what degree does the type (e.g., vascular, Alzheimer’s, Lewy Body) of dementia an individual has (if known), change the way you assess or treat clients?

Does not change Somewhat changes Changes Substantially Changes

19. Pretend you have an hour to assess an individual with probable Alzheimer's. Based on your daily practice, drag the assessment elements (under "items") to either the "What I would do" box or the "What

I would NOT do" box. Rank your priority of the necessity of the items in the "l'd do" box by rearranging the order of them.

- Standardized test: specify
- Family interview (assume family is available)
- Interview patient alone
- Interview family with the patient
- Screeners
- Informal tests: specify
- Refer for hearing evaluation/provide hearing screening
- Collaborate with OT/PT/Nursing
- Observation in natural environments
- Complete dynamic testing (e.g. see how they react to visual aids)
- Differential Diagnosis (e.g., ensuring their diagnosis is dementia, and if so, which type?)
- Case history
- Medical history

Comments: ______________________________

20. Other than dementia, what other concerns do you consider when evaluating someone with possible dementia?

How confident are you in your ability to (Not confident 0-100 Completely confident):

21. …identify a gap in your knowledge related to a patient or client situation (e.g. history, assessment, treatment?)

22. …formulate a question to guide a literature search based on a gap in your knowledge?

23. …effectively conduct an online literature search to address the question?

26. …interpret study results obtained using statistical tests such as t-tests or chi-square tests?

27. …interpret study results obtained using statistical procedures such as linear or logistic regression?

28. …determine if evidence from the research literature applies to your patient's or client's situation?

29. …ask your patient or client about his/her needs, values and treatment preferences?

30. …decide on an appropriate course of action based on integrating the research evidence, clinical judgement and patient preferences?

31. …continually evaluate the effect of your course of action on your patient's outcomes?

32. …assess an individual with dementia?

33. …clinically treat an individual with mild dementia?

34. …clinically treat an individual with moderate dementia?

35. …clinically treat an individual with severe dementia?

36. …treat an individual with dementia presenting with severe behaviors (i.e., aggressive and combative)

37. …provide counseling to family members of an individual with dementia

38. Are you familiar with errorless learning (e.g., spaced retrieval practices)?

   a. If YES: How often do you use spaced retrieval?
      i. Never, but it could be applicable to my caseload/setting
      ii. Sometimes
      iii. Often (Monthly)
      iv. Always (Daily/Weekly)
      v. Never, but it could be applicable to my caseload/setting
      vi. It is not applicable to my caseload/setting
   b. If NO: definition- Read the following definition of errorless learning:
      "the principle of Errorless learning is used as an instructional method for individuals with compromised memory and executive functions and may involve any intervention aimed at reducing the number of errors throughout the various stages of learning. This error reduction may be achieved by any combination of graded tasks where the task at hand is broken down into small steps, immediate error correction, encouraging participants not to guess, modeling the task steps, fading cues and prompts when steps are successfully performed (vanishing cues), or rehearsal of the retrieval of information that is taught with increasing time intervals (spaced retrieval) (Werd, Boelen, Rikkert, Kessels, 2013, p. 2)."
      Is this a treatment you do utilize? If so, do you call it by a different name?
      i. No, it is still unfamiliar
      ii. Yes, I do this and call it errorless learning/spaced retrieval
      iii. Yes, I do this, but call it something else: Please specify:______________

39. Are you familiar with reminiscence therapy?

   c. If YES: How often do you use spaced retrieval?
      i. Never, but it could be applicable to my caseload/setting
      ii. Sometimes
      iii. Often (Monthly)
      iv. Always (Daily/Weekly)
      v. Never, but it could be applicable to my caseload/setting
      vi. It is not applicable to my caseload/setting
   d. If NO: Read the following definition of reminiscence therapy:
      "Reminiscence Therapy (RT) involves the discussion of past activities, events and experiences with another person or group of people, usually with the aid of tangible prompts such as photographs, household and other familiar items from the past, music and archive sound recordings. Reminiscence groups typically involve group meetings in which participants are encouraged to talk about past events at least once a week. Life review typically involves individual sessions, in which the person is guided chronologically through life experiences, encouraged to evaluate them, and may produce a life story book (Woods, Spector, Jones, Orrell, & Davies, 2005)."
      "Reminiscence Therapy (RT) is an intervention approach that uses the life history and experience of an individual to improve his or her sense of well-being. RT programs typically involve the discussion of past activities, events, and experiences—using tangible prompts, such as photographs, familiar items, and music from the past. The customized nature and individual focus of reminiscence therapy make it an intervention particularly well suited for individuals from diverse backgrounds”

(ASHA, 2018a). Is this a treatment you do utilize? If so, do you call it by a different name?

    i. No, it is still unfamiliar
    ii. Yes, I do this and call it reminiscence therapy

Yes, I do this, but call it something else: Please specify: ______________

40. Are you familiar with Cognitive stimulation/cognitive rehabilitation therapy?

    e. If YES: How often do you use cognitive stimulation/cognitive rehabilitation?
        i. Never, but it could be applicable to my caseload/setting
        ii. Sometimes
        iii. Often (Monthly)
        iv. Always (Daily/Weekly)
        v. Never, but it could be applicable to my caseload/setting
        vi. It is not applicable to my caseload/setting
    f. If NO: definition- Read the following definition of cognitive stimulation/cognitive rehabilitation:
    "Cognitive stimulation therapy (CST) focuses on actively stimulating and engaging individuals with dementia by using theme-based activities in an optimal learning environment (typically, in a small-group setting)" (ASHA, 2018a).
    "Cognitive training typically involves guided practice on a set of standardized tasks designed to reflect particular cognitive functions, such as memory, attention, or problem solving. Tasks may be presented in paper-and-pencil or computerized form or may involve analogs of activities of daily living" (Bahar-Fuchs, Clare, & Woods, 2013).
    g. Is this a treatment you do utilize? If so, do you call it by a different name?
        i. No, it is still unfamiliar
        ii. Yes, I do this and call it cognitive stimulation/cognitive rehabilitation
        iii. Yes, I do this, but call it something else: Please specify:_____________

41. Are you familiar with caregiver training in dementia?

    h. If YES: How often do you use caregiver training?
        i. Never, but it could be applicable to my caseload/setting
        ii. Sometimes
        iii. Often (Monthly)
        iv. Always (Daily/Weekly)
        v. Never, but it could be applicable to my caseload/setting
        vi. It is not applicable to my caseload/setting
    i. If NO: definition- Read the following definition of caregiver training:
    j. "The changes in communication functioning brought about by cognitive decline can significantly affect day-to-day communication, resulting in considerable frustration. Research focused on individuals with AD suggests that training caregivers about dementia and teaching them to use strategies to enhance communication effectiveness may contribute to increased caregiver understanding of communication breakdowns; more successful conversational exchanges; and improved quality of life for the individual with dementia" (ASHA, 2018a). Is this a treatment you do utilize? If so, do you call it by a different name?
        i. No, it is still unfamiliar
        ii. Yes, I do this and call it caregiver training

    iii. Yes, I do this, but call it something else: Please specify: _____________

42. Can you estimate, in total (across all intervention sessions), the time it takes for you to provide caregi
training?

-5 minutes
-~15 minutes
~30 minutes
~45 minutes
60+ minutes
I do not provide caregiver training

43. Are you familiar with using external memory aids?

k. If YES: How often do you use external memory aids?
    i. Never, but it could be applicable to my caseload/setting
    ii. Sometimes
    iii. Often (Monthly)
    iv. Always (Daily/Weekly)
    v. Never, but it could be applicable to my caseload/setting
    vi. It is not applicable to my caseload/setting
l. If NO: definition- Read the following definition of external memory aids:
m. "External memory aids are aimed at helping individuals with memory problems in their day-to-day activities. They include electronic and non-electronic devices, as well as environmental adjustments. Examples include personal digital assistants (PDAs), message boards, clocks, and pictures" (ASHA, 2018a).
n. Is this a treatment you do utilize? If so, do you call it by a different name?
    i. No, it is still unfamiliar
    ii. Yes, I do this and call it external memory aids
    iii. Yes, I do this, but call it something else: Please specify: _____________

44. What do YOU call the external memory aids you use (i.e., how would you refer to them in documentation)?

45. Briefly describe an example of an external memory aid you use frequently.

46. Which of the following treatments have you used for individuals with dementia within the last year (Select all that apply)?

- Reality orientation-
- Simulated Presence
- Montessori Intervention
- Computerized Cognitive Intervention
- Vanishing Cues
- Multidisciplinary Approaches (Walking/Talking programs, exercise and social groups)
- Communication Aids/other AAC
- Validation Therapy

47. How do you measure outcomes in your day to day practice?

48. Briefly (e.g., bulleted list) describe what you consider to be barriers to successful dementia treatment.

49. Briefly (e.g. bulleted list) describe what you consider to be barriers to implementation of evidence-based practice as a whole.

Rate the degree to which you agree with the following statements.

Strongly Disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)

50. Overall, I have enough resources (e.g., materials and funding for assessment/therapy, access to current literature, access to colleagues/other professionals, time, access to continuing education) available to me to enhance my daily practice.

51. I have enough resources to assess my clients with dementia.

52. I have enough resources to treat my clients with dementia.

53. I have colleagues (i.e., other SLPs) with whom I can consult with to give me input in my practice.

54. I have enough opportunities to receive in-person continuing education credits.

Appendix H

Example of Compiled Memos by Interview Question during Open Coding

Question #	Participant 1	2	3	4	…8
1) Approach to assessment	-General Assessment Info (not specific to tests) -formal testing -reasoning behind assessment -assessment reasoning, but with limitation - Diagnosis of dementia (doesn't diagnose), doesn't classify mild, mod, severe; only identify presence what think dementia -formal assessments -Assessment reasoning: start with language even with COG patients - Process of evaluation (where to start) - Stroke (not dementia related)	- Evaluation needs several factors - Getting caregiver input for evaluation/what their day looks like - Emphasizing that 30-60 minutes small part of day - Interviewing family -formal measure - Reasoning behind formal testing: more vantage points of ADL function -eval: skilled observation of ADLs/in activities -Reasoning: get better idea what they're able to process thru/sequence - Advantages of university setting: no billing Disadvantages of not having that in other settings: billing challenges -interview patient(?): yes, involves pt -trend: Interviewing	-feeling: Mention of using evidence based practice- tells need to do standardized assessment -formal assessment -informal measures -talking to caregivers about what they observe -treatment reasoning behind using informal to complement MOCA (formal measures) -not interested in staging from standardized tests -trend: Emphasizing qualitative information of formal measures: amount of struggle, impulsive, awareness of deficits, frustration level -informal measure -informal measures pulled from formal measures: auditory comp, verbal expression, naming, reading	-trend: First step is Formal Assessment - Negative reasoning behind a test: MOCA too lengthy -reasoning: SLUMs gives more information	- Assessment approach: thorough, group approach -formal assessments -assessment selected based on level of patient -1. Assessment: caregiver interview 2. Assessment: interview and address behavior issues -1. Collaboration with OT 2. Distribution of services: OT- ADLs, SLP- communication and behaviors - regular collaboration/communication with OT -Assessment: interview up to caregiver whether include PWD

		patient depends on what level they’re at -trend: Involving patient in interview especially in early stages -trend: Learn their interests Learn what they want to work on Make therapy as functional as possible - Talks about research behind an approach/EBP (assessment) - Formal measure (I think?) - Trend: Testing involving caregiver -Refers to a personal research study where family more accurate than patients in how much change -trend: more functional observation-based assessments			

Appendix I

Categories, Subcategories, their Definitions, and Examples from Open Coding

I. Evaluation

Formal testing: SLP describes using formal testing, either naming a specific test or generally talking about formal measures. This also includes when the SLP describes pulling test questions from formal measures.	**Examples:** "I use the Boston Naming test a lot" "I usually pull questions from the X test." "I might try to do something standardized"

Formal testing reasoning: SLP provides reasoning behind using or not using an assessment.	**Examples:** "I think that test gives you a good idea about their cognition" "I find that test to be too easy for patients, so I don't use it much"

Informal procedures/measures: SLP describes or states use of informal measures (e.g., observation), procedures (e.g., self-introduction), or additional considerations (e.g., diagnosis) in the evaluative process.	**Examples:** "I want to look at their chart and see their medical history" "At the end of the evaluation, I tell the family what we will be targeting in therapy" "I would see if I need to make any additional referrals"

Caregiver input/interviewing family: SLP states he/she utilizes caregiver input and/or interviews caregivers in the evaluation process	**Examples:** "I make sure I interview the family" "I want to get the family's input"

Specific questions/information: SLP specifically states what questions he/she asks or the general information about what he/she is asking caregivers	**Examples:** "I ask the family, "How often do you see those behaviors?"" "I ask the family about whether they have concerns with memory"

Interview patient: SLP indicates he/she interviews the patient or asks the patient questions	**Examples:** "I also ask the patient how they feel about…" "I also want to include the patient and interview them"
Considering safety/behaviors: SLP discusses considering safety or patient behaviors in the evaluative process	**Examples:** "I want to see what their degree of safety is, if they are independent in taking medications" "I then ask caregivers if they have observed any negative behaviors"

Assessment decisions based on level: SLP generally or specifically states that his/her evaluation process changes based on the suspected level the patient is at	**Example:** "If the patient is in the early stages, I don't tend to ask about that"

Evaluation reasoning: when the SLP states the reason why they do a certain evaluation task or what they are looking for in an evaluation task (Note: NOT for specific standardized tests, use "Formal testing reasoning" instead)	**Examples:** "When I observe them, I am looking to see if they interact with other people in the dining room" "I want to do a family interview because I think it's important to get their input" "I want to make sure they get referred for that, because I want to prevent a hospitalization"

Frequency (evaluation): SLP uses a word/short phrase to indicate how frequently he/she does an evaluation task

never (1) maybe/if possible/sometimes/might (2) typically/a lot/probably (3) always (4)

II. Treatment

Top 5 strategy: SLP mentions **using or describes treatment procedures that fall under** one of the following strategies for cognitive-linguistic therapy with patients with dementia: • Spaced Retrieval/Errorless Learning • Cognitive Stimulation (Cognitive rehabilitation, cognitive/memory training, group cognitive therapy) • Reminiscence (group reminiscence, individual reminiscence, computerized reminiscence) • Caregiver Training/Education/Caregiver Administered Cognitive Stimulation • External Memory Aids (memory books, memory notebooks, visuals)	**Examples:** "I use spaced retrieval" "I do a lot of memory training" "I want to make sure I do caregiver training" "I might put a visual on their wall"

Description of caregiver training: SLP provides a description of what skills or informal they are training/educating caregivers in

Non top 5 strategy: SLP mentions **using** a specific strategy that does not fall under the top 5 strategies. This also includes when the SLP describes the treatment procedures of an overall strategy that does not fall under the top 5 strategies.	**Examples:** "I'm giving them compensatory memory strategies like using pneumonic devices" "I really like using Simulated Presence" "I pretty much strictly use environmental modification"

Negative approach: SLP mentions an approach or treatment procedure that he/she avoids or minimally/rarely uses	**Examples:** "I don't use ______." "I've had no success using ____ strategy"

Reasoning against: SLP provides reasoning behind why they do not use a specific approach	**Example:** "I don't use it, because I don't think it's successful. I find that no patient can pick up on using it."

Cognitive target: SLP specifically discusses **targeting** or describes treatment targets that fall under any of the following cognitive skills in treatment of dementia: • problem solving/reasoning • memory • attention • orientation • establishing routine	**Examples:** "I'm really trying to improve their problem solving or executive function skills" "I want them to be able to attend long enough to have a conversation" "I want them to remember their appointments"
Language/communication target: SLP specifically discusses targeting or describes treatment targets that fall under any of the following in treatment of dementia: • receptive/expressive language • communication • reading	**Examples:** "I want them to be able to have a conversation with their son" "If I can get them to be more social in therapy…" "I might target something like word finding or understanding simple commands"
Safety target (e.g., medication management, hydration): SLP indicates targeting specific safety targets, negative behaviors in therapy, and/or generally states targeting safety in dementia therapy	**Examples:** "I want to make sure I'm preventing falls" "They need to have a system for accurately taking medication" "I want to address their violent behaviors"

Treatment reasoning: SLP provides reasoning behind why he/she does a specific approach, chooses certain therapy targets, and/or general trends of their treatment practice in dementia	**Examples:** I like using spaced retrieval because you see some quick gains in progress" "I need to target medication management so they can be independent" "I do this in order to…"

Frequency (treatment): SLP uses a term that quantifies how frequently or how much they use a strategy,
approach, or engage in a certain activity for dementia intervention

Don't do/minimally/rarely (1) maybe/occasionally (2) a lot/usually (3) always (4)

Extent of success: SLP uses a term that quantifies the extent that a treatment approach or strategies are successful

Not/minimally successful/effective (1) can make progress (2) extremely successful (3)

Examples: "I don't think that's an effective strategy, they just can't do that" (No/minimal success)
"They were able to make some gains" (can make progress)
"I have found that to be an incredibly successful way to target that" (extremely successful)

Theory/principles: SLP describes their philosophy to dementia treatment or talks generally about their overall approach (e.g., compensatory) to dementia treatment	**Example:** "Generally, I'm wanting my patients to improve in their day to day function" "Most of what I do is to maintain what they do have left"

Functional/individualized: SLP describes emphasis on functional treatment, such as based on patient interests, focusing on remaining abilities, and facilitating independence/carry over	**Examples:** "It needs to be something that's important to that patient" "I start at a place that is successful for them" "The ultimate goal is making them as independent as they can be in their environment" "There's no point in targeting something unless it's going to carry over to their day to day life"

Decision making based on level: SLP provides rationale/reasoning for cognitive-linguistic dementia treatment decisions based on the level of the patient, severity of dementia, and/or results of testing	**Examples:** "Treatment all depends on the level of the patient" "That depends on what their global deterioration scale might be"

Trend at specific level: SLP specifies a trend of cognitive-linguistic therapy for individuals based on the specific level they are at

Early stage/higher level (1) Late stage/lower level (2)

Measuring outcomes description: SLP describes how he/she measures outcomes for their patients with dementia	**Examples:** "I really am looking at percentage accuracy of my goals I've written" "I want to see if they can remember to schedule all their appointments for a month"

Source (patient): SLP describes an outcome measure based on a patient behavior (NOTE: this includes measures they hope to implement)	**Example:** "I see if the patient is using the strategies"
Source (caregiver): SLP describes an outcome measure based on a caregiver behavior (NOTE: this includes measures they hope to implement)	**Example:** "I want to decrease caregiver stress"
Reasoning behind outcomes: SLP describes the reasoning behind using his/her specific outcome measures	**Example:** "I measure medication management so they can still continue to live mostly independently"

Description of expected progress: SLP describes what he/she would expect in terms of progress with the diagnosis of dementia or awareness of degenerative disease	**Example:** “If this person has dementia, I know this is a degenerative disease” “You know they’re going to progressively get worse and worse at that”

Change in approach/treatment process: SLP states a specific time or general circumstances that causes him/her to change approach, the treatment process, and/or the focus of therapy targets. This also includes when an SLP indicates a lesson he/she learned or explanation of how it changes.	**Examples:** “If they don’t make progress there, then I start to target ____ instead” “After that, I changed my approach and never did that again” “It taught me how to focus my intervention” “The family told me not to worry about fixing that, so their input was important, because I don’t want to target something that isn’t necessary for them to do”

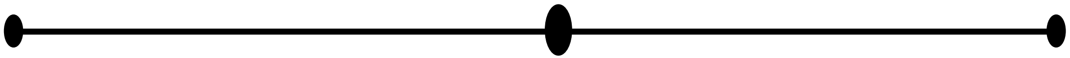
Family/caregivers as source: SLP states that feedback from families/caregivers guided their practice or caused them to change approach	**Example:** “Then his wife told me that he was a huge golfer, which changed the materials I use”

Group therapy: SLP states he/she currently does group therapy or has prior experience doing groups for patients with dementia and/or describes what kind of group it is and activities completed	**Examples:** “I used to do a reminiscence group at the nursing home where we’d look at old pictures and old items” “I really wanted them to be more social in that group”

Functional maintenance plan: SLP states he/she has experience implementing functional maintenance plans	**Example: “**I used to write those functional maintenance plans all the time”

Description of adjusting: the SLP provides information about how or how often he/she adjusts functional maintenance plans	**Example:** “Once that plan is set, we don’t really adjust it after that” “We would decide as a team if anything needed to be changed on a case by case basis”

Initiation of plan: SLP indicates the time in the therapy process that they initiate or start the functional maintenance plan



beginning of therapy (1) in between/depends (2) near discharge (3)

Examples: “I would start it during my first sessions with the patient”
“Once we get ready to discharge the patient, we put that plan together”

Terminology: SLP clarifies the term he/she uses for a specific therapy-related term, requests clarification	**Example:** “That’s what we call it where I work”

regarding terminology, or indicates uncertainty in labeling something clinically related	“I don’t know/can’t remember what you would call that” “What do you mean by spaced retrieval therapy?”

Treatment materials/resource: SLP provides information regarding what materials/technology he/she uses for therapy (e.g., picture cards) or the resource he/she uses to guide therapy	**Examples:** “I have them use their phones for that” “I bring in pictures from the 1930s” “A lot of what I do for treatment comes from what I learned in graduate school”

Schedule: SLP states the number of visits per week/number of weeks they see patients with dementia	**Example:** “I see them 4 times per week for about 9 weeks”

Reasoning behind schedule: SLP provides reasoning behind his/her scheduling (e.g., setting, severity of patient, etc.)	**Example:** “It all comes down to how they are reacting to therapy. If we’re not making progress, I’ll do fewer sessions.”

Caseload description: SLP describes the general details of his/her caseload/experiences or describes the typical client he/she might see in current or past settings	**Examples:** “When I worked in the hospitals, I saw a lot of patients with Lewy Body Dementia” “A lot of my patients also have other medical issues with alcohol or drug abuse”

Specific patient situation: SLP describes the details of treatment for a specific patient with dementia	**Example:** “One time I had a patient who made a lot of progress using that strategy. I saw her for about 10 weeks….”

Extent type changes: SLP indicates the extent to which the type of dementia changes his/her approach to evaluation/treatment		
None/minimally (1)	Not in big ways (2)	Definitely changes (3)

Reason why: SLP states why or how the type of dementia changes assessment/treatment	**Example:** “Patients with frontotemporal dementia are going to be the type of patients you….”

III. Impacts

Family/follow through: SLP states an impact or limitation of therapy by family or follow through	**Examples:** “A lot of times, there’s no follow through with that” “The family was getting in the way of progress because they had such high expectations” “The daughter was difficult to work with”

Other professionals: SLP states an impact and/or limitation based on other professionals (e.g., accuracy of diagnosis) or a trend of other SLPs	**Examples:** "The other PTs at my work target X a lot and I don't think that's appropriate" "I have found that lots of doctors….." "Some SLPs will…."

Collaboration: SLP states that he/she works collaboratively with another profession (i.e., outside of family members) or provides referrals to additional professionals while engaging in dementia evaluation or treatment	**Examples:** "I am in contact with the psychologist about their results" "I would then refer them to…." "We work together to make progress happen for our patients" "I try to teach nursing what I know"

Setting: SLP describes a positive or negative impact specific to their certain setting or location (e.g., time, resources, rural)	**Examples:** "We just have a very limited schedule" "We get holidays off. I love that about my setting."

Funding/insurance driven: SLP describes a trend of funding driven decisions or limitation due funding/insurance	**Examples:** "I can't do that, because it won't get reimbursed by Medicare"

Feedback/reaction: SLP indicates a time the received feedback (positive or negative) from a patient/caregiver or describes an assumed patient feeling (either positive or negative) from a stimulus presented by them (i.e., therapist)

Negative (1) Positive (2)

Examples: "They patient started throwing my materials across the room" (negative)
"His wife told me she really liked that idea" (positive)"

Interviewee wants: SLP indicates certain wants/hopes to do or implement into day-to-day practice or see more of in general	**Examples:** "I wish I could do something like that" "I hope to one day…" "I was really hoping to find the answer to that question"

SLP role: SLP provides explanation of his/her role/scope of practice in his/her setting or how he/she advocates for SLPs	**Examples:** "My job in that setting is to target safety." "I have learned that we need to advocate for our profession and what we can do"

Extent of expertise: SLP indicates the extent to which he/she does or does not have expertise in the area of dementia

Not an expert (1) Area of specialty (2)

Examples: "I really don't know much about dementia"

“I’ve taken a lot of my CEUs in dementia, so I’ve really focused on learning more about it.”

Evidence Based Practice (EBP): SLP indicates general awareness of the evidence behind an approach or mentions the concept of evidence-based practice	**Examples:** “I know that strategy has a strong evidence base behind it.” “I know I need to do this to maintain evidence-based practice.”

Dysphagia: SLP mentions dysphagia therapy or discusses how dysphagia therapy is prominent part of treating people with dementia	**Examples:** “A lot of intervention is focused in dysphagia in that setting.” “I also target swallowing a lot with these patients.”

Proportion dysphagia: SLP indicates how much of a role dysphagia plays with people with dementia

A lot (1) mostly/almost always (2) all (3)

Appendix J

Tables from Causal Conditions of Dementia Evaluation

Table 3.4

Interviewee Responses/Categories for Formal Testing Reasoning

General reasoning	*n*	Specific reasons or direct quote
Content of test	5	• Language based • Cognitive realms • ADL Function • See impairments in general
Test properties	4	• Thorough • Formal • Short/long • Provides more information • Patient more comfortable/not realizing being tested
SLP setting/funding	3	"Certain places I worked previously have asked that I use the MOCA"
Gain informal information	2	"Just sitting there with them and watching them do that or you know once I get a feel for how much they need to be cued. What their attention's like"

Table 3.5

Interviewee's Reported Evaluation Reasoning

Reasoning	*n* =	Example
Gauge what a patient is like (i.e., from caregivers)	5	"Sometimes the family is very good in bringing up things that you normally wouldn't probably obtain through those questions."
Getting to know patient	3	"The reason that I do so many assessments, over, over visits is because I'm also getting to know the patient, their background, their preferences, what they like, what they don't like through engaging the patient in kind of trial and error tasks and talking with caregivers and family."
Not wanting patient to feel analyzed	3	"I don't like the patient to feel that they're being analyzed or tested or put on the spot. So I incorporate the standardized assessments in a very comfortable manner."
Gauge patient self-awareness or their concerns	3	"Then of course the individual themselves if they are able to talk about how they feel. Like their different, how they, now like how do they feel like their communication is going, because you know, then you get a sense of a person's self-awareness."
Important for day-to-day function	2	"What I get more of my information from is yes how they perform on the various tasks, but also more qualitative information. What, you know, how much do they struggle? What kind of delay? How impulsive might they be? Are they aware, are they aware of any errors that they make? Their level of frustration, when they encounter something that they find difficult. Because those are all of the kinds of things that I think become extremely important in their day to day function."

See if progress could be made	1	“Or just kind of get a feel for maybe progress wouldn’t be made and they need a, maybe a little bit more of a push to pursue the formal testing.”
Decide the purpose of treatment	1	“And that will help me decide if we’re going to restore function or if we’re at a point where “Okay we can only restore a little bit of attention”.”
Gauge conversation skills	1	“So I get a feel for how they do in conversation, for what’s going on um in their day to day life.”
Gauge orientation skills	1	“Looking at the patient’s ability to sustain a wakeful state, or alertness. It may just be very casual questions looking at orientation.”
Gauge safety awareness	1	“Give them situations to see if they even are aware of safety, safety awareness within their environment.”
Gauge cueing needed	1	“Just sitting there with them and watching them do that or you know once I get a feel for how um how much they need to be cued”
Compare patient and family responses	1	“It’s nice, interesting to compare the you know the client’s answer to the caregiver’s answer to those questions. You know what kind of bridge you have to cover, you know, in terms of working with the patient and educating the caregiver.”
Comorbidities affecting patient	1	“We want to see if there’s anything in their history that also could be a contributing factor for them.”
Gauge writing skills	1	“Have them just on the back of the form, write their name, their address and phone number. Just as a functional writing assessment.”

Table 3.6

Interviewees Quotes from EBP Considerations in Dementia Evaluation

n	Direct Quote
1	“I will say this that as far as how that is normed, I don’t know, in terms of dementia how that stacks up to other standardized tests”
1	“I would say that while I know for Medicare reimbursement and evidence based and that sort of thing, I need to do some sort of standardized assessment.”
1	“I had to do a lot of independent research to figure out how to even assess and treat that population”
1	“This was actually one that I pulled into my dissertation and I hadn’t used it much before, but it has been fairly well researched. It’s called the AD8 and it’s actually kind of a basis of how I ask some of my interview questions.”

Table 3.7

Interviewee’s Roles as an SLP in Evaluative Process

Role	*n*	Direct Quote
Cannot diagnose dementia	2	“I feel like I can say this is language and this is cognition, but I don’t feel comfortable saying this patient has dementia. I can identify the presence of what I suspect is dementia.”
Families/PWD unaware of SLP Role	1	I always have to explain why a speech therapist is calling them and most of the time I have to say, “We’re not concerned with your speech.””
Defining role between professions	1	OT likes dementia in my agency…and so I try to be a little bit inclusive um and let them address more ADL issues. And I handle lots of the communication and behaviors.”

Appendix K

Table from Context of Dementia Evaluation

Table 3.8

Interviewees' Described Caseloads as They Affect Evaluation

Caseload Characteristic	*n*
Rarely see dementia as an official diagnosis	2
Often have PWD with comorbidities	2
Family members unaware of the diagnosis	1
Infrequently see individuals with severe dementia	1
See variety of types of dementia	1

Appendix L

Tables from Actions/Strategies of Dementia Evaluation

Table 3.9

Formal Tests/Screeners Reported by Interviewees

Test	*n*
MOCA	5
SLUMS	3
Allen Cognitive Levels/Placemat	3
RIPA	2
Boston (mentioned generally*)	2
Mini Mental	2
CLQT	2
Global Deterioration Scale	2
Boston Naming Test	1
RCBA	1
Arizona	1
AD8	1
Rivermead Behavioral Memory Test	1
Kingston Standardized Cognitive Assessment	1
Brief Cognitive Rating Scale	
Functional Assessment Staging (FAST)	1
RTIE Routine Task Inventory	1
ASHA NOMS	1
Cognistat	1
	1

*These participants mentioned the Boston generally, and could be the Boston Diagnostic Aphasia Examination or the Boston Naming Test

Table 3.10

Informal Procedures Reported by Interviewees

Informal Procedure	*n* =	Example
Chart review and considering medical factors	3	“First thing I need to do we’re going to hit the chart. Look at medically what else is going on with the patient.”
Building rapport with patient	3	“Try and get them to warm up to me a bit…so try and build a nice rapport with them”
Referral to other services	3	“And then we usually assess and make referrals to our social worker if they need any social needs, transportation, finding financial aid assistance in the home”
Skilled observation or inquiring about ADLs	2	“I also like if I can, just to do some skilled observation of what they’re doing throughout their day, when they’re in activities. If I can observe some ADLs”
Introduce self	2	“I first need to introduce myself. Which I do by name. And I will say that I’m, you know, a speech therapist with this particular

		home health agency, and I will tell them the reason that I am calling”
Qualitative information from tests	2	“What I get more of my information from is yes how they perform on the various tasks, but also more qualitative information”
Pleasant, non-threatening approach	2	“As much as I can, I’m very open. I’m very pleasant. I’m very friendly. I’m very non-threatening”
Give overall impressions at the end	2	“And then after I do all of that, before I leave, I’ll say, “So let me tell you just kind of my general impressions of, you know, where I think you’re doing well and if I see there are any areas that I think they’re having particular difficulty in…””
Provide a list of suggestions or written info	2	“Sometimes I will give them written information before I leave”
Orientation	2	“It may just be very casual questions looking at orientation”
Memory	1	“Going over memory. Some very distant, like retro memory”
Sustain wakeful state	1	“Looking at the patient’s ability to sustain a wakeful state, or alertness”
Sequencing tasks Picture cards	1	“And then I might start with something basic like let’s just do some little sequencing task or something. Maybe picture cards.”
Schedule appointment	1	“I will find out if I can schedule that directly with the patient or if I need to contact a family member in terms of, you know, who is kind of in control with the schedule.”
Explain SLP role	1	“I always have to explain why a speech therapist is calling them and most of the time I have to say, “We’re not concerned with your speech, however, part of what I do is I work with adults who might be having difficulties with their memory or their concentration and I also work with people who have some difficulty with eating and swallowing.””
Give an overview of evaluation	1	“These are the kinds of things that I’m going to be covering today”
Home Health standard questions	1	“I do have some standard questions that I ask everybody, so let’s go through those and some of those are the requirements. You know, are you in any pain today? You know, those kinds of things that I need to do for home health purposes”
Writing assessment	1	“I may have them just on the back of the form, just you know, write their name, their address and phone number. Just as a functional writing assessment”
Auditory comprehension Naming	1	“I’ll start with my auditory comprehension questions. Yes/no. Follow commands. I’ll do some basic naming, pointing to different objects in the room.”
Safety awareness	1	“Give them situations to see if they even are aware of safety”
Vision, hearing, educational status	1	“I find out about vision and hearing. I find out about educational level.”

Table 3.11

Specific Questions or Information for Caregiver Input by Interviewees

Specific Information	*n* =	Example
Concerns/problems	4	“Are there any concerns that you’d like to share with me?”
Behaviors	4	“I’ll do an additional interview after that with the caregiver hopefully and identify behaviors”

Change in communication or communication skills	3	“What are the communication, you know problems that in the family words or in the caregiver’s words?”
What patient’s world is like or change in status	2	“…is if they feel there’s been a change in status more recently”
How to approach patient	1	“how best to approach the patient”
When to see PWD	1	“…best time of day to see them”
Memory or cognition	1	“…like what the functional limitations are in regards to like memory and cognition”
Safety concerns	1	“…subjective report from like the family members of what’s like safety concerns”

Table 3.12

Frequency of Various Evaluation Tasks or Procedures by Interviewees

Frequency	Procedure	*n* =
Never	Dementia as a diagnosis (identify presence of suspected dementia)	1
	Mention the term dementia in introduction	1
	Do the full comprehensive assessment without the diagnosis	1
Maybe	MOCA	2
	CLQT	2
	Cognistat	1
	Kingston Standardized Cognitive Assessment	1
	Completely informal measures	1
	Functional informal writing assessment	1
	Casual orientation questions	1
	Something basic (e.g., sequencing task)	1
	Give written information at end of evaluation	1
	Careful what they ask in front of patient	1
	Arrange so family/caregiver is there (if possible)	1
Typically	Caregiver interview	3
	Formal cognitive assessment	2
	SLUMS	2
	Conversation with patient	1
	Assess and making referrals (social worker, neuropsychologist)	1
	GDS	1
	Placemat Test	1
	MOCA	1
	Informal assessment form	1
	Interview (general)	1
	Explaining SLP role to patient/family	1
Always	Chart Review/Case History	3
	Patient interview/involving patient in interview (if possible)	2
	Formal testing	2
	Schedule visit	1
	Allen Cognitive Levels	1
	Approach assessments with casual interaction	1
	Explain why an SLP would evaluate	1
	Introduce self	1

Appendix M

Tables from Causal Conditions of Dementia Treatment

Table 3.13

Interviewees' Reasons Type of Dementia Changes Assessment/Treatment

Type of Dementia	Different?	*n* =	Example
Alzheimer's	Memory	2	"In more typical Alzheimer's dementia where we're really just focusing on memory"
	Behaviors	1	"You don't have the behaviors. Like some of the Alzheimer's patients have, you know behaviors that make therapy, like nonfunctional."
	Losing language	1	"You're true Alzheimer's patients they are, you know, they are slowing losing their language and memory and everything else. But the language piece really sticks out at you and those are the ones that you really want to make sure you get those words down."
Lewy Body	Hallucinations and aggressive behaviors	3	"I think the only way I would say yes to that is if I specifically see Lewy Body, the aspect of the hallucinations and sometimes the more physically aggressive behaviors, because they don't know what they're seeing and hearing"
	Difficulty communicating	1	"Like how to help them and their caregivers communicate functionally. Like they're still talking, they have like a million words. You know they say nonsense, but they can't say, "I need to go to the bathroom?""
	Review medications more	1	So on my Lewy Body patients, I review their medications a little better
Frontotemporal: PPA variant	Focus on language	2	"People who have like Primary Progressive Aphasia…and things are more focal on language, not cognition."
Frontotemporal	More behaviors	1	"I would say that the two ways that it might change it is let's say if someone has more of a frontotemporal dementia, I'm gonna be more attuned to behavioral issues and that might be more the focus of then my treatment"
Vascular	More like aphasia	1	"I'm dealing with someone who may have more of a vascular dementia, they may have some characteristics, you know, that are more like CVA-related, aphasia-related"

Table 3.14

Reported Theories/Principles to Dementia Practice by Interviewees

Theory/Principles	*n* =	Example
Compensatory	4	"So, it's all compensatory"
Person to person/remain open minded	2	"I believe that dementia, you have to take it person to person...cuz everybody's different of course"
Combination of restorative and maintenance or compensatory	2	"So typically, I kind of do a collaborative of both restorative but also like maintenance"
Scale dementia, provide education	2	"Go in, scale the dementia and provide education and compensatory strategies"
Functional (Stated in general terms)	2	"Definitely all about the functional gains"
Improve quality of life or self-worth	2	"But even still, as much as we're able to maximize their function to improve their quality of life"
Patient/caregiver centered	1	"I feel like, I've you know I think it's so much got to be more patient centered or patient/caregiver centered therapy."
Work around the dementia	1	"I think you are kind of getting the gist that I don't really deal specifically with the diagnosis of dementia…I'm dealing with another diagnosis that, usually stroke…and you know, but they have dementia, which is basically something we have to work around."
Maximize ability	1	"So, for a lot of the intervention, it would be looking at the person's facility and trying to maximize their ability"
Preserve function	1	"And as much as we can, trying to preserve their function"
Provide repetition and training for retention	1	"Like I said, through the repetition and, and continued training, they're probably gonna elicit recall and execution at a higher level"
Montessori	1	"I really like the Montessori Approach. I wish I could see that in more units. I think that people do have kind of that sense of self-worth. That sense that they are contributing something"
Clinical and cue based	1	"I think it's just kind of clinically and cued based. A lot of what I do, instead of the more programatic approaches"
Always something to do to help	1	"There's always something you can do. There's always something you can do to help the individual. Even if they're GDS 7."
Focus on remaining abilities	1	"it's Claudia Allen's theory…but it's about focusing on a patient's remaining abilities rather than focusing on what they no longer can do."

Appendix N

Tables from Context of Dementia Treatment

Table 3.15

Range of Family Impacts or Concept of Follow-Through Reported by Interviewees

Family Impact or Follow-Through in General	*n* =	Example
Family/caregivers difficult to work with	2	“I’ve worked with caregivers that were nurse practitioners and they were probably the hardest caregivers that I’ve ever trained.”
Medical issues of family members	1	“Make sure she (PWD) was taking her medications. It turned out that probably she wasn’t taking them accurately. She knew she wasn’t taking them accurately. He (PWD’s husband) wasn’t checking her, but he also was sick himself.”
Families are key	1	“Being able to use the home health environment is wonderful…it really allows me to work with their families. That’s the one thing that you have such limited ability to do when you’re working in any kind of clinical environment... and the families are just key to all of this.”
Follow through with home exercise program	1	“A big thing is like for us is the follow through and so I mean if they’re not carrying over and doing like the home exercise program, you know there’s really not much we can do for them.”
Extent of caregiver’s knowledge	1	“It depends on how bad they are and how much help and education the caregiver needs. I have some very knowledgeable caregivers.”
Lack of caregivers	1	“It was a couple of exceptional situations where there really there were no caregivers that I could do any caregiver training with and so it was, you know, kind of to stay involved to help manage a situation.”
Follow up with functional maintenance plans between departments	1	“Unfortunately, I have seen especially communication between other departments…therapy being one of those, not really being good enough to follow up with them very well.”

Table 3.16

Range of Impacts by Interviewees’ Setting (Positive to Negative)

Impact	Aspect	*n* =	Example
Positive	Freedom in university setting	1	“Now that is easy for me to say, as a university employee coming into a skilled nursing facility who’s not billing…fortunately, for me, time is not an issue…so I‘m kind of lucky in that respect.”
	Re-referrals in home health	1	“This is where the home health model can be beautiful for this, is I can say, “You know things are working really well right now, but just know that six months from now, a year from now, if something changes and you need us to come back, you just need to let your doctor know and he or she can send a referral back to us”.”
	Home health = natural environment	1	“Number one, we get to go into the patient’s home and that is just hugely different than working in a clinical setting…for a number of reasons. It’s their home environment.”

	Home health = work with family	1	“It really allows me to work with their families. That’s the one thing that you have such limited ability to do when you’re working in any kind of clinical environment.”
	Home health = longer term relationship	1	“I just think that it’s the model that has the best ability to have a longer term relationship with the patient and their family to really provide support.”
	Home health = outcomes	1	“I personally believe that home health is probably a model of service delivery that has a lot of potential…in terms of outcomes, it does.”
	Neuroscience center access	1	“We’re lucky we’re kind of hooked up with like a big like neuroscience center so we get quite a few there’s a movement clinic disorder there.”
	SNF = long term impact	1	“Whereas skilled nursing I get to do more, kind of an impact, a long-term impact…changing the way they are in their environment.”
Negative	Not enough time/busy	2	“I don’t have the time and I’ve never worked anywhere where we had the time.”
	Access to materials	2	“For my setting you know I’m kind of responsible for all the supplies, so I like to get a basic one-dollar notebook.”
	SNF scheduling	1	“I mean if you’ve been in a nursing home at all, you know that schedules are crazy to get people.”
	Rural area	1	“So culturally, services available, and those kinds of things, I think we’re more rural than we are urban.”
	Home Health = Spaced Retrieval not helpful	1	“The environment that I work in through home health it’s just not conducive…If I’m only going in twice a week, you know, it’s either I’m dealing with spaced retrieval at 15 minutes or 3 days. And it just doesn’t allow for a lot of successful transition.”
	Problem solving targets in a facility	1	“I try to do as much as I can with, a lot of it unfortunately because if you’re in a facility a lot of it is verbal problem solving…and that doesn’t always tell you what a person is actually going to do.”
	Facility = residents “sitting around”	1	“I don’t know if you’ve ever walked into a memory unit or one of those units. Sometimes you walk in and they’re just sitting around doing nothing…they’ll sit them at a table, and they’ll put activities in front of them.”
	Get in trouble with management	1	“Cuz if you can’t justify why you’re doing what you’re doing, then you’re going to get in trouble from management.”
	Caregiver availability	1	“Those caregivers are there and they’re there for a few minutes and they’re fine and then they leave.”
Neutral	Hospital = acutely ill	1	“This is very dependent on the setting on acute care, because you have people who are quote on quote, acutely ill.”
	Hospital = other priorities	1	“That is only because we’re gonna have other patients who are gonna be higher priority. Not that these patients are not important, but essentially…for acute care, what is your barriers for wellness and as far as getting the patient to where they can have further intervention outside of the acute facility.”
	Focus of setting	1	“All about the functional gains. You know that’s been the focus of the work both in, you know, facilities and in-home care.”
	Home health procedures	1	“Now I have to take a picture of it and upload it to my iPad so it’s on their electronic chart as well.”
	Home health targets	1	“But what can I do to make it to where that caregiver and that patient get along. Where they’re still able to create positive

		memories and decrease the frustration. Cuz that's what you run into at home."

Table 3.17

Caseload Characteristics Reported by Interviewees

Caseload Description	*n* =	Example
Variety of severities or types of dementia	3	"I've worked with a variety of levels of dementias."
Focus on dysphagia	2	"In the acute setting, we really don't target cognitive…it's mostly dementia but for the swallowing."
Patients primarily on Medicare	1	"We don't do, groups are not covered by Medicare, primarily my patients are on Medicare."
Living situation	1	"Most of my patients are still living at home."
Patient anxiety	1	"A lot of the patients (PWD) I've worked with have almost like an anxiety or an agitation over what should I be doing?"
Timing of referral	1	"Long term care people…so these are the people that have dementia who've had dementia, you know, and you may get called into them because they're getting worse. You know, or they're all of a sudden, they have behaviors. Or all of a sudden the staff is noticing they stop talking."
Focus on hospital-induced delirium	1	"I rarely get orders to address dementia in that setting…but when I do, it's kind of the hospital-induced delirium. Where they're super confused, super combative, fidgety, irritable, just cuz they don't know what's going on"
Typically, more progressed patients	1	"I find most of the referrals I get, people are kind of progressed past the point of those things being effective"
Transition to functioning at home	1	"A person is home because they are supposed to be, you know transitioning to functioning in their own environment and not needing to rely on so many services."

Table 3.18

Instances When EBP was Discussed by Interviewees

Participant	Awareness of EBP	Example
A	Retesting is better practice	"I know from an evidence based perspective it would be better to retest. I don't have the time and I've never worked anywhere where we had the time."
B	Has knowledge of published names	"See not that I know a lot of the evidence and publications in this realm, but I am almost positive what is pretty uniform right now is that it is shown that you, you are dealing with individuals with progressive deficits…it's almost like through repetition and like consistent education and feedback to the individuals that they can have some ability to have retention and execution"
C	Trends in evidence-base for dementia	"I know there a lot of things out there that are published and different under names. I know, like reminiscence therapy is out there."
	Was not providing EBP	"When I was first working on a memory care unit and I was just kind of starting to dabble in how to do therapy with the dementia population. And I was doing some of the things that we're kind of starting to read about now where maybe their not best practice. But we didn't really know that yet."

	Lack of evidence base for dementia	“Definitely an area that we need more research in for sure.”
D	EBP outside of SLP	“There’s just so much study out there, you know research out there supporting the importance of physical exercise on cognition and memory.”
E	Independent research	“I had to do a lot of independent research to figure out how to even assess and treat that population.”

Appendix O

Tables from Actions/Strategies of Dementia Treatment

Table 3.19

Specific Skills/Information in Interviewees' Caregiver Education/Training

Training or Education	*n* =	Example
Continuing stimulation (e.g., list of activities)	4	"Trying to find like ways that they can continue stimulation as much as possible in a home setting."
Providing assistance with patient problems/cueing	4	"Educating so other people within their life can give them the assistance"
Information about dementia or advancement of dementia	4	"I'll give them an overview of here's how this dementia generally presents as compared to this other type"
Understanding behaviors	3	"Working with the caregivers to help them identify "Okay when you see these behaviors, these are some questions to ask" or "these are some things to look at" to meet her needs to decrease those negative behaviors."
Best ways to communicate	3	"You educate the staff the best way to communicate with that person right now"
Patient's abilities	2	"I do a lot of education with those caregivers. Again, this is what this person is able to do."
Safety	2	"How to kind of assist the caregiver with like safety and just functioning (right) at home. "
Providing choices	1	"I teach them…along with that I include giving options for choices."
Validation therapy	1	"A lot of validation therapy where I have to teach them to pretend to go along with it safely."
Establishing routine	1	"And so, I do a lot of education with that person and again their caregivers…how establishing a routine is extremely important."

Table 3.20

Non-Top 5 Treatment Strategies for PWD Reported by Interviewees

Strategy	*n* =
Memory Techniques	3
Internal memory strategies (i.e., repetition, association, chunking)	2
Environmental modification	2
Montessori	2
General cueing systems	2
Patient education	2
Auditory cues	1
Circumlocution strategies	1
Touch therapy	1
Oils/natural oils	1
Observing behaviors for antecedents	1
Talk therapy	1
Teaching functional procedures (i.e., utilizing procedural memory)	1
Communication strategies	1
Agree and redirect	1
Validation therapy	1

Modifying own non-verbal behavior	1
Talking to PWD like typical adults	1
Cotreatment groups with physical therapists	1

Table 3.21

Treatment Materials Reported by Interviewees

Materials	*n* =
Calendars	3
Photographs (e.g., family photos)	2
Smart phones/technology (e.g., Echo Dot)	2
Printed schedule	1
Deck of cards	1
Bright colored paper	1
Name tags (in group setting)	1
Memory book	1
Oils	1
Food (i.e., making food)	1
Whiteboard	1
Worksheets	1
Blank notebook	1
Good Interest Inventory	1
Kit of materials from graduate school (e.g., pictures of common items)	1

Table 3.22

Treatment Trends/Actions Reported by Interviewees Based on a PWD's Level

Stage	Trend/Action	*n* =
Early	Wanting increased independence with ADLs, put them on a schedule	1
	Able to do procedural memory	1
	Can attend to a task- use book on memory and reasoning, problem solving	1
	Better insight into the disease- more education with patient	1
	Use standard memory techniques (repetition/rhythm)	1
	Targeting accurately taking medications	1
	Higher level problem solving	1
	Calendar orientation (what's happening in facility) or use of schedule	1
	Schedule: 2x per week for 8 weeks	1
Later	Use agree and redirect	1
	Touch therapy with hands	1
	Memory book (when not remembering family)	1
	Couldn't tolerate a group if have behaviors	1
	Little success in treating severe patients for anything because can't recall	1
	New learning is too affected for memory strategies to be effective	1
	Trying to decrease outbursts/increase feelings of safety and needs being met	1
	Targeting more behaviors and observing what happens before behaviors (e.g., hitting, refusal)	1
	Always something you can do to help	1
	Share test score with family (e.g., especially if PWD is being left at home alone)	1

Table 3.23

Outcome Measures for PWD Reported by Interviewees

Outcome Measure	*n* =	Example
Caregiver understanding and use of strategies	3	"I tend to write my goals based on like the caregiver being able to first verbalize understanding of what I'm teaching them and then teach it back to me"
Decreasing levels of assistance	2	"I love to use the min mod max, like so if someone starts out needing max cues… to they only need mod cues and they only need min cues and then they can do it independently."
Patient participation of activities or ADLs	2	"…looking at their ability to perform daily activities"
Decrease in behavior/outbursts	2	"If they can go a period of time where they're not having outbursts."
Patient use of strategies	2	"What I look at is more use of strategies by the patient themselves. You know, whatever I 've sort of taught them to do."
Medication accuracy	1	"…for them to remember to take their medication every day this week"
Use of call button/life alert	1	"Can they use a button if they have one of those devices. You know, can they use their call button."
Caregiver report	1	"Or the caregiver's report regarding the accuracy of how they are doing functionally."
Maintenance of skills	1	"Outcomes are gonna be more based on maintenance of skills."
Patient feels needs are met	1	"That their needs are met and that they feel like they're safe. I think that's a really great outcome."
Conversation ability	1	"If someone starts out needing max cues to you know participate in a conversation"
Global Deterioration Scale for goals	1	"I use the Global Deterioration Scale a lot…and it helps you with the goals as well"
Patient actions	1	"Then we'll document if they (PWD) were able to do that or not"

Table 3.24

Reported Scheduling (Sessions Per Week and Number of Weeks) for PWD

Setting	Times Per Week	Number of Weeks or Months
Home Health	2x/ week	4-8 weeks
	1 or 2x/month	Not reported
	1x/week	3-4 weeks (4 visits max)
	1x/week	5-6 weeks
	2x/week	6-10 weeks
Skilled Nursing Facility	3x/week	4-8 weeks
	3x/week or	8-12 weeks
	5x/week	6 weeks
	3x/week	4 weeks
Subacute	5x/week	8 weeks
Acute	1-2x/week	1 week
LTAC	5x/week (if severe) 2-3x/week (if trying to maintain)	Not reported
Outpatient Rehab	2x/week (at beginning) 1x/week or 1x/month (after)	2-6 months
Outpatient	1x/week	4 weeks

University	2x/week	12 weeks

Table 3.25

Interviewees' Provided Reasoning Behind Selected Schedules of Therapy

Reasoning behind schedule	*n* =	Example
Severity of patient	4	"It just depends on I think the support, the level they're at."
Caregiver situation	3	"There were no caregivers that I could do any caregiver training with and so it was, you know, kind of to stay involved to help manage a situation."
Progress/meeting goals	2	"Really it would just be very dependent on, as I'm working with individuals and I'm setting goals for them, are we moving towards those goals? Are we making progress towards them?"
Insurance-based	2	"I would say that, that was more based on, again kind of the red tape of things…I would have like to have seen them longer to follow them a little bit."
What can be accomplished	2	"Depending on what I'm trying to accomplish"
Type of dementia	1	"It just depends on the type of dementia it is."
Presence of other acute issues	1	"But if you have someone who has dementia, everything else medically is stable. They can be discharged to wherever the most appropriate setting would be, still get speech therapy. Someone who is NPO and doesn't have a feeding source, they're not going anywhere until that's managed."
Patient/family reports	1	"It really depends on what they're reporting to you, you know…If you need to go more, you can go you know once a week if you want to."
Follow through	1	"Just kind of for maintenance to make sure there aren't you know any issues and they're following through with the recommendations."

Table 3.26

Frequency Terminology Reported by Interviewees Regarding Dementia Treatment

Frequency	Treatment Procedure	*n* =
Don't do or minimally do	Group therapy	6
	Spaced Retrieval	1
	Spaced Retrieval for what day it is today	1
	Trying to improve memory	1
	Worksheets/more typical speech activities	1
	Stimulating memory with music and smells	1
	Focus much on cognition (because affected by dementia)	1
	Cognitive treatment (in acute care)	1
	Retest patients at end of therapy (no time)	1
	Use Functional Maintenance Plans	1
	Take notes during session (PWD get paranoid)	1
	Challenging tasks for patients with Lewy Body	1
Maybe	Worksheets (only for paperwork-oriented personalities)	1
	Montessori Therapy	1
	Reorientation (depends on patient)	1
	Addressing problem solving	1
	Addressing safety awareness	1
	Animal Therapy Group	1
	Whiteboard for orientation	1
	Standard memory techniques	1

	Take patients outside	1
	Spaced Retrieval	1
	Memory book is more for family	1
	Use Functional Maintenance Plans	1
	Touch Therapy	1
	Visual cues in environment (if patient is able)	1
	Functional memory tasks in group therapy (e.g., nametags)	1
	Focus on participation in activities (e.g., Bingo)	1
	Led some groups for dementia	1
	Orientation targets	1
	Modify evaluation/treatment for a patient with PPA	1
	If patient has returned for more therapy, set up a maintenance program	1
	Tell patients they are their partner or coach	1
	Start with behaviors having difficulty with	1
	If severe, observe what happens before behaviors	1
	Call button/walker sign	1
	Talk with physician to set up speech therapy after discharge from hospital	1
	If patient had huge change in communication, more intensive therapy	1
	Specific goals on Functional Maintenance Plan, if patient has them	1
	Integrating swallowing, voice, and remembering strategies for Parkinson’s	1
	Work with PWD for a longer period of time	1
	One or two visits (if caregivers are more knowledgeable)	1
A lot	Caregiver training or education	4
	Schedule-related (number of visits/week)	2
	Change approach based on family feedback or input	2
	Reminiscence	2
	Focused on functional tasks	2
	Memory book	1
	SIRI to schedule appointments	1
	Call it daily memory notebook or diary	1
	Talking about how to deal with hallucinations	1
	Validation therapy	1
	Agree and redirect	1
	Touch therapy	1
	Sensory	1
	Talk therapy	1
	Recommend cognitive stimulation tasks	1
	Handle the communication and behaviors	1
	Providing choices (and teaching caregivers to do that)	1
	Internal and external memory strategies	1
	Trial and error of finding best external memory aid	1
	Using food and cooking	1
	GDS to measure outcomes	1
	Engage patient in different tasks to stage their cognitive level	1
	Circumlocution strategies	1
	Compensatory therapy	1
	Targeting language	1
	Establishing routine	1
	Focus on taking medications accurately	1
	Print out schedule for patient	1
	Safety	1

	Pill Boxy app	1
	Family report to measure outcomes	1
	Use memory, reasoning, problem solving books for higher level	1
	Bright colored paper for visual signs	1
	Make a memory notebook for patients able to copy over the pages	1
	Education and promoting to work at home	1
	Conduct treatment in familiar environment so caregivers can observe	1
	Pretend patient doesn't have dementia (because patient is unaware)	1
	Training and repetition for whatever trying to achieve for patient	1
	Most concerned about problem solving at home and communication	1
	Collaboration of restorative and maintenance	1
	If no functional gains in first 6 weeks, move away from maintenance therapy	1
	Try to turn things over to caregivers once established routines	1
	Include photos of where person lives (memory book)	1
Always	Caregiver/staff training	3
	Functional Maintenance Plan	2
	Stage PWD	2
	Change approach based on family input	1
	Independence as a goal	1
	Individual therapy	1
	Getting communication all set	1
	Am aware diagnosis may be wrong	1
	Personalized list of activities	1
	Something an SLP can do to help	1
	Tell families to reach out in future for re-evaluation	1

Appendix P

Tables from Consequences of Dementia Treatment

Table 3.27

Treatment Approaches or Procedures Interviewees Reported "Avoiding"

Negative Approach	*n* =	Examples	Reasoning Against Using (If Provided)
Spaced Retrieval	2	P1: "I don't do a lot of spaced retrieval." P2: "It's not very successful. And that is spaced retrieval"	P1: "I've found that I haven't had any success with it at all." P2: "I think spaced retrieval is probably great for people who might work in a long term care facility. You know or in SNF rehab or something like that where you have the opportunity to work with a person daily."
Worksheets	2	"I rarely pull out worksheets and you know more typical speech treatment activities."	"Those I reserve for people who don't have dementia, may have cognitive deficits but you know if we're more on a typical rehab improvement of function approach."
Group therapy	1	"Well, I mean, I'm not sure about that, to be honest with you" (in response to interviewer stating maybe group therapy would be effective)	"Because, it's so distracting in a group. And their basic attention is often what is really compromised...Especially if the cognition is worse and worse"
Targeting cognition	1	"I don't actually focus as much on cognition"	"Because the cognition's gonna be compromised by the dementia."
Improving memory	1	"You know memory strategies, yes, but not improving memory per se."	
Reminiscence Therapy	1	"I know, like reminiscence therapy is out there. And some of those things. I actually didn't use that much."	"My activities director at my facility used it more often…So in my mind, that just kind of made it, this is terrible, but just kind of made it unskilled. Because it was something that you know a skilled therapist wasn't using and adapting."
Reality Orientation	1	"That reality orientation, I don't always like that."	"They may ask every day, "Are we going to see mom and daddy today?" and everyday someone feels the need to tell them mom and daddy are dead. And that's just mean."
Documenting in front of PWD	1	"I try not to bring a clipboard and paper and document in front of them."	"It's like they want to know what you're writing, and they want to know what you're doing, and it looks too formal."
Spaced Retrieval (for information that changes)	1	"But if it's like what day it is today, I don't typically do that."	"I would just think that they'd be better suited using like an external, like a whiteboard that would have it and they would know. Or a calendar and they would know where to go to look for that information"

Complex memory strategies	1	“And I’m not a love of…OT likes to provide complex compensatory memory strategies.”	“But most of my patients really can’t do that. So, I avoid anything that is more than about three steps “

Table 3.28

Range of Success of Treatment Procedures Reported by Interviewees

Extent of Success	Treatment Procedure	*n* =
Extremely Successful	Being PWD’s partner and coach	1
Can Make Progress	In functional situation with food for PWD, can do some training	1
	Through repetition, ability to have retention and execution	1
	Think more logically	1
	Improving processing skills to better solve problems	1
	Word retrieval	1
	Targeting communication	1
	Simplified communication strategies and teaching to caregivers	1
Not or minimally successful	Spaced retrieval in general	2
	Spaced retrieval/external memory aids (once progressed)	1
	Memory strategies (once progressed)	1
	Improving memory	1
	Treating dementia like a cognitive deficit with CVA (cognitive stimulation tasks)	1
	Make a patient get up and go over what day it is and what we’re doing today	1
	Dementia intervention	1
	Treating severe dementia for anything	1

Table 3.29

Range of Mentions of Future Wants Disclosed by Interviewees

SLP Want	*n* =	Example
Other SLPs to learn dementia and/or spread word about role	2	“That I just really encourage speech pathologists to really learn this disorder and learn what this is all about, because I think going forward, we could have such a huge role in the support for these individuals and their families.”
Implement different outcome measures	2	“I have talked about using the, there’s a Caregiver Burden Scale that I thought about using.”
See more Montessori	1	“I really like the Montessori Approach. I wish I could see that in more units.”
More research in dementia	1	“Definitely an area that we need more research in for sure.”
SIG Group for Gerontology Home Health	1	“I would love to see, you know, sort of a smaller group within the gerontology special interest group for people working in home health.”
Tell colleagues what SLPs can do	1	“I think it’s just; we just need to be telling our colleagues always what we can do.”
Group therapy for dementia	1	“No, I mean I definitely think that is something that we are actually currently trying to create...it’s something we’d like to offer cuz we see the value and the benefit of like a group setting”
Use Facebook group	1	“I actually thought about asking that question on some of our Facebook groups”

More curriculum in graduate programs	1	"I hope that there's more curriculum for it now in graduate school…because you know, dementia was just a lecture in one of our classes."

Table 3.30

Range of Dementia Expertise Reported by Interviewees

Extent of Expertise	*n* =	Examples
Not an expert	3	"Not that I can of that would be specific to dementia, but maybe I'm just not, it's not my area of absolute expertise, you know…not at all."
		"See not that I know a lot of the evidence and publications in this realm."
		"I'll feel like I would want to say is well like I did my CFY in a skilled nursing facility and I felt grossly underprepared for the dementia population."
Area of Specialty	2	"Whatever environment we're in I just think because if we have such great knowledge and I do particularly because I've chosen this as sort of my area of specialty."
		"I just kind of took it on as a special interest and then when I transitioned to home health."

Appendix Q

Supplemental Tables for Survey Data

Table 4.2

Certifications Reported by Survey Participants

Certifications	*n* = (Percentage)
CCC-SLP	114 (100%)
VitalStim® Therapy	46 (40.4%)
Lee Silverman Voice Therapy	28 (24.6%)
SPEAK OUT! ®	5 (4.4%)
Dementia Care Specialist	3 (2.6%)
McNeil Dysphagia Therapy Program	3 (2.6%)
Certified Dementia Practitioner®	2 (1.8%)
Certified Brain Injury Specialist (CBIS)	2 (1.8%)
Board Recognized Specialist in Swallowing and Swallowing Disorders (BRS-S)	2 (1.8%)
Guardian nMES Dysphagia Therapy	2 (1.8%)
Certified Dementia Care Provider (CDCP™)	2 (1.8%)
Dementia Capable Care/Therapist (DCCT)	2 (1.8%)
Certificate for OASIS Specialist-Clinical (COS-C)	1 (<1%)
DPNS	1 (<1%)
NOMAS® license and certificate	1 (<1%)
MBSImP	1 (<1%)
SSNR Neurofeedback	1 (<1%)
Spaced Retrieval	1 (<1%)

Table 4.9

Standardized Tests Utilized by Survey Participants (Optional Free Response)

Standardized Tests	*n*
Ross Informal Processing Assessment (RIPA)	17
Cognitive-Linguistic Quick Test (CLQT)	14
Saint Louis University Mental Status (SLUMS)	12
Arizona Battery for Communication Disorders of Dementia (ABCD)	11
Montreal Cognitive Assessment (MOCA)	10
Brief Cognitive Assessment Tool (BCAT)	8
Allen Cognitive Levels	6
Brief Cognitive Rating Scale	5
Functional Linguistic Communication Inventory (FLCI)	5
Depends on situation	2
Global Deterioration Scale	2
Brief Cognitive Impairment Scale	2
Repeatable Battery for the Assessment of Neuropsychological Status	2
Clock Test	1
Rivermead Behavioral Memory Test	1
Mini Mental	1

Aphasia Test	1
SCATBI	1
Boston Naming Test (BNT)	1
Western Aphasia Battery (WAB)	1
Test Your Memory (TYM)	1
Cambridge Assessments of Mental Disorders in the Elderly	1
Portions of standardized tests	1
MCA	1
Minnesota Test for Differential Diagnosis of Aphasia (MTDDA)	1
Kingston	1
Kitchen Picture Test	1
RTI	1
Assessment of Language Functional Activities (ALFA)	1

Table 4.10

Screeners Reported by Survey Participants

Screeners	*n* =
MOCA	12
SLUMS	11
MMSE	7
BCAT	3
CLQT	2
MCAT	1
BCRS	1
ACL	1
Massey Dysphagia Screening Test	1
Memory screener	1
Cognitive Linguistic Protocol Informal screen	1
Vision	1
Depression	1

Table 4.11

Informal Tests Utilized by Survey Participants (Optional Free Response)

Informal Tests	#	Informal Tests	#
MOCA	6	NeuroBehavioral Status Exam	1
Problem Solving	5	Unstructured conversation	1
SLUMS	4	Expressive/Receptive Scale	1
Interview	3	Portions of other assessments	1
Orientation	3	Following directions	1
BCAT	3	Patient-reported concerns on continuum	1
GDS	3	Short-term memory questions	1
Mini Mental State Examination (MMSE)	2	Informal/homegrown assessment tool	1
BCRS	2	Home safety awareness	1
Boston Diagnostic Aphasia Examination	2	Clock drawing	1
Sequencing/Verbal Sequencing	2	Calendar	1
Reading Comprehension/Writing	2	Word Finding	1
Pragmatic observation	2	Clinician devised	1

Spaced Retrieval	2	Word fluency	1
CLQT	1	Naming objects in room	1
FROMAJE	1	Confrontation naming	1
RIPA	1	Naming to description	1
Reading Comprehension Battery for Aphasia	1	Automatics	1
		Long term (biographical) memory	1
BNT	1	Picture description	1
Allen Cognitive Levels (ACL)	1	Language assessment	1
Mississippi Aphasia Screening Test	1	Visual memory	1

Table 4.12

Other Concerns for Survey Participants in Dementia Evaluation

Element	#
Safety/falls/balance	27
Caregiver support/availability	23
Hearing	21
Vision	15
Psychiatric diagnosis	14
Language (receptive, expressive, writing, reading)	13
Behaviors	10
Communication ability/needs	9
Pharmacology	8
Possible stroke/TBI/normal pressure hydrocephalus	7
Socialization	7
Nutrition/weight loss	7
Personal well- being/QOL/emotional state	7
Discharge location/living arrangement	7
Patient’s awareness of deficits	6
How they interact in environment/with others	6
UTI	5
Prior level of function	5
Acute infections/comorbidities	5
How ADLs are affected	4
Patient motivation	3
Severity/staging level/rate of deterioration	3
Potential for dehydration	3
Use of compensatory strategies	3
Judgement/problem solving	3
Medical HX	3
Education level	3
Response to cueing	2
Cognition/memory	2
Speech	2
Family/caregiver burden	2
Visual attention/attention	2
Patient strengths	1
Lung disease (e.g. COPD)	1
Post OP Delirium	1
History of speech therapy	1
Functional level they need to obtain?	1
Level of life participation	1
Learning preference	1
Preserving independence	1

Awareness of resources	1
Appropriateness of validation vs. reorientation	1
Success with spaced retrieval and errorless learning	1
Differential diagnosis	1
Dysarthria	1
Long-term family goals	1
Assistive devices used	1
Past substance abuse	1
PT/OT needs	1
Respiratory status	1
MRI Cat Imaging	1
Religion	1
Employment	1
Culture	1
Sleep	1
Smoking history	1
Dental issues	1
Elopement risk	1

Table 4.14

Outcome Measures Reported by Survey Participants for PWD

Outcome Measures	Number of Mentions
Cueing/reduction in cues or assistance	19
Percentages/percentages of task completion/accuracy	18
General caregiver feedback/report	15
Data/weekly data	14
Decreased behaviors/improving behaviors	11
Reassessment/ongoing assessment	9
Caregiver understanding of strategies	8
Patient response or ability to use strategies	8
Set goals/reviewing goals/progress towards goals	7
NOMS	6
Functional outcomes/functional within environment	6
Number of trials	5
Independently utilize visual supports/external memory aids	5
Participation in ADLs	5
Safety awareness	4
Increase communication/socialization	4
Spaced retrieval intervals	3
Time based measures	3
Improved performance/performance based	3
Patient recall of new information	3
Caregiver management/decrease in stress	2
Daily note taking	2
Improved independence	2
Orientation	2
Patient report	2
Scoring methods (e.g. PICA)	2

Completion of tasks	2
Comparing from baseline measurements	2
Progress summary	1
Tally of correct responses	1
Improved PO intake	1
Global Deterioration Scale	1
Positive emotion	1
Improved attention	1
Improved naming skills	1
Clinician observation	1
Sequencing tasks	1
Strategies utilized	1
Auditory comprehension	1
Maintenance	1

Table 4.15

Survey Participant-Reported Barriers to Dementia Practice

Barriers	Number of Mentions
Reduced caregiver support/buy-in	24
Lack of carryover/follow through with caregivers and staff	18
Lack of understanding or training by staff	15
Denial (family/patient) or poor patient insight	13
Progression of dementia or severity	12
Patient frustration or behaviors	12
Comorbidities, pain, or medical status	10
Participant participation and motivation	9
Insurance or Medicare limitations	8
Time	7
Caregiver availability, turnover, or understaffing	7
Unrealistic expectations from family	6
Overmedication, side effects, or medication management	6
Patient progress, ability to learn, or generalize	6
Advocating for SLP services to other professionals or under-utilization of SLPs	6
Resources or funding	5
Facility-based (setting, buy-in, not equipped for dementia)	4
Lack of Patient Attention	3
Misdiagnosis or unclear diagnosis	3
Psychological (e.g., depression, anxiety)	3
Physician support	3
Lack of fitness/cognitive stimulation in environment	3
Selecting functional targets, determining effectiveness/appropriate approach	3
Documentation (e.g., point of care notes)	2
Family frustration or fatigue	2

Lack of early intervention	1
General lack of knowledge	1
Lack of general public education about dementia	1
Lack of wellness and community programs	1
Too many different therapists/inconsistent treatment methods	1
Comorbidities unidentified (e.g., Parkinson's)	1
Lack of adequate supervision	1
Lack of personal belongings	1
Reduced agreement of what may be possible for communication gains/maintenance of current skills	1
Initial contact with patient in acute care setting	1
Patients who are non-verbal	1
Lack of established and appropriate ICD-10 codes to support treatment	1
Lack of diagnosis and medical treatment in early stages	1
Level of care	1
Patient limitations	1
Entrance into dying stage	1
Lack of case history access	1
Stigma	1
Providing services in natural environments	1
Strategy consistency	1

Table 4.16

Survey Participants' Reported Barriers to EBP in General

Barriers	Number of Mentions
Time limits (e.g., can't keep up)/productivity	21
Lack of family support/carryover	15
Research not applicable/doesn't match individual/small sample	11
Lack of materials/resources	11
Patient constraints/inconsistency/motivation/participation/comorbidities	7
Limited evidence	7
Lack of staff/doctor/facility support	7
Lack of access to research	6
Environment of therapy/environment constraints	6
Staff limitations (carryover, training, education)	5
None	5
Carryover/follow through in general	5
Budget/money	5
Lack of knowledge about approaches	4
Staff turnover or consistency	4
Insurance limitations	4
Patient and family denial/unrealistic expectations	2
Patient/family understanding or education	2
Personal limitations (i.e., staying in old ways, not doing research)	2
Misconception of SLP role	1

Lack of training in research methods	1
Documentation in setting	1
Difficulty figuring functional targets	1
Lack of support due to misunderstanding of evidence-based practice	1
No funding to participate in research	1
Reduced agreement of what may be possible for communication gains/maintenance of current skills	1
Poor training	1
Support	1
Attitudes all around	1

Table 4.17

Memory Aid Terminology Reported by Survey Participants (2+ mentions) (n = 86)

Term	*n* =	Term	*n* =
Calendars	19	Alarm	4
External memory aid/EMAs	18	Memory journal	3
Memory book	13	Daily log	3
Visual aid	7	External aids	3
Memory aid	7	Visual supports	3
Written cues/prompts	5	Compensatory strategies	3
Compensatory memory strategies	5	Sign/signage	2
		Timers/audible timers	2
Visual cues	4	Lists/checklists	2
Pictures	4	Visual memory aids	2
Clock	4	Environmental modifications	2

Table 4.18

Memory Aid Terminology Reported by Survey Participants (1 Mention Each)

PICTURE-BASED/VISUAL
Picture cards
Sequencing pictures
Picture book/journal
Pictures of family with names
Picture/communication board
Low tech picture communication
Visual image/sequence
Pictures of familiar items and people
Pictorial aids
Visual supports for ADL completion
Visual schedule
Visual compensatory strategies
Visual signage for orientation
Environmental visual cues

AIDS/DEVICES
Compensatory aids

BOOKS/NOTEBOOKS
Communication book
Memory wallet
Personalized memory book
Communication books
Communication notebook
Communication journal
Memory notebook system

EXTERNAL MEMORY/MEMORY TERMS
External memory strategies
External memory tools
External memory compensatory strategies
External compensatory strategies
External memory device
External cues and stimuli
Memory tools
Memory compensation

Environmental cues
Assistive devices
Environmental aids

TECHNOLOGY
Medication apps
Mobile phone reminders
Smart phone
Visual digital calendars

WRITTEN SUPPORTS
Written steps
Written cognitive supports
Schedules
Newspaper
ADL schedule
Post-it notes
Daily journal
Notes
ADL checklist
White board

OTHER/COMBINED
Cues
Meal ticket
Scripts
Bracelets
Words
Strategy
Objects
Verbal cues
Time reference
Functional objects
List(s) of actions
Color coded items
Daily medication dispenser
Established set-up/routine
Visual/verbal/tactile cues
Sequencing events of daily living
Memory recall for sequential organization of daily tasks
Different rooms with others present to cue to eat a meal
Aided (pictorial, printed material)
Unaided (sign language, mnemonics, mental strategies)

Table 4.19

Examples of Memory Aids by Survey Participants (Category Breakdowns): n =85

Calendar: 36
- Placement of a large print calendar in a consistent eye level location with days marked as they go, appointments in color
- Spaced retrieval to recall calendar use
- Monthly calendar to write down appointments, activities planned (lunch with friend, shopping with family member). And have patient estimate/plan length of one to prepare for the outing (shower, dress, gather purse, etc.).
- A calendar book with room to write activities/appointments on a daily basis and space to jot down what occurred on a daily basis
- Placed in a consistent easily visible location with tasks or events in color
- With facility name, events past and present written down, mark dates that have passed
- Calendar with events to come and events to review

Written supports: 26
- Written steps as strategies to be more independent with simple daily activity steps
- Written phrases
- Printed contact information for family members
- Written info/ label
- Newspaper
- Paper and pencil
- To-do lists
- Daily checklist
- Daily sheet which incorporates both orientation and personal/biographical information
- Steps to an ADL
- Meal ticket -orientation to date, time, meal, setting given 3x/day

- Daily activity/appointment list
- Patient’s name or some other identifier for room location
- Reminders completed
- Bright-colored paper, large printed letters, bold. Or key family names and phone #s also large, bold print on bright paper
- Safety reminders
- Sticky pad
- Note pad/note taking
- We often use bold lettered bright notes as external aids in curing patient to remember safe measures such as “push call light”, “always use walker when standing”, etc.

Signs/visual supports: 17

- Sign posted in room to use call light for assist
- Menus hallway signs
- Signs to label household needs
- Signs with reminders to use cane/walker
- Call light sign
- Call button sign to remind a patient to use their call button to get a hold of the nurse and for safety
- Neon green signs for location of items in room and location of bathroom
- Visual support such as a reminder to call for help, don’t get out of your chair
- Visual reminders to use the call button for milder dementia
- Printed items in large font providing swallowing reminders (e.g. chin down).
- Family tree
- Social story

Memory book: 14

- Personal and family info and history, family pictures, calendar, daily log, timeline of life
- With written and/or pictorial information
- Includes calendars, family visitation sheet, client personal biography, important dates list, phone book, etc.
- I make a simple memory book with a notebook with important information for the patient to remember with large print and short amounts of information per page.
- Include demographic information of the client i.e. family; education, hobbies, occupation, close friends, orientation to time, place-space, person
- Containing pictures of patient's nursing staff, room number, time and location of meals, etc.
- Photograph a patient in PT and put this pic in a memory book to remind the patient of progress.

Daily schedule/schedule: 10

- Personally, developed schedule of daily events, including simple things such as grooming, meals, etc.
- Schedule that can be updated daily

Photos: 9

- Pictures of hip precautions
- For a given topic -approx. 5 pictures with text. could be no, low, or high tech
- Picture of a glass of water "DRINK WATER" posted with water container within client's reach
- Pictures for orientation
- Low tech picture communication
- Picture schedule
- Family pictures

- Picture worksheets

Other memory/journals/books: 9

- Book with orientation and critical personal information
- Memory logbook, planners
- Memory journal (important info, bio, dates)
- Memory binder
- Memory cards
- Memory diary
- Memory wallets
- Personal Information Journal - contains personal, situational and temporal information. Can also include notes that are created by client/family and pictures that allow for reminiscence.
- Sequence-memory book schedule

Timer/alarm/reminders: 6

- I train individuals with mild dementia how to respond to an iPad based alert (they may need assistance with programming)

White board: 6

- I often recommend a dry erase board for orientation and to assist with recall of events,
- White board in patient's room that lists the current date

Journal: 5

Technology/materials: 5

- Use a patient’s phone or tablet to keep track of appts
- Apps on phone for alarms
- Pill box alarms
- Daily medication dispenser

Daily logs: 4

- Paper often with times of days delineated for pt to write down what they did

Bright tape: 3

- Line of sight taping or color use for attention to furniture

Set up routine/rooms or familiar objects: 3

- Stablished set-up/routine in the bathroom/bedroom/kitchen
- Dining room for meals, bedroom for sleep times
- Cueing with a familiar item in home

Photo album: 3

Clock: 2

Memory notebook: 2

- With calendar; personal information including name, address, phone number; pictures of patient with family with names; likes such foods, places, past history; parents, siblings; favorite occasions; holidays; vacations; word retrieval strategies; Bible verses; music they enjoy; poems; literature enjoyed.