Whose Job is it?
The Role of Speech-Language Pathologists and Occupational Therapists in Supporting
Environmental Alterations for People with Alzheimer's Disease

by

Jordan Meyer

Communication Science and Disorders, University of Pittsburgh, 2019

Submitted to the Graduate Faculty of

The University of Pittsburgh in partial fulfillment

of the requirements for the degree of

Bachelor of Philosophy

University of Pittsburgh

2019

UNIVERSITY OF PITTSBURGH

SCHOOL OF HEALTH AND REHABILITATION SCIENCES

This thesis was presented

by

Jordan Meyer

It was defended on

February 18, 2019

and approved by

Erin Lundblom, PhD, Assistant Professor, Communication Science & Disorders,

University of Pittsburgh

Juleen Rodakowski, OTD, MS, OTR/L, Assistant Professor, Occupational Therapy,

University of Pittsburgh

Monica Robinson, OTD, OT/L, FAOTA, Associate Professor, Occupational Therapy,

The Ohio State University

Thesis Director: Paula Leslie PhD, Professor, Communication Science & Disorders,

University of Pittsburgh

Whose Job is it?
The Role of Speech-Language Pathologists and Occupational Therapists in Supporting
Environmental Alterations for People with Alzheimer's Disease

Jordan Meyer, B.A.

University of Pittsburgh, 2019

ABSTRACT

Background

Speech-language pathologists and occupational therapists play important roles when caring for those with dementia. Therapeutic techniques for these individuals may be similar between professions, but goals may differ. It is important for professionals within interdisciplinary teams to understand their scopes of practice to ensure successful therapy without overstepping boundaries.

Research Questions

1. How do undergraduate students, graduate students, and clinicians perceive the roles of SLPs and OTs, especially when caring for those with dementia and Alzheimer's disease?

2. How do undergraduate students, graduate students, and clinicians feel their education prepared them to work in an interdisciplinary team?

Method

An anonymous Qualtrics based survey was distributed to undergraduate students, graduate students, and clinicians who are pursuing a career in speech-language pathology or occupational therapy or currently practicing.

Results

We received responses from 12 undergraduate students, 10 graduate students, and 115 clinicians. Participants agree that SLP and OT scopes of practice overlap (undergraduate students 91%,

graduate students 83%, clinicians 82%). Participants agree that there are parts of their scopes of practice which could belong to either field (undergraduate students 64%, graduate students 67%, clinicians 68%). Most participants agree that their education explained how SLPs and OTs work together in interdisciplinary teams (undergraduate students 91%, graduate students 83%, clinicians 65%) and that their education made them feel prepared to work in an interdisciplinary team (undergraduate students 91%, graduate students 83% clinicians 76%). When presented with a case scenario describing a therapeutic action, most clinicians agreed that the action could belong to either field (SLP 98%, OT 79%).

Conclusion

Participants recognize the overlap between SLPs and OTs, and they feel their education prepared them to work together. The education professionals receive should prepare them to not only work together but to predict and solve interprofessional conflict. Good communication within interdisciplinary teams helps address overlaps and differences in professional practice. Discrepancies about scope of practice boundaries still exist, evidenced by the results of the case scenario. Interdisciplinary team members should be aware that SLPs and OTs may want to implement the same therapeutic technique for an individual, but their therapeutic goals may differ.

TABLE OF CONTENTS

LIST OF TABLES

*Speech-language pathology

**Occupational therapy

LIST OF FIGURES

*Speech-language pathology/pathologists

**Occupational therapy/therapists

1.0   PREFACE

I cannot sufficiently express my gratitude for those who helped me throughout this process. First and foremost, I thank Dr. Paula Leslie for guiding me through this project from the very beginning and helping me form it into the child it has become for me. This is the closest thing my parents will get to grandchildren, so we are all quite thankful. To Dr. Janice Vance: thank you for leading me to the University of Pittsburgh in the first place, which has offered unmeasurable blessings. To my parents, grandparents, Paige, and Cece: thank you for never failing to make me feel like a star by being at *every* event in which I participate. I will never be embarrassed to have you in my cheering section (even if you cry afterwards). Many thanks to all who participated in the study, as none of this would be possible without you. This project has proved to be one of the most beneficial accomplishments of my young career and I am forever thankful to all involved.

The residents I have met while working as a nursing home Dietary Aide have completely changed the way I view the world and how to care for others. This project will hopefully inspire thought and conversation about ways to transform geriatric care, which is the least I can to do thank the residents for all they have taught me.

2.0   INTRODUCTION

Imagine yourself as a young guitarist with dreams of becoming a world-renowned rock star. After years of hard work, you and the band you founded begin to gain popularity. This is not just local popularity – you seem to have caught the attention of hard rock fans across the globe. You are inducted into the Rock and Roll Hall of Fame, you have the second best-selling album of all time, and you are considered one of the greatest rhythmic guitarists in the world. Suddenly, your mind does not seem to be working as well as it used to. Your family comments on your inability to recognize someone that had just been in the room with you moments before. Your short-term memory is fading, and it is crushing your relationships. Even with overwhelming musical success, the simple parts of life do not seem to make you happy anymore. Your spouse tells you that the only way to treat this is to enroll in full-time care and to retire at the young age of 61. Your years of hard work and success come to an unexpected and devastating end.

No one knows how this feels better than Australian hard rock band AC/DC's co-founder Malcolm Young. He retired in 2014 after his dementia diagnosis. Cognitive disorders and related dementias are life altering diseases that can destroy cherished memories, dreams, futures, and the efforts from a lifetime of hard work.

2.1   DEFINING DEMENTIA

Dementia is defined as a syndrome that diminishes one's ability to process thought more than what is expected with normal aging (World Health Organization, 2017). Although cognitive decline is most commonly associated with dementia, its effects extend to deeper levels. Dementia's life-altering impacts affect people on social, physical, and economic levels. Individuals suffering from dementia are robbed of normal behavior, thought processes, and the ability to participate in everyday tasks. This devastating syndrome is growing exponentially as years pass. With 47 million cases in 2018, the prevalence is expected to triple by the year 2050. The United States experiences another person diagnosed with Alzheimer's disease every 65 seconds. This means almost five new cases of Alzheimer's disease develop in the four minutes and fifty-two seconds it takes to listen to ACDC's song Thunderstruck. Our world is experiencing a devastating epidemic of cognitive impairment that is growing at an alarming rate (Alzheimer's Association, 2018a).

2.1.1   Alzheimer's disease and related dementias

A common misconception is that dementia is classified as a disease, but it is actually a syndrome. The Cambridge Dictionary defines a syndrome as a collection of medical problems that unveil the presence of a disease (Cambridge Dictionary, 2017). Dementia can appear in multiple overlapping forms that commonly coexist. This includes dementia with Lewy bodies, caused by a buildup of proteins inside nerve cells, vascular dementia, caused by a block of blood flow to the brain, and frontotemporal dementia, due to diminishing frontal lobe volume in the brain (World Health Organization, 2017). The most prevalent form of dementia is Alzheimer's

disease. Alzheimer's disease accounts for as much as 80% of total dementia cases (Alzheimer's Association, 2017b). This progressive disease begins with mild memory loss in its early stages but can escalate to the inability to hold a conversation or respond to the physical surroundings. A defining pathological characteristic of Alzheimer's disease is the presence of amyloid plaques and neurofibrillary tangles due to the buildup of protein in the brain (Alzheimer's Association, 2018a). Potential risk factors for Alzheimer's disease include age, gender, depression, prior head injury, genetics, heart disease, stroke, obesity, and social isolation. Research has found that cohorts of individuals with these features are diagnosed with Alzheimer's disease more frequently than individuals without these qualities (Alzheimer's Association, 2018b).

Awareness of these risk factors can only help prevention of the disease. It is unlikely that there will be a cure in the immediate future because a cause has yet to be identified. Treatments are available to slow the progression and ease the complications, but people with Alzheimer's disease are expected to live only four to eight years post-diagnosis (Alzheimer's Association, 2019). As the sixth leading cause of death in the United States, Alzheimer's disease kills more people than breast cancer and prostate cancer combined (Alzheimer's Association, 2017b).

2.2   DEMENTIA INTERVENTIONS AND MANAGEMENT

This study will refer to those individuals receiving medical and behavioral intervention as patients. Some professionals believe that a more accurate term to describe their position is clients. This term can portray a connotation that focuses on the business side of medical services and does not accurately describe how professionals view the individuals they serve. The Alzheimer's Association website refers to these individuals as patients, which has a more

personal connotation and is therefore how they will be addressed. This work will also refer to those diagnosed with Alzheimer's disease as "people/individuals with Alzheimer's disease" as opposed to "Alzheimer's disease patients". This is an effort to avoid identifying the individual as only a diseased patient, but rather an individual who experiences the disease as a part of their life.

2.2.1   Pharmaceutical Interventions

A cure for Alzheimer's disease has yet to be discovered despite strenuous research efforts. The only form of relief available to people with dementia is to temporarily alleviate the symptoms. Pharmaceutical treatments are one attempt to influence chemicals in the brain and alleviate the troublesome symptoms.

A family of medications commonly used to treat the symptoms of Alzheimer's and other forms of dementia are cholinesterase inhibitors. According to the Mayo Clinic medical site, these medications work by increasing chemical levels in the brain that help with memory and judgement (Mayo Clinic, 2017). Donepezil (Aricept), galantamine (Razadyne), and rivastigmine (Exelon) are some of the medications currently approved to treat Alzheimer's diseases' symptoms by the U.S. Food and Drug Administration (FDA). They each work to slow the process of neurotransmitter breakdown that is present with Alzheimer's disease. Research has not shown that cholinesterase inhibitors can help people with Alzheimer's disease function in everyday life, however the medication can slightly delay the loss of mental abilities for patients with Alzheimer's disease (Institute for Quality and Efficiency in Health Care, 2009).

Another drug sometimes prescribed with cholinesterase inhibitors is memantine. Memantine works to regulate glutamate, another brain chemical that affects learning and

memory. Memantine can be prescribed by itself or with donepezil to treat symptoms that are found within the moderate and severe stages of dementia. Glutamate is involved with memory and learning but can become harmful when there is too much of it. Evidence shows that medications that contain memantine delay the appearance of symptoms. A recent study shows that about 1 in 10 people who consume medications containing memantine can delay the worsening of cognitive performance of people with Alzheimer's disease over a period for six months (Institute for Quality and Efficiency in Health Care, 2011). This short-term study also observed memantine's effects on the ability to complete daily functions. These functions include getting dressed, catching a bus, and brushing one's teeth. The study's results show the ability to complete these activities still decrease but memantine can delay this process (Institute for Quality and Efficiency in Health Care, 2011).

These medications are prescribed to individuals with Alzheimer's disease in an attempt to increase cognitive ability and slow the process of memory decline. Cholinesterase inhibitors and memantine have proven to delay the impactful symptoms of Alzheimer's disease, but do not reduce the progression of the disease. There is not yet a pharmaceutical treatment that slows the progression of the disease because a direct cause is not yet identified. The only option currently available is to address the symptoms and try to increase the client's quality of life. If a condition cannot be cured, the goal of healthcare workers should still be to optimize their patients' quality of life.

2.2.2   Behavioral Intervention

In a perfect world Alzheimer's disease would only affect memory function and could be controlled with medications to balance the brain's chemicals. Unfortunately, the disease impacts

5

other areas of life. The main goal of any type of therapy in dementia care is to help the patient maximize their quality of life. The World Health Organization defines the *quality of life* as an individual's personal view of their position in life in reference to their culture's values, goals, and expectations (World Health Organization, 2018). These therapies may include physical therapy, occupational therapy, and speech-language pathology. Therapists in these fields realize that they cannot currently cure Alzheimer's disease or any form of dementia, so they work to improve the patient's environmental safety, health, and overall quality of life (Alzheimer's Association, 2017a). Behavioral interventions focus on patients' strengths and weaknesses to increase their quality of life through non-invasive methods. A key aspect of this includes educating the patient and their family about what to expect as the disease progresses. Periodic medical and cognitive monitoring allow everyone involved to assess the situation and choose what to do next. The purpose of therapeutic interventions in Alzheimer's disease is to focus on meaningful activities for the patient and to work toward their personal goals.

2.3   OCCUPATIONAL THERAPY AND SPEECH-LANGUAGE PATHOLOGY

Occupational therapy and speech-language pathology are two fields that frequently work together in the healthcare field. Occupational therapists (OTs) work with people to engage them in meaningful activities of daily living despite the presence of medical, psychological, and cognitive conditions. They can evaluate, treat, and discharge patients. An important goal in occupational therapy is to provide strategies for patients to do the activities of daily living that patients need, want, and are expected to do in their daily lives. The American Occupational Therapy Association defines occupational therapy as the practice of therapeutically using

occupations (such as activities of daily living) with patients to promote participation, performance, and function in situations in a variety of environments (American Occupational Therapy Association, 2011). Older adults with arthritis often have trouble completing simple tasks that they used to easily complete such as cooking, cleaning, playing the piano, and buttoning shirts. OTs assess how these patients perform and introduce strategies that compensate for lost ability. An individual with arthritis may benefit from utensils with thicker handles so they can grip them easier (Peranich, Reynolds, O'Brien, Bosch, & Cranfill, 2010).

Speech-language pathologists (SLPs) are frequently seen working with OTs. SLPs work with people to build communicative and swallowing abilities when complications arise. The American Speech-Language-Hearing Association defines speech-language pathology as the practice of preventing, assessing, diagnosing, and treating disorders of speech, language, swallowing, and communication in patients across the lifespan (American Speech-Language-Hearing Association, 2017b). SLPs work with older adults who struggle with the ability to communicate and swallow. Although they commonly treat patients with pathologies, they can also address complications that arise with typical aging. The ability to taste and smell decreases with age but can be compensated for through interventions with an SLP and dietician. Loss of hearing, memory, and swallowing abilities are other commonly addressed areas. Like OTs, SLPs' main goal is to help patients adapt to their new lifestyles in safe and enjoyable ways.

OTs and SLPs play an important role when treating people with dementia. OTs offer services that keep patients safe despite their memory and sensory losses (The American Occupational Therapy Association Inc., 2017). This could include maximizing independence in basic activities of daily living, removing hazardous objects that the individual encounters or creating environmental cues that elicit memories and actions. SLPs address the communication

and swallowing deficits, and issues associated with the memory and sensory loss. SLPs focus specifically on communication, memory, attention, sequencing, and problem solving (American Speech-Language-Hearing Association, 2017a). If a person with Alzheimer's disease has trouble remembering personal experiences, SLPs may construct a memory book to help them recall specific events. Neither SLPs nor OTs can provide cures for Alzheimer's disease or dementia, but they are vital in developing strategies for people with dementia to increase their quality of life.

SLPs and OTs have seemingly similar scopes of practice, especially when caring for those with memory deficits. SLPs and OTs may even do the same therapeutic technique but with different goals for the patient. For example, a man living in a nursing home frequently forgets to put on his shoes before leaving his room. Both an SLP and an OT may decide to place his shoes near the front door to remind him to put them on before leaving. Although both professionals use the same technique (putting his shoes by the door) which results in the same outcome (he remembers to put on his shoes before leaving), their motivations for doing so may differ due to their scopes of practice. An SLP may put his shoes at the front door with the goal of him *remembering* to put his shoes on, while an OT uses the same technique to get the man to *put his shoes on*. The SLP uses an activity of daily living to improve the patient's procedural memory, while the OT uses the patient's procedural memory to improve his activities of daily living. Both the SLP and OT in this scenario are working to improve the resident's quality of life, but the *qualities* of life they focus on differ (memory vs. physical actions).

Issues may arise within interdisciplinary teams when two professionals have similar scopes of practice. In the previous example, an SLP and an OT may both be concerned that the patient has trouble remembering to put on his shoes. If they do not communicate, both the SLP

and OT may not know that the other professional is also concerned, so they both end up intervening separately. They may also have conflicting views on how to treat the problem. The SLP and OT may also assume the other is responsible for intervening, leading to the job never being done. Similar scopes of practice are problematic when communication is not implemented between team members.

2.3.1   Interdisciplinary Qualities

A unique characteristic of rehabilitative healthcare careers is their interdisciplinarity. This means that many of the fields collaborate because a patient's care requires attention from multiple professional fields. The United States healthcare system has shown increased efforts in integrating more team-based recovery methods because patient care and healthcare costs are becoming increasingly complex (Behm & Gray, 2012). Physical therapists, OTs, SLPs dieticians, physiatrists, nurses, and other fields share the common goal of improving their patients' quality of life. Interdisciplinary team approaches have shown to decrease patient mortality, improve patients' satisfaction with services, decrease the amount of time spent in rehabilitation, and increase workers' career satisfaction (Behm & Gray, 2012).

Collaborative care techniques, such as interdisciplinary teams, have shown benefits for people with Alzheimer's disease. Research supports that approaching Alzheimer's care through interprofessional collaboration improves the behavioral and psychological symptoms found in dementia (Callahan, Boustani, Unverzagt, & et al., 2006). Callahan and colleagues (2006) stated that the quality of care increases when healthcare professionals work together in an interdisciplinary team (Callahan et al., 2006). Patients with complex needs benefit from interdisciplinary team members that are educated on not only their own scopes of practice, but

also those of other team members. Interdisciplinary team members have reported that successful interdisciplinary teams require commitment, leadership, clear communication, and full investment from the staff, resident, and faculty development (Markova, Mateo, & Roth, 2018)

While interdisciplinary team models are very beneficial for patients, barriers may still arise. Team members may feel that their professional boundaries are being encroached when there is a lack of communication. They may also feel that their judgement is questioned when other team members challenge their approaches. It may be difficult to collaborate with multiple professionals if each has a different view on what is best for the patient. This can be solved through voicing concerns about the work and learning about the other fields in the team (Kim et al., 2019).

Team members are obviously educated in different domains and concentrations and the outcomes of their therapies are different. Confusion arises when unfamiliar vocabulary and jargon is used when trying to work together. This can be reduced through a collaborative discussion where professionals simplify their terminology and turn their focus to the patient's needs. All team members can openly contribute to the discussion and create a universal understanding to reach a common goal (Behm & Gray, 2012).

2.4   ALTERING ENVIRONMENTS

Both SLPs' and OTs' scopes of practice involve providing the most suitable conditions for their patients based on their patients' strengths and weaknesses. This involves making alterations to the environment in some cases. SLPs and OTs will evaluate how their patients' surroundings affect their behavior and verbal communication. For people with Alzheimer's disease, a common

approach involves creating environmental cues that elicit responses. Environmental surroundings impact the way people cognitively process information. Thus, this strategy is used with people with dementia in an effort to support their cognition.

Cognition can be defined as mental processes involved in thinking, remembering, judging, problem solving, and comprehending (Cherry, 2017). Individuals with dementia experience a much more significant decline in cognitive abilities than what would be expected with normal aging (National Center for Complementary and Integrative Health, 2017). This makes it important for those caring for people with dementia and Alzheimer's disease to consider cognitive processing when trying to improve their patient's quality of life.

A common misconception is that an individual's expressive language is reflective of their cognitive abilities. Individuals with aphasia exemplify why this fact is not always true. Aphasia is defined as an acquired disorder that affects one's communication, language processing abilities, and speech, but does not affect their intelligence (National Aphasia Association, 2018). Aphasia may only affect one aspect of language, such as the ability to name objects, or it can affect multiple aspects of language and make communication extremely difficult. These communication deficits can cause individuals with aphasia to appear cognitively impaired at first glance. Proper accommodations need to be made during cognitive assessments in order to separate language abilities from intelligence. This could include picture cards, written communication, or even simply giving the individual more time to respond. People with aphasia highlight the possible disconnection between language and cognition. Recognizing that language and cognition are separate is important when caring for those with Alzheimer's disease and dementia. An accurate assessment of individuals' cognitive abilities is needed to provide appropriate treatment.

SLPs and OTs need to take into consideration how their services can affect the way their patient processes information. If an individual with dementia has trouble remembering how to wash their hands, they may benefit from a sign next to their sink with directions for hand washing. Someone that has difficulty swallowing may have a card that reads, "Chin down, then swallow" next to their seat at dinner to remind them of safe swallowing techniques.

One of the most common environmental changes for people with dementia is relocation, such as moving from their home to a nursing facility. This usually occurs when the symptoms of the disease put the patient in dangerous situations. For example, people with dementia are four to five times more likely to suffer from a fall than cognitively healthy people (Alzheimer's Society of Manitoba, 2014). This is because dementia affects one's ability to recognize sensory input in the environment, interpret their surroundings, move sufficiently, and remember information. These factors make falling easier and living independently harder. The best way to combat these safety risks is to rely on environmental changes. Increasing color contrast is an effective method to use if the patient has difficulty seeing objects in the environment. Bright non-slip tape can be put on the edge of steps to make the stairs' edges more noticeable. Using a dark bathmat on a light bathroom floor can draw more attention to the change in flooring and help prevent the patient from tripping. If the patient has trouble accessing everyday objects, adaptions can be made like lowering their bed and putting important items within reach. A very basic change would be to declutter hallways and other commonly used pathways (Alzheimer's Society of Manitoba, 2014). Falling is the leading cause of fatal and non-fatal injury for older adults so it is imperative that prevention techniques are implicated for vulnerable populations (National Council on Aging, 2017).

A large-scale example of environmental alterations for people with dementia is the Dementia Village in Denmark called De Hogeweyk [pronounced Der Hokherveeck]. This is a secured community where all of the residents are in the mid to late stages of some type of dementia. What makes this care facility unique is that it sheds the typical nursing home ambiance and is designed to look like the outside world. The community has a grocery store, theater, outpatient care unit, and restaurant. Residents can live as they normally would in the outside world, while being overseen by caregivers (Hogeweyk).

Hogeweyk began as a typical hospital-style nursing home in 1993 (Hogeweyk). Its revolutionary concept began when staff members decided that the residents deserved a more advanced and humane way to receive care. They pondered what they would want for their parents if they were to send them to a nursing home. They agreed that normalcy and individualism were what they wanted most. Hogeweyk began to incorporate aspects of the outside world into their facility by designing 23 residential houses. Each house can hold up to seven residents and one supervising caregiver. The houses have seven different designs that residents can choose from – Artisan, Christian, Cultural, Goosie, Homey, Indonesian, and Urban (Hogeweyk). These styles were created by studying the residents' interests and tailoring to their preferred lifestyles.

Another noteworthy aspect is the Hogeweyk supermarket. It is set up just like one in the outside world, complete with items on shelves and cashiers. The only difference is that Hogeweyk's residents use an in-house currency to pay for their groceries. This means that a specific amount of fake money is distributed each of the 23 houses. The houses' members decide how to budget the money. This system focuses on emphasizing what the residents can do instead of what they cannot do.

This individual freedom is continuous throughout the activities that are offered. Caregivers analyze the social tendencies of the residents and care for their unique needs. There are environments suited for introverts that are quiet and private, as well as activities for extroverts like bingo, theater, and social clubs. Hogeweyk encourages its residents to be socially active by enjoying the outdoors. There are gardens and outdoor areas designed specifically to promote safe and healthy outdoor recreation. The creators of this groundbreaking facility understand that its benefits may only last a few years. Their goal is to make the Hogeweyk experience as enjoyable and independent as possible (Weller, 2017).

Hogeweyk is a large-scale example of how environments can be altered to better suit the needs of people with dementia. Research of Alzheimer's disease symptoms make the need for alterations obviously apparent, but it is up to healthcare professionals to decide which alterations to make. Both SLPs and OTs analyze the needs of people with dementia and can alter their environments. Because of their professional overlap, problems can arise when distinguishing whose job it is to make these changes. Challenges can arise when interdisciplinary team members build boundaries between each other based on their scopes of practice. They may be afraid of overstepping their professional boundaries and offending fellow interdisciplinary team members. (Behm & Gray, 2012). SLPs and OTs at the undergraduate, graduate, and clinical levels need a clear understanding of interdisciplinary team systems and of each other's professional roles to support patients optimally. Both professional fields claim expertise but there is overlap and lack of clarity. This grayness filters down to students who may be trying to understand their professional futures or even choose a clinical career direction.

Why is it important to see how undergraduate, graduate, and clinical SLPs and OTs view their scopes of practice? Why does it matter if they feel confident with their educational

preparation? Everything students and clinicians learn about their scopes of practice influences how they will perform in interdisciplinary teams. If SLPs and OTs are highly educated on what both of their professions entail, interdisciplinary therapy may be more likely to succeed. Educated team members have knowledge that allows them to communicate effectively with other professions about what is expected to provide the best form of therapy. Receiving services from a well-functioning interdisciplinary team is especially important for individuals with dementia, as they have complex needs that are best treated by multiple professionals.

The ability to communicate with team members from other professions is not something people are born with. It is a skill that begins to form throughout one's education. It is important for future clinicians to learn not only their own scope of practice, but also that of other professions. Knowing about other professionals' scopes of practice prepares students to collaborate with their future interdisciplinary team members (Nester, 2016). Successful clinicians realize that their clients may provide a complex set of needs that will require interdisciplinary collaboration, which may include overlapping scopes of practice. Clinicians can effectively address these overlaps when they are educated on what each scope of practice entails (Nester, 2016). Interdisciplinary teams that can effectively solve problems like this are able to provide effective care for their patients.

Noting discrepancies among cohorts of participants can help us gain insight to problems that may arise in interdisciplinary teams. For example, if SLPs tend to think that their scope of practice is completely separate from that of an OT and does not overlap at all, this may predict that SLPs underestimate the interaction between professions that must occur to ensure success. Studying how confident participants feel with their educational preparation is important because it can reflect how comfortable clinicians feel entering interdisciplinary teams and working with

15

individuals of similar professions. For example, if both SLPs and OTs report not feeling confident with their educational preparation on each other's scopes of practice, they may not communicate or perform well together in an interdisciplinary team. This study shines light on the differences in viewpoints between SLPs and OTs that may influence the success of interdisciplinary teams.

2.5   RESEARCH QUESTIONS

This study explored the following research questions:

1. How do undergraduate students, graduate students, and clinicians perceive the roles of SLPs and OTs, especially when caring for those with dementia and Alzheimer's disease?

2. How do undergraduate students, graduate students, and clinicians feel their education prepared them to work in an interdisciplinary team?

3.0 METHODS

In order to investigate the perception of roles of SLPs and OTs when supporting those with dementia and Alzheimer's disease, undergraduate students, graduate students, and certified clinicians were invited to take an online survey. The survey provided elective, statement rating, and multiple-choice questions regarding the main research questions.

3.1 PARTICIPANTS

3.1.1 Students

Students included in this study were intending to become either SLPs or OTs. These students were interested in occupational therapy and speech-language pathology, and therefore ideally had some knowledge of the fields.

Inclusion criteria for undergraduate students included:

- Pursuing a degree that fulfills the prerequisites to become either an SLP (requires a Communication Science and Disorders undergraduate degree) or an OT (no specific major, but certain course requirements (e.g. human anatomy, human physiology, sociology)).

Inclusion criteria for graduate students included:

- Enrolled in an accredited university for an entry level graduate program for speech-language pathology or occupational therapy

Exclusion criteria for graduate students included:

- Pursuing a doctorate degree, as their knowledge may be above what is normally reflected by students

- Enrolled in a program outside of the United States, to ensure that all participants have experienced similar educational curricula

3.1.2 Clinicians

Participating clinicians must have been professionally licensed in their respective fields.

Inclusion criteria for SLPs included:

- Completed their bachelor's and master's degree from accredited schools

- Completed supervised clinical experience, a clinical fellowship of 9-12 months, and passed the Praxis exam to test their understanding of current content and practices.

- Certified with a Certificate of Clinical Competence (CCC) and licensed by the state in which they practice.

Inclusion criteria for OTs included:

- Licensed by the state in which they practice

- Completed fieldwork experience

- Passed the National Board for Certification in Occupational Therapy exam

3.2   SURVEY

The research team distributed the online survey via email to potential participants who satisfied the requirements. Email communication was via a gatekeeper rather than directly to an individual. Participants included members of the American Speech-Language-Hearing Association's (ASHA) Special Interest Group (SIG) 15 (Gerontology), which is a community of individuals interested specifically in gerontology and speech-language pathology. Members of the American Occupational Therapy Association's (AOTA) Special Interest Section (SIS) Productive Aging were also contacted. This SIS is similar to SIG 15 because it is a community of individuals passionate about productive aging and occupational therapy. Both SIG 15 and the Productive Aging SIS are subgroups within their respective national organizations. The team encouraged participants to share the survey with other potential participants. Professors were encouraged to share the survey with students.

A survey was the chosen modality for this research because it allowed for widespread sharing, a small time commitment for participants, and participant anonymity. The questions asked related to the participants' opinions, which were best elicited through a survey questionnaire. The survey was distributed to individuals and organizations where researchers expected a high level of participant interest. For example, universities with graduate SLP and OT programs were contacted, along with special interest groups focused on geriatric care.

3.2.1   Survey Software

Qualtrics Survey Service is a secure web-based system that was used to provide the survey. The survey was distributed via email to clinicians through SIG 15, the Productive Aging SIS, and professional colleagues of the committee. Graduate and undergraduate students were contacted by emailing gatekeepers of universities across the U.S. to distribute to their students.

Questions for this survey were created with the intention of exploring how participants answer the main research questions. There are numerous survey questions to address the breadth of the research questions. For example, the first research question addresses how students and clinicians view SLP and OT scopes of practice when caring for people with dementia and Alzheimer's disease. Instead of simply asking this question with an open-ended response, numerous statements (to which the participants rated their level of agreement) were created to provide an in-depth view of the participants' opinions. Statements such as "SLPs and OTs have the same scopes of practice" and "There are parts of SLP and OT scopes of practice that are the same" relate to Research Question 1. Analyzing the rating of agreement for each statement provides detailed insight to how participants view the interaction between SLP and OT scopes of practice.

A Likert scale (i.e. response selections including strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, and strongly agree) was used for this study. This scale was used to provide the researchers with a clear representation of how the participants agree with the statements. Responses were easily categorized for data analysis.

The case scenario was developed by the researcher and the research committee. They chose a task that addresses the area of interest for the study, which is environmental alterations for individuals with dementia. The scenario involves a therapeutic technique that could be

completed by either an SLP or an OT. The survey was reviewed and revised by the research committee, which comprised both SLPs and OTs.

3.2.2   Human Resource Protection Office

This study was reviewed by the HRPO, previously Institutional Review Board (IRB), at the University of Pittsburgh. The IRB is used to protect the rights of those recruited to participate. This study is minimal risk exempt review under the IRB and did not require a full board review because it did not manipulate human subjects. The study was deemed EXEMPT under section 45 CFR 46.101(b)(2) on May 16, 2018. The IRB number for this project is PRO17080659.

3.3   DATA ANALYSIS

Survey data are reported based on the frequency of response selection. Responses are compared across populations.

3.3.1   Characterizing Populations

Demographic data were collected to characterize the responding population. This included current status (i.e. undergraduate student, graduate student, clinician), undergraduate university, graduate university, year in school, number of years spent practicing, undergraduate major and

minor(s), graduate program, profession, job title, settings worked, and areas worked. Certain demographic questions appeared based on participants' current status.

Participants rated their opinions on statements provided. Statements were provided such as "SLPs and OTs have completely separate scopes of practice" and "I thoroughly understand how OTs care for people with Alzheimer's disease". Participants rated how much they agreed or disagreed with the statements. Responses include: strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, and strongly disagree. These quantitative responses provide insight on how participants feel about their education and SLP and OT scopes of practice.

Participants were asked about their past/current education related to working in an interdisciplinary team, and what helped them feel prepared to work in an interdisciplinary team. This information helped us gain insight into what the participants know and what they have learned.

3.3.2   Research Question 1: Perception of Roles

The first research question focused on how undergraduate students, graduate students, and clinicians perceive the roles of SLPs and OTs. The nature of these questions included ratings of how strongly participants agreed with statements about SLP and OT scopes of practice. For example, participants were asked to rate the statement "SLPs and OTs have completely separate scopes of practice." Answer options included strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, and strongly agree. We reported how many students and clinicians chose each option. Participants' opinions on statements like this allowed us to gain insight on how they perceive the roles of SLPs and OTs.

22

3.3.3   Research Question 2: Educational Preparation for Interdisciplinary Teamwork

The second research question examined how undergraduate students, graduate students, and clinicians feel their education had prepared them to work in an interdisciplinary team. Participants were asked to rate certain statements about their educational preparation. For example: "My past/current education makes me feel prepared to work in an interdisciplinary team." Response options also ranged from strongly disagree to strongly agree. The frequency of each response allowed us to analyze how participants feel their education prepared them to work in an interdisciplinary team.

3.3.4   Case Scenario

The survey concluded with a case scenario involving a therapist providing care for a patient with Alzheimer's disease. The exact text from the case scenario can be found in Q30 of the survey, provided in Appendix 1. Participants were asked to judge under whose scope of practice they believe the therapeutic technique to fall – that of an SLP, an OT, or both an SLP and OT. This case scenario was included in the study to provide participants with a real-world example of the scope of practice perception discrepancies addressed in previous questions. The scenario allows participants to clearly visualize a therapeutic situation where either an SLP or an OT could have provided service. The goal of this section was to see if participants assign the neutral, unnamed therapist as strictly an SLP, strictly an OT, or possibly either. Results reveal if certain populations of participants believe an environmental alteration, such as the one in question, belongs under only one scope of practice or under both.

3.3.5 Free Response

Several open-ended questions did not appear when the participants took the survey due to a formatting error regarding skip logic. These questions are displayed in red font in the survey in Appendix A. Therefore, no results were reported for the following questions:

- Q21: Which parts of SLP and OT scopes of practice overlap?

- Q23: Which parts of OTs' scopes of practice are not in SLPs' scopes of practice?

- Q24: Which parts of SLPs' scopes of practice are not in OTs' scopes of practice?

- Q26: Which parts of SLP and OT scopes of practice are not clearly separated?

4.0   RESULTS

The same survey was distributed to everyone, but certain questions did not appear based on their response to "Current status." For example, undergraduate and graduate students were asked their year in school, but clinicians were not. Clinicians were asked how many years they have spent practicing, but students were not. A total of 137 participants (115 clinicians, 10 graduate students, and 12 undergraduate students) opened and completed at least one question from the survey. The number of respondents differ for each question because answers were optional rather than required to complete the survey. Due to the snowball approach to dissemination, the exact number of surveys sent is unknown.

4.1   DEMOGRAPHIC RESULTS

4.1.1   Undergraduate Participants

Twelve undergraduate participants responded to the survey, but one of them did not intend to become an SLP or OT so their survey ended after answering "No" to Q4. Data from the remaining 11 undergraduate participants were analyzed. All of them were Communication Science and Disorders students and had a variety of minors, such as Psychology, Spanish, English, Human Development, and Applied Music. There is not a specific undergraduate major

for individuals intending to become OTs. One participant was pursuing a certificate in American Sign Language. See Table 1.

Table 1: Demographic data for undergraduate SLP and OT students

	Undergraduate Students
University attending has an SLP and an OT program	Just SLP: 10 Just OT: 0 Both SLP and OT: 2
Do you intend to become an SLP or OT?	Yes: 11 No: 1 (excluded)
Year in school	First year: 0 Second year: 0 Third year: 7 Fourth year: 4 Fifth year or more: 0
Undergraduate major	CSD (or equivalent): 11 Rehabilitation Science: 0 Psychology: 0 Physical Therapy: 0 Occupational Therapy: 0 Exercise Sciences: 0 Health Sciences: 0 Biology: 0 Sociology: 0 Other: 0
How did you hear about this survey?	Distributed to me by my professor: 10 SIG 15: 1 Other: 0
Do you have experience working with people with Alzheimer's disease?	Yes: 2 No: 9

4.1.2 Graduate Participants

Responses from 10 graduate students were received. Their undergraduate majors included Communication Science and Disorders (7), Health Sciences (2), and Architecture (1). Their undergraduate minors included Spanish, Child Development and Family Studies, Sociology, and Special Education. Two respondents were in the first year of graduate school, five were in their

second year, and one was in their fifth year or more (two did not respond). Five graduate level respondents were studying Speech-Language Pathology (or equivalent), two were studying Occupational Therapy (or equivalent), and one reported studying neither (two did not respond). See Table 2.

Table 2: Demographic data for graduate SLP and OT students

	Graduate Students
University attended/attending has an SLP and an OT program	Just SLP: 3 Just OT: 1 Both SLP and OT: 6
Undergraduate major	CSD (or equivalent): 7 Rehabilitation Science: 0 Psychology: 0 Physical Therapy: 0 Occupational Therapy: 0 Exercise Sciences: 0 Health Sciences: 2 Biology: 0 Sociology: 0 Other: 1
Year in school	First year: 2 Second year: 5 Third year: 0 Fourth year: 0 Fifth year or more: 1 Non-response: 2
Graduate major	SLP (or equivalent): 5 OT (or equivalent): 2 Neither: 1 Non-response: 2
How did you hear about this survey?	Distributed to me by my professor: 5 SIG 15: 0 Other: 2 Non-response: 3
Do you have experience working with people with Alzheimer's disease?	Yes: 2 No: 4 Non-response: 4

4.1.3 Clinicians

A total of 115 clinicians responded to at least one question of this survey. See Table 3.

Their other undergraduate majors (not listed as options in the survey) included:

- Spanish

- Teaching English as a Second Language

- Music Education/Therapy

- Journalism, Linguistics

- Special Education

- Vocal Performance

- English, History and Philosophy

- Human Behavior

- Drama

- Life and Biomedical Sciences and Humanities

- Radio-TV-Film

- International Relations

- German

- Communication

- Deaf Education

Some of their undergraduate minors included:

- Musical Theatre

- Audiology

- Piano

- Chemistry

- Gerontology

- Dance

- French

- Writing

Some of their undergraduate certificates included:

- American Sign Language

- Clinical Aromatherapy

- Massage/Bodywork Therapy

- Emotional Disorders Teaching Certification

- Special Education

Their job titles included:

- Clinical Lead OT

- Rehabilitation Lead SLP

- Associate Professor

- Rehabilitation Director

- Vice President of Clinical Programming

- American Sign Language/English Interpreter

Other settings not listed they had worked included:

- home health

- outpatient clinics

- early intervention from birth to three years

- private practices

Table 3: Demographic results for SLP and OT clinicians

	Clinicians
University attended had an SLP and an OT program	Just SLP: 46 Just OT: 26 Both SLP and OT: 35 Non-response: 8
Undergraduate major	CSD (or equivalent): 47 Rehabilitation Science: 1 Psychology: 12 Physical Therapy: 0 Occupational Therapy: 20 Exercise Sciences: 1 Health Sciences: 3 Biology: 2 Sociology: 0 Other: 20 Non-response: 9
Graduate major	SLP (or equivalent): 62 OT (or equivalent): 23 Neither: 5 Non-response: 25
Profession	SLP: 64 OT: 26 Neither: 0 Non-response: 25
Years spent practicing	Minimum: 1 Maximum: 52 Median: 17.5
Settings worked (could select multiple)	Hospital: 57 School: 33 Nursing/Assisted Living Home: 48 Skilled Nursing Facility: 71 Rehabilitation Center: 41 Other: 43
Areas worked (could select multiple)	Urbanized Areas: 50 Urban Clusters: 51 Rural Areas: 44
How did you hear about this survey?	Distributed to me by my professor: 2 SIG 15: 50 Other: 43 Non-response: 20
Do you have experience working with people with Alzheimer's disease?	Yes: 88 No: 4 Non-response: 23

4.2   RESEARCH QUESTION 1

How do undergraduate students, graduate students, and clinicians perceive the roles of SLPs and OTs, especially when caring for those with dementia and Alzheimer's disease?

The data in this section show whether perceptions of the roles of SLPs and OTs differ across participants. Results are separated into sections based on groups of participants (i.e. undergraduate students, graduate students, clinicians (SLP or OT). To easily compare responses across groups, 100% stacked column graphs were created to display the proportions. These graphs compare data between undergraduate students, graduate students, and clinicians, as well as between SLPs and OTs. Responses from SLPs and OTs include data from only clinicians because clinicians have experience working in their field which offers specific insight.

The numbers on the graphs represent the number of people who chose that option. UG stands for undergraduate students, G stands for graduate students, and C stands for clinicians. Clinicians include both SLPs and OTs. The total respondents for each statement may differ because some participants chose not to answer certain questions. There were five options to choose from in the survey (i.e. strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree). The responses strongly disagree/somewhat disagree and strongly agree/somewhat agree were collapsed into disagree and agree when reporting the data. This was done to simplify the results and ease the reader's understanding.

4.2.1 Completely separate or completely the same

Figure 1 and Figure 2 show undergraduate students' (UG), graduate students' (G), and clinicians' (C) responses to their view of the overlap/separation between SLP and OT scopes of practice. The participants included in this analysis are those who declared their current status as an undergraduate student, graduate student, or clinician. All 11 undergraduates who declared their status responded to the questions regarding the overlap/separation between scopes of practice. Of the 10 graduate students who declared their status, 6 answered these questions. Of the 115 clinicians who declared their status, 95 answered these questions.
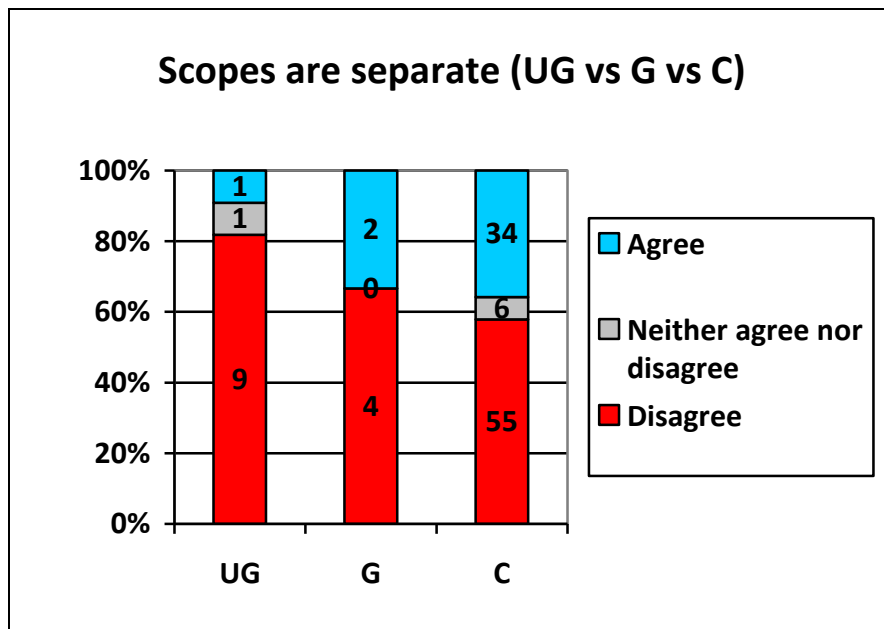

Figure 1: UG, G, and C responses to "SLPs and OTs have completely separate scopes of practice"
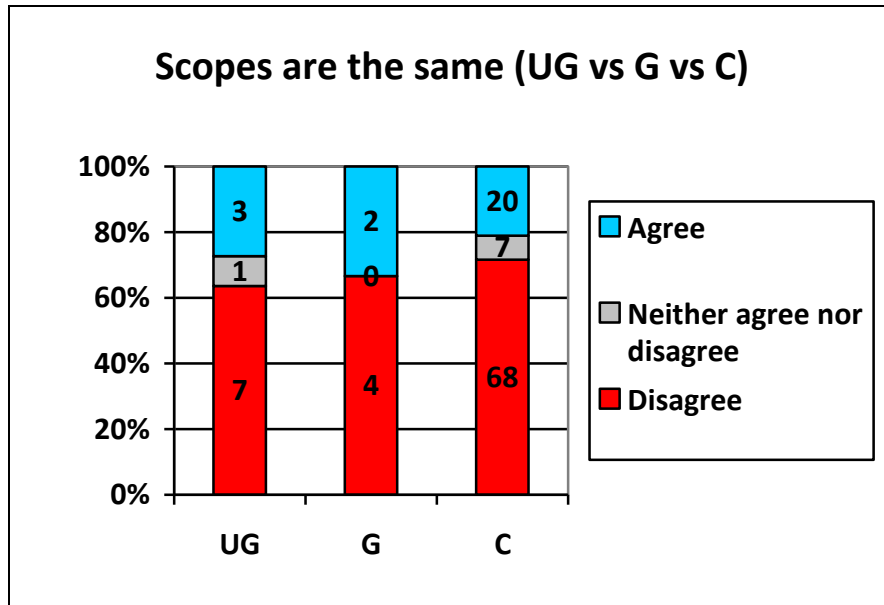
Figure 2: UG, G, and C responses to "SLPs and OTs have the same scopes of practice"

These results show that most undergraduate students, graduate students, and clinicians do not think that SLP and OT scopes of practice are exactly the same or completely separate.

4.2.2 Potential overlap and parts hard to tell

Figure 3 and Figure 4 relate to how participants view the gray areas between SLP and OT scopes of practice. All 11 undergraduates who declared their status answered these questions. These questions received responses from 6 out of the 10 graduate students who declared their status. Of the 115 clinicians who declared their status, 95 responded to "There are parts of SLP and OT scopes of practice that are the same" and 94 responded to "There are parts of SLP and OT scopes of practice where it is hard to tell which field it belongs in."

33

Figure 3: UG, G, and C responses to "There are parts of SLP and OT scopes of practice that are the same"

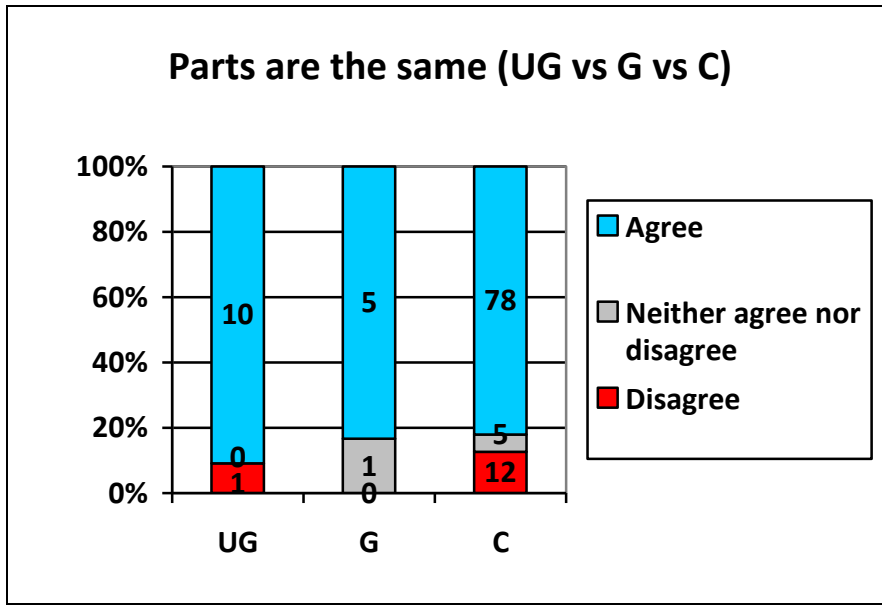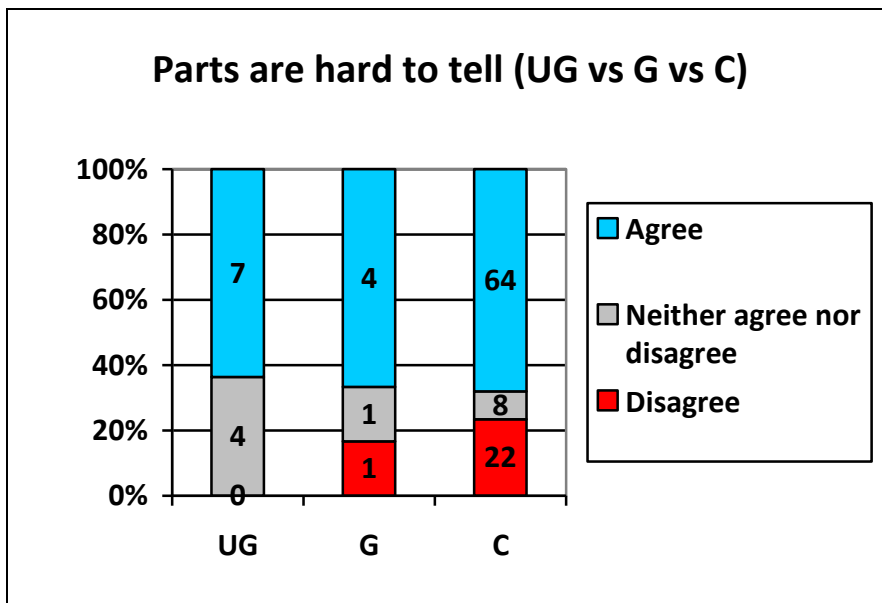**Figure 4: UG, G, and C responses to "There are parts of SLP and OT scopes of practice where it is hard to tell which field it belongs in"**

These results show that undergraduate students, graduate students, and clinicians believe SLPs and OTs have overlapping qualities in their scopes of practice. They also agree that there are some aspects of SLP and OT scopes of practice that are hard to attribute to one scope of practice.

4.2.3   Completely separate or completely the same

Figure 5 and Figure 6 display the results for questions regarding how SLPs and OTs view the overlap/separation of their scopes of practice, separate from the other participants. These participants are those who declared themselves as clinicians and identified their profession. Of the 115 who identified as practicing clinicians, 90 of them reported their profession. The remaining 25 participants who did not report their profession are excluded for the sub analysis by profession. The 90 individuals who reported their profession are used when separating clinicians into SLP and OT groups. Of these 90 clinicians, 64 were SLPs and 26 were OTs. Q20a and Q20b received responses from 61 SLPs (from a total of 64 who identified as SLPs) and all 26 OTs.
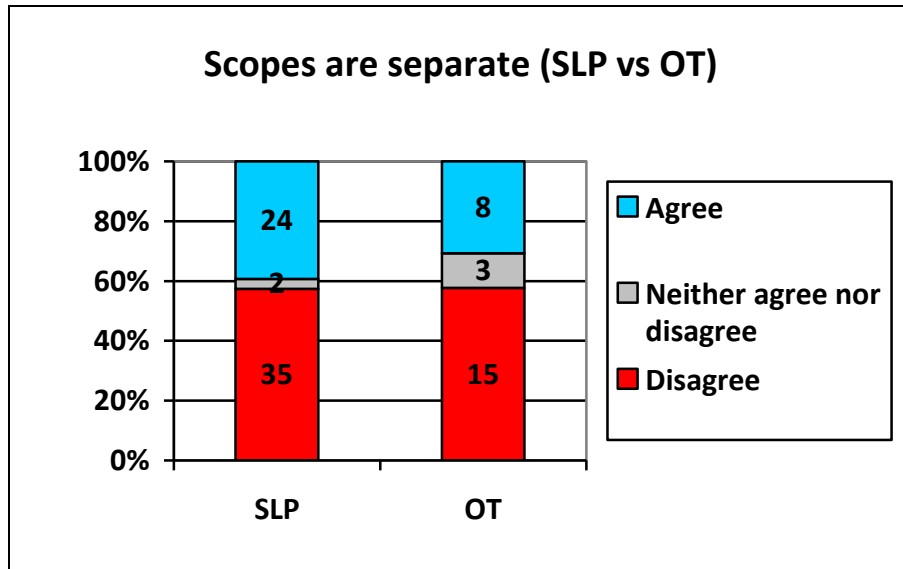
Figure 5: SLP and OT responses to "SLPs and OTs have completely separate scopes of practice"
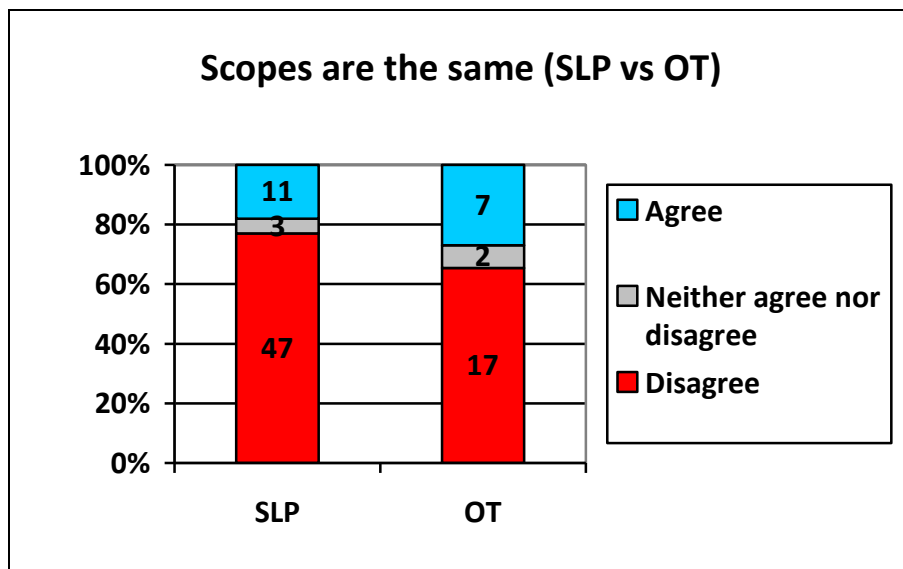
Figure 6: SLP and OT responses to "SLPs and OTs have the same scopes of practice"

SLPs and OTs both mostly disagreed that their scopes of practice are exactly the same or completely separate. Only 39% (24 out of 61) of SLPs and 31% (8 out of 26) of OTs agreed that

their scopes are completely separate, and only 18% (11 out of 61) of SLPs and 27% (7 out of 26) of OTs thought they are the same.

4.2.4   Potential overlap and parts hard to tell

Figure 7 and Figure 8 show responses from SLP and OT clinicians for questions regarding the gray areas between their scopes of practice. Of the 64 clinicians who identified themselves as SLPs, 61 responded to these statements. All 26 OTs responded.
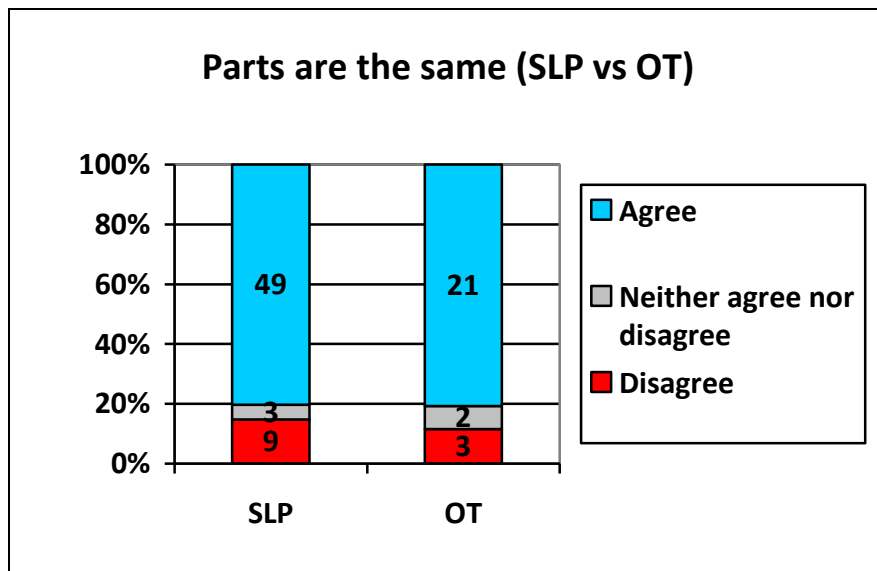
Figure 7: SLP and OT responses to "There are parts of SLP and OT scopes of practice that are the same"
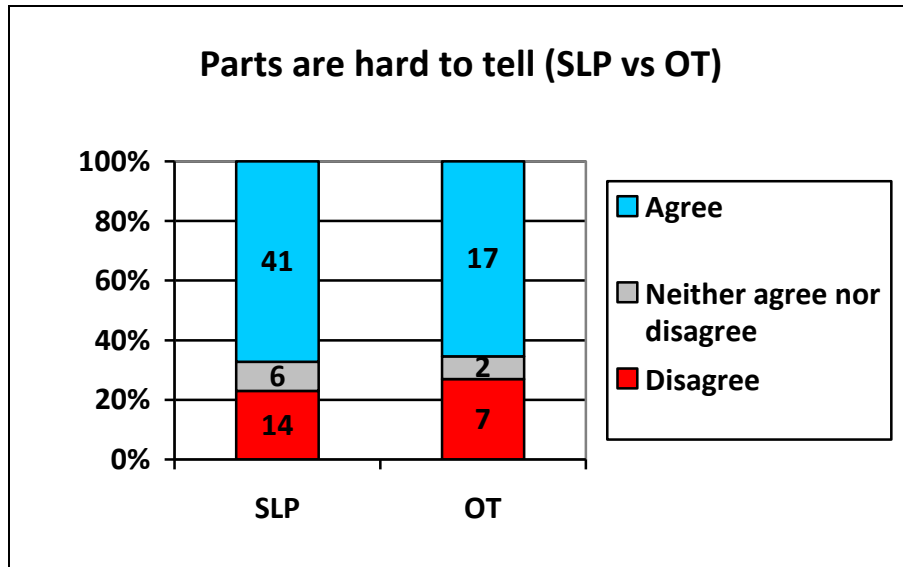
Figure 8: SLP and OT responses to "There are parts of SLP and OT scopes of practice where it is hard to tell which field it belongs in"

SLPs and OTs mostly agree that there are parts of their scopes of practice that are the same. Around 80% (49 out of 61) of SLPs and 81% (21 out of 26) of OTs agree with this statement. The majority of SLPs and OTs also agree that there are parts of their scopes of practice where it is hard to tell which field they belong in. Around 67% (41 out of 61) of SLPs and 65% (17 out of 26) of OTs agree with this statement.

4.3   RESEARCH QUESTION 2

How do undergraduate students, graduate students, and clinicians feel their education prepared

them to work in an interdisciplinary team?

These data represent how prepared by their education participants feel to enter interdisciplinary

teams. Results are presented in the same format as Research Question 1 (i.e. separated into

sections based on participants, using 100% stacked column graphs to compare across groups,

collapsed response groups).

Figure 9 displays the results of undergraduate students, graduate students, and clinicians

for how they feel their education prepared them to work in an interdisciplinary team. The

participants included in this analysis are those who declared their status (undergraduate student,

graduate student, or clinician). All 11 undergraduate students responded, 6 out of 11 graduate

students responded, and 91 out of 115 clinicians responded.
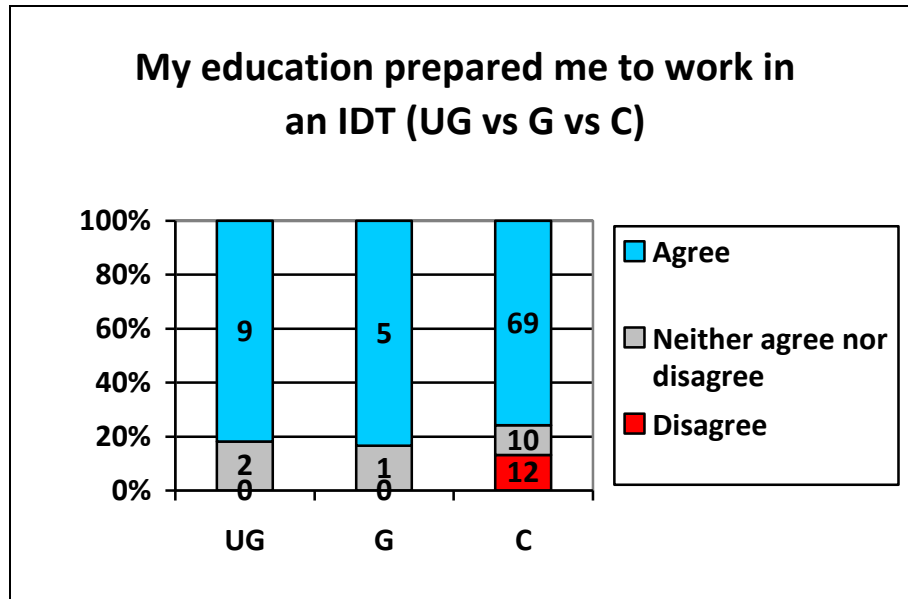
Figure 9: UG, G, and C responses to "My past/current education makes me feel prepared to work with clinicians from other fields in an interdisciplinary team"

The majority of undergraduate students, graduate students, and clinicians agreed that their education prepared them to work in an interdisciplinary team. A small percentage of clinicians, 13% (12 out of 91), disagreed with this statement.

4.3.1 SLPs vs. OTs educational preparation

Figure 10 displays the results from clinical SLPs and OTs for how they feel their education prepared them to work in an interdisciplinary team. The participants included in this analysis are those who declared their status as a clinician and identified themselves as either an SLP or OT. Of the 64 who identified themselves as SLPs, 60 responded to how their education prepared them to work in an interdisciplinary team. Of the 26 who identified themselves as OTs, 25 answered this question.

40

My education prepared me to work in an IDT (SLP vs OT)
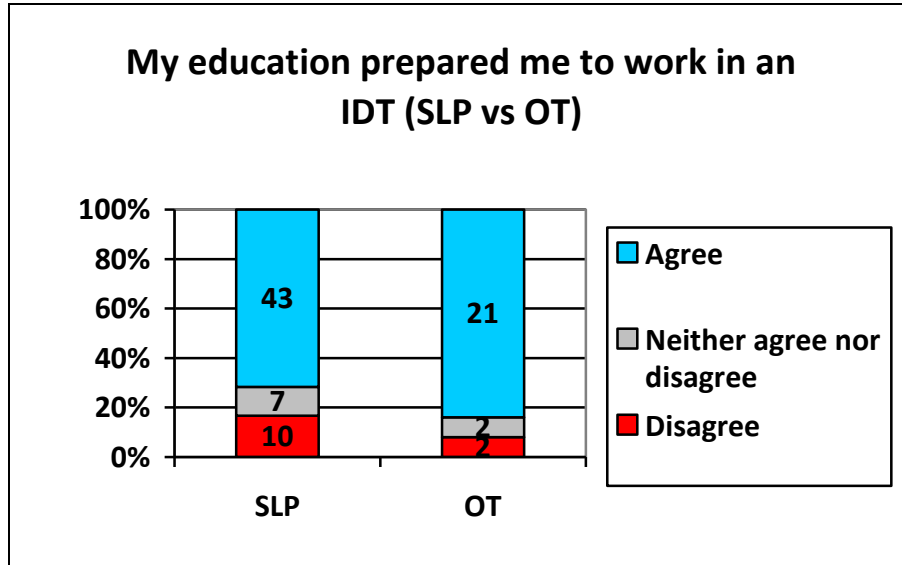
Figure 10: SLP and OT responses to "My past/current education makes me feel prepared to work with clinicians from other fields in an interdisciplinary team"

SLPs and OTs mostly agreed that their education prepared them to work in an interdisciplinary team. SLPs disagreed slightly more (17%, or 10 out of 60) with this statement than OTs did (8%, or 2 out of 25).

4.4   CASE SCENARIO

A nursing home resident with Alzheimer's disease has trouble remembering how to wash her hands after using the bathroom. To help her, a sign is placed above her bathroom sink with simple instructions on how to wash her hands. Putting a sign in a resident's bathroom is considered altering the patient's environment and is done by a healthcare professional. Adding

the instructional sign falls under the scope of practice of: SLPs only, OTs only, or both SLPs and

OTs?

This case scenario was included in the survey to provide participants with an opportunity to apply their knowledge of scope of practice to a real-world situation. The results reflect how participants view the roles of SLPs and OTs when supporting environmental alterations for individuals with Alzheimer's disease. Results are displayed in the same format as previous sections (e.g. separated into sections based on participants, using 100% stacked column graphs to compare across groups, collapsed response groups, etc.).

Figure 11 displays the responses of undergraduate students, graduate students, and clinicians for the case scenario. This analysis takes into consideration the responses from the 11 undergraduate students, 10 graduate students, and 115 clinicians who declared their status. All 11 undergraduate students responded to the case scenario, 6 of 10 graduate students responded, and 91 of 115 clinicians responded.
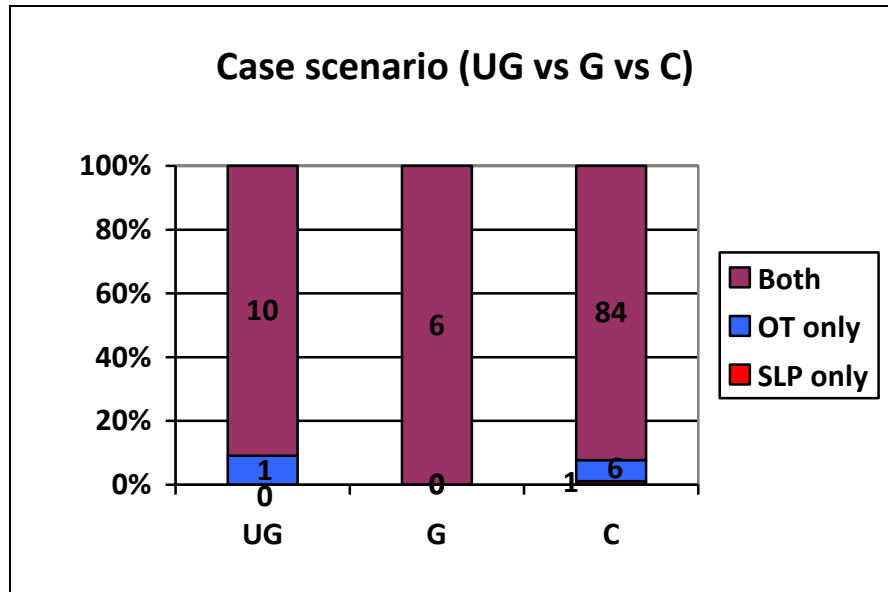
Figure 11: UG, G, and C responses to the case scenario

The vast majority of participants across all groups believe the therapeutic action could belong to either an SLP's or an OT's scope of practice. About 92% (84 out of 91) clinicians believe it could belong to either profession, and the remaining 8% (7 out of 91) believe it only belongs to one. The results from clinicians are further analyzed to explore this.

Figure 12 displays the responses from clinical SLPs and OTs for the case scenario. The participants used in this analysis are those who declared their status as a clinician and identified their profession. This includes 64 SLPs and 26 OTs. Of these totals, 61 SLPs and 24 OTs responded to the case scenario.
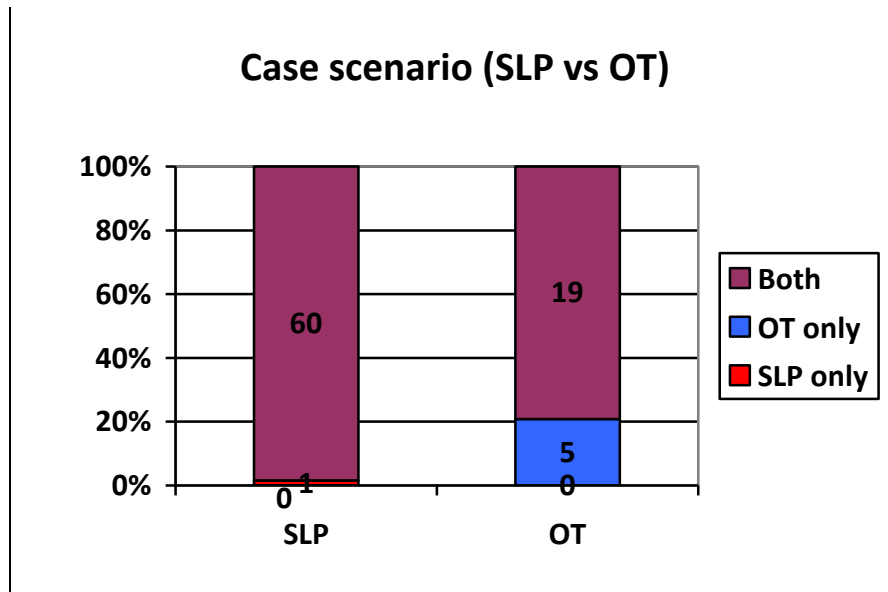
Figure 12: SLP and OT responses to the case scenario

Most SLPs and OTs thought that the therapeutic action could fall under the scope of practice of both an SLP and an OT. About 2% (1 out of 61) of SLPs thought it could only fall under their scope of practice. About 21% (5 out of 24) OTs thought it could only fall under their scope of practice. No SLPs or OTs thought the therapeutic action could fall under *only* the other profession's scope of practice.

4.5 QUESTIONS RELATED TO ALZHEIMER'S DISEASE

4.5.1 Understanding SLP and OT roles in Alzheimer's disease

Figure 13 shows the results for how well participants understand how SLPs care for people with Alzheimer's disease. Figure 14 shows the results for how well participants understand how OTs care for people with Alzheimer's disease. Responses from participants who declared their status

as an undergraduate student, graduate student, or clinician were used for this analysis. All 11 undergraduate students responded, 6 of 10 graduate students responded, and 92 of 115 clinicians responded.

I understand how SLPs care for people with Alzheimer's disease

UG: Disagree 2, Neither agree nor disagree 2, Agree 7
G: Disagree 1, Neither 0, Agree 5
C: Disagree 20, Neither 3, Agree 69
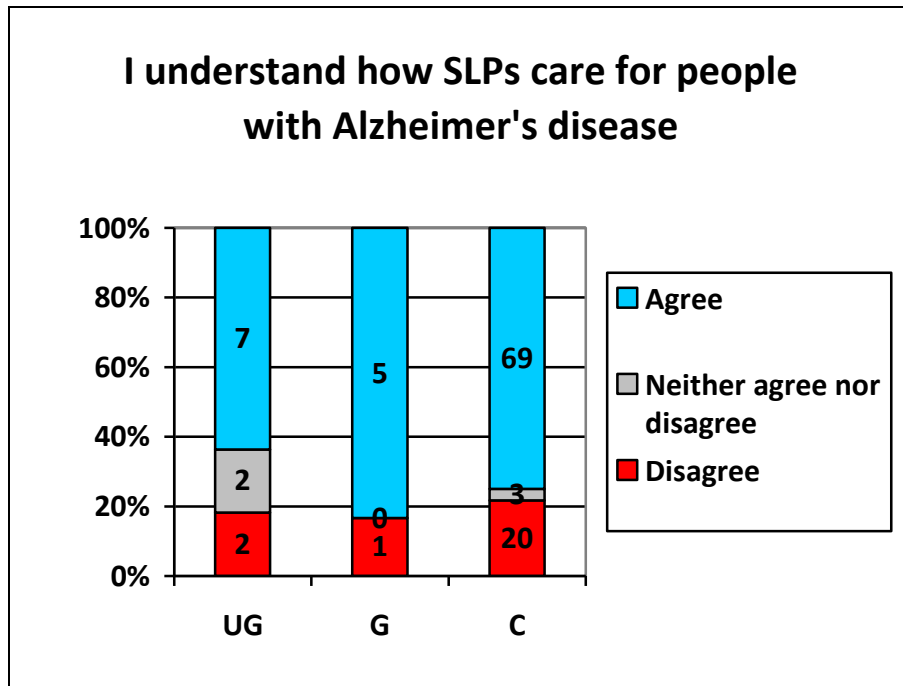
Figure 13: UG, G, and C responses to "I thoroughly understand how SLPs care for people with Alzheimer's disease"
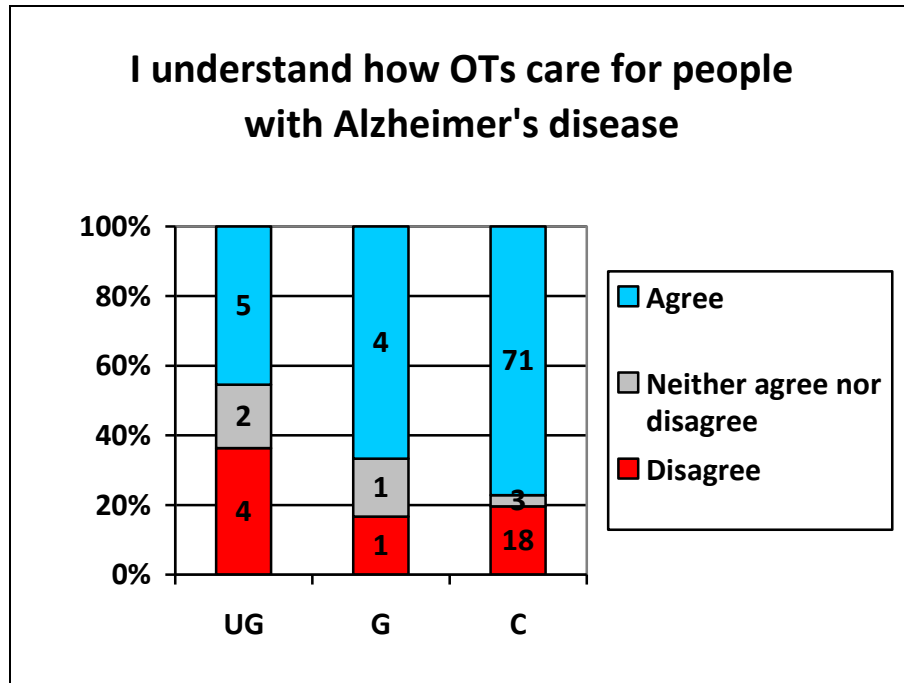
Figure 14: UG, G, and C responses to "I thoroughly understand how OTs care for people with Alzheimer's disease"

Most undergraduate students, graduate students, and clinicians agree that they understand how SLPs care for people with Alzheimer's disease. Only about 45% (5 out of 11) of undergraduate students understand how OTs care for people with Alzheimer's disease while the remaining 55% (6 out of 11) disagree or are unsure. Graduate students show a slightly higher number of people who understand how OTs care for people with Alzheimer's disease, with 67% (4 out of 6). Clinicians have the highest number of participants who understand, with 77% (71 out of 92).

4.5.2   SLP and OT understanding of roles in Alzheimer's disease

Figure 15 and Figure 16 display results from SLPs and OTs who identified their professions. Of the 64 SLPs who identified their profession, 61 responded to how well they understand how

SLPs and OTs care for people with Alzheimer's disease. Of the 26 OTs who identified themselves, 25 responded.
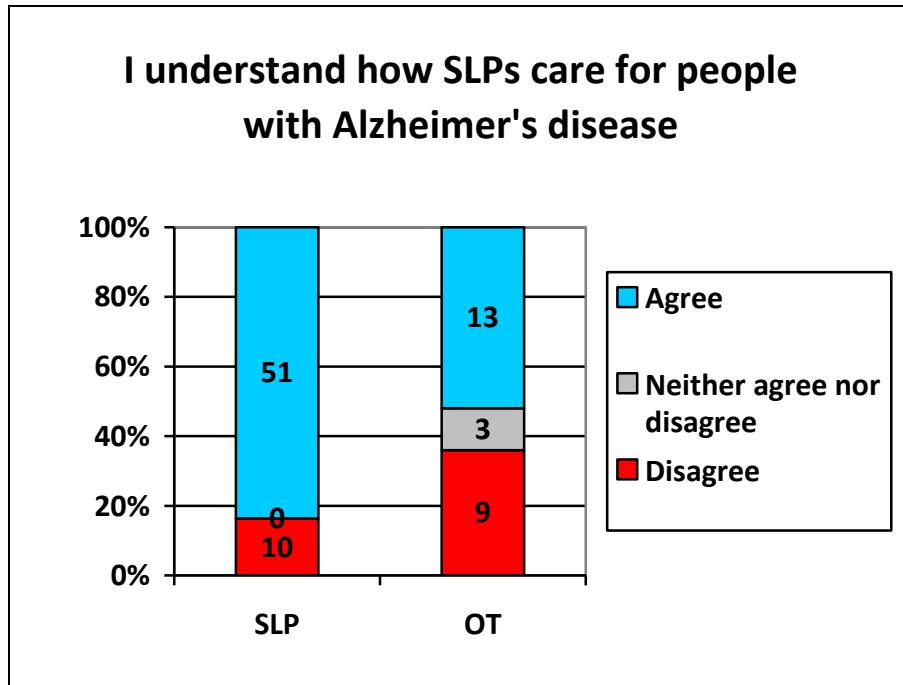
Figure 15: SLP and OT responses to "I thoroughly understand how SLPs care for people with Alzheimer's disease"

**I understand how OTs care for people
with Alzheimer's disease**
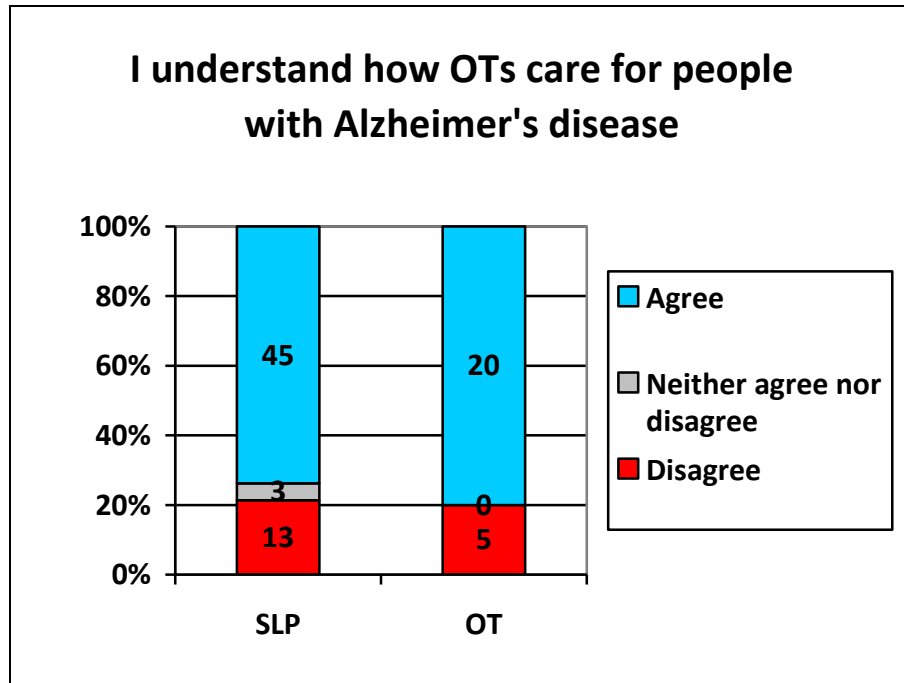
**Figure 16: SLP and OT responses to "I thoroughly understand how OTs care for people with
Alzheimer's disease"**

Most SLPs and OTs understand how their profession cares for people with Alzheimer's disease.
They are both more confident in their understanding of their own profession than they are for the
other profession. For example, about 84% (51 out of 61) of SLPs understand how they care for
people with Alzheimer's disease. Only 74% (45 out of 61) of SLPs understand how OTs care for
these patients. Exactly 80% (20 out of 25) of OTs understand how they care for people with
Alzheimer's disease, but only 52% (13 out of 25) understand how SLPs care for these patients.

4.5.3 Case scenario results based on experience with Alzheimer's disease

These data show responses to the case scenario from clinicians who have worked with people
with Alzheimer's disease compared to clinicians who have not. The results shine light on the

notion that one's experience working with people with Alzheimer's disease may have affected their response to the case scenario, which involves a patient with Alzheimer's disease.

Figure 17 displays the results from SLPs and OTs regarding their experience working with people with Alzheimer's disease. The participants used in this analysis were those who declared their status as a clinician and identified their profession. Of the 64 who identified as SLPs, 61 reported their experience with people with Alzheimer's disease. Of the 26 who identified as OTs in Q13, 25 reported their experience.
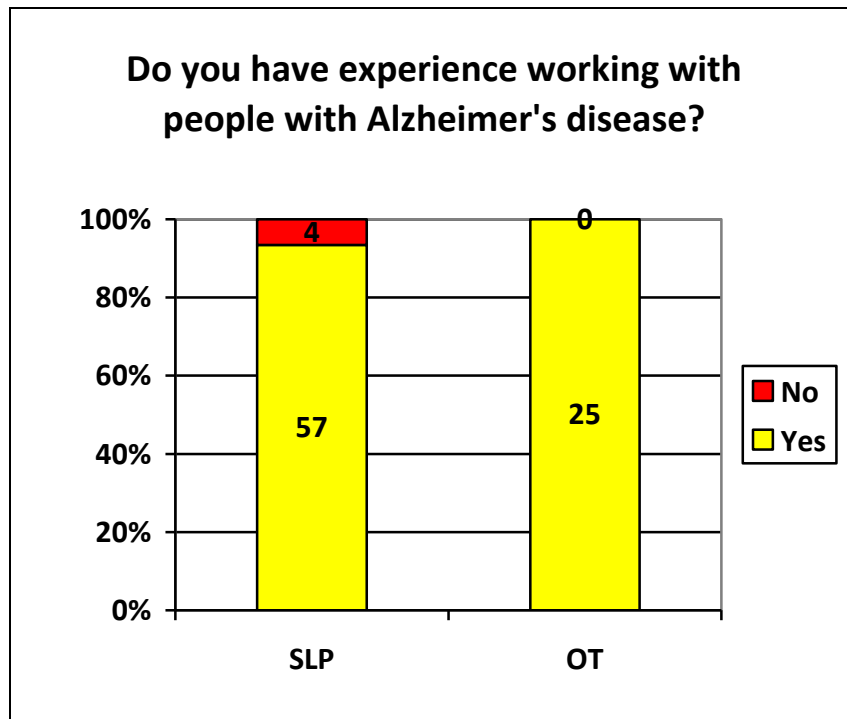
Figure 17: SLP and OT responses to "Do you have experience working with people with Alzheimer's disease?"

About 93% (57 out of 61) of SLPs had experience working with people with Alzheimer's disease. All OTs (25 out of 25) had experience working with these patients.

Figure 18 compares results from the case scenario for SLPs and OTs with and without experience working with people with Alzheimer's disease. Of the 61 SLPs who responded to the case scenario, 57 of them have experience working with people with Alzheimer's disease. Their responses to the case scenario are reported above the label "SLP (Yes)" on the graph. Four SLPs did not have experience working with people with Alzheimer's disease and their responses are labeled "SLP (No)". All 24 OTs who responded to the case scenario had experience working with people with Alzheimer's disease. One OT who had experience working with people with Alzheimer's disease did not respond to the case scenario, which is why there are 24 OTs instead of 25. Their responses are labeled "OT (Yes)". If there were OTs who did not have experience working with people with Alzheimer's disease, their results would be displayed above the label "OT (No)".
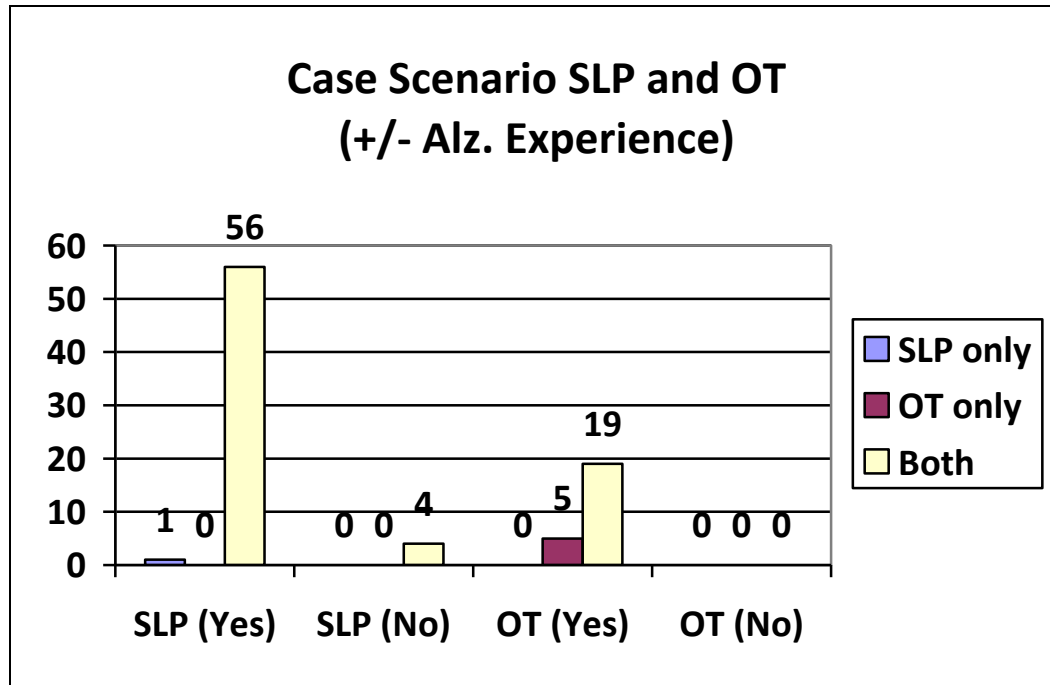
Figure 18: SLP and OT responses to the case scenario, divided by their experience working with people with Alzheimer's disease

Most of the SLPs who had experience working with people with Alzheimer's disease believed that the therapeutic action in the case scenario can fall under both an SLP's and an OT's scope of practice (about 98%, or 57 out of 57). The remaining 2% (1 out of 57) thought it would only be under an SLP's scope of practice. All SLPs who did not have experience working with people with Alzheimer's disease also thought it could be under both scopes of practice. Most OTs who had experience working with people with Alzheimer's disease thought it could be under both scopes of practice (79%, or 19 out of 24). The remaining 21% (5 out of 24) of OTs with experience thought it would be only under an OT's scope of practice.

51

5.0   DISCUSSION

This is the first study to examine how SLP and OT students and clinicians view their roles especially when caring for people with Alzheimer's disease and dementia, and to explore their attitudes on their educational preparation. Differences in opinions among the groups studied offer insight to how professionals may perform in an interdisciplinary team. Differences in the perception of roles and educational preparation highlight the need for communication within an interdisciplinary team to ensure therapeutic success.

5.1   PARTICIPANT CHARACTERISTICS

Undergraduate SLP and OT students were asked to participate because their responses reflect how students at the undergraduate level are learning about interdisciplinary teams. Undergraduate education is usually the first exposure future SLPs and OTs have to interdisciplinary teams. This is also usually the point when future clinicians start forming ideas about what kind of professional they want to be based on what they have learned. Opinions and confidence about their education on interdisciplinary teams uncover how the initial impressions of working alongside other professionals in a healthcare field are made.

Interprofessional education is a tool that has been internationally recognized for only about 40 years (Buring et al., 2009). Even with its increasing recognition of its importance,

students are not usually exposed to interprofessional education until they reach an advanced level of education, such as graduate school. Graduate students were surveyed in this study to examine how individuals at this level of education perceive the information they are taught regarding interdisciplinary teams. By the time students are in graduate level courses, they have had multiple years of education about their fields. Interdisciplinary team techniques and values are vital to learn in this phase of education because they are about to begin their careers as interdisciplinary team members. Information about interdisciplinary teams and clinical skills taught at the graduate level are vital for future clinicians.

Practicing clinicians were asked to participate in this study because their opinions provide insight to how interdisciplinary teams are currently functioning. The information provided from clinicians reflects how current professionals are looking back on their education and how they view SLP and OT scopes of practice.

Highlighting how undergraduate students, graduate students, and clinicians view the interdisciplinary and divided areas of SLP and OT scopes of practice will encourage participants to actively question their understanding of their careers. More generally, this study inspires readers to consider and compare other fields' scopes of practice with their own. With a growing insight to the work of OTs and SLPs, we can optimize the care of those with cognitively impairing diseases.

5.2   RESEARCH QUESTION 1

How do undergraduate students, graduate students, and clinicians perceive the roles of SLPs and OTs, especially when caring for those with dementia and Alzheimer's disease?

Most clinicians and students agreed that SLPs and OTs have overlapping scopes of practice (91% of undergraduates agreed, 83% of graduates agreed, 82% of clinicians agreed). See Figure 3. This is a positive finding because it means participants realize that these professions will frequently interact when providing therapy. Realizing this overlap will hopefully encourage interdisciplinary conversations about scope of practice to ensure the best care is provided from an interdisciplinary team.

Participants did not believe that SLPs and OTs have completely separate or identical scopes of practice (82% of undergraduates disagreed, 67% of graduates disagreed, 58% of clinicians disagreed, see Figure 1 and Figure 2). As evidenced by the participants' responses, there are some parts of their scopes of practice that are the same.

Participants also responded that there are parts of SLP and OT scopes of practice where it is hard to tell which field it belongs in (64% of undergraduates agreed, 67% of graduates agreed, 68% of clinicians agreed, see Figure 4). This claim reflects that participants realize SLP and OT scopes of practice have unique elements, but it can be difficult to recognize to which scope those elements belong.

5.2.1 Differences between clinicians and students

Undergraduate students, graduate students, and clinicians responded similarly to the survey questions. The rating of agreement for each statement has a similar trend across cohorts. The responses from clinicians were slightly less polarized than those of the undergraduate and graduate students. This could be due to several factors. There were significantly more clinicians who responded to each statement than students, which may mean the data were not so swayed by

outliers. All undergraduate students were majoring in Communication Science and Disorders, which most likely means they are planning to become SLPs (or audiologists). There is not a specific undergraduate major for students intending to become OTs, so some of those who were intending to become OTs may have been majoring in Communication Science and Disorders. There were multiple OTs among the clinicians who responded to the statements. It is not surprising that the trends of responses between undergraduates and clinicians may differ because clinicians have had more specialized exposure to the OT scope of practice through their time working in the field.

5.2.2   Differences based on profession

SLPs and OTs both tend to disagree that their scopes of practice are completely separate (57% of SLPs disagreed, 58% of OTs disagreed, see Figure 5). This is a positive finding because it suggests that SLPs and OTs recognize each other's scopes of practice. It suggests that they have some knowledge of how other professionals care for their patients.

About 80% of SLPs and OTs either agree or strongly agree that parts of their scopes of practice are the same (see Figure 7). The popularity of this view can positively impact the cohesiveness of interdisciplinary teams because it shows that SLPs and OTs recognize that their job descriptions and duties have some overlapping qualities.

Both SLPs and OTs mostly agree that there are parts of their scopes of practice where it is hard to tell where it falls (67% of SLPs agreed, 65% of OTs agreed, see Figure 8). This means that professionals recognize that there may be conflict within interdisciplinary teams when trying to figure out who is responsible for what.

A recent study examined the causes of conflict within interdisciplinary teams. Among other causes (e.g. accountability, time, workload), scope of practice and role boundary issues were found to elicit conflict. When team members are unsure of where their scope of practice boundaries lie, it can be hard to identify one's responsibilities (Lewis, Ellis, Stewart, Freeman, & Kasperski, 2011). Lewis and colleagues recognized that there are helpful ways to resolve interdisciplinary conflict and tension. Developing conflict resolution protocols can prepare interdisciplinary team members to communicate about their issues before they become severe. If this is not successful, leaders within the organization can negotiate and solve the problem (Lewis et al., 2011). The findings in our study reflect the claim that interdisciplinary conflict may arise due to the differing views of SLP and OT scopes of practice, but there are strategies for resolving these issues.

5.3   RESEARCH QUESTION 2

How do clinicians, graduate students, and undergraduate students feel their education prepared them to work in an interdisciplinary team?

All participants felt that their education prepared them to work in an interdisciplinary team alongside other professionals and work in an interdisciplinary team (see Figure 9). This is a positive finding because it suggests that clinicians enter the field feeling prepared to collaborate with their team members. Educated clinicians have the potential to create an environment that promotes collaboration across professions.

Figure 9 shows that clinicians are the only group where participants disagree that their education prepared them to work in an interdisciplinary team. This may be due to several factors. When clinicians were in college, their classes may not have discussed working in interdisciplinary teams as much as educators do today. This shift in education may have caused the difference in responses between students and clinicians. If educational practices are the same for students now as they used to be for clinicians, this may mean that students think they are prepared to work in an interdisciplinary team but change their minds when they start practicing. Clinicians may realize that they are not as prepared to work in interdisciplinary teams as they thought they were when they were students.

The majority of clinicians agreed that their education prepared them to work in an interdisciplinary team (76% of clinicians agreed). As noted before, participants acknowledge that there are some parts of SLP and OT scopes of practice where it is hard to tell which field it belongs in. University education can only prepare novice clinicians for a small number of clinical situations. Real-world experience is important for understanding how scopes of practice interact to an extent beyond their university education.

5.4   CASE SCENARIO

A nursing home resident with Alzheimer's disease has trouble remembering how to wash her hands after using the bathroom. To help her, a sign is placed above her bathroom sink with simple instructions on how to wash her hands. Putting a sign in a resident's bathroom is considered altering the patient's environment and is done by a healthcare professional.

57

When reporting whose scope of practice this environmental alteration falls under, most participants responded that it could be an SLP's or an OT's job (see Figure 11). This is a positive finding because it reflects that participants can recognize the potential overlap between professions in a specific example.

SLPs and OTs had a few small differences when their responses were separated (see Figure 12). One SLP thought that it was only the job of an SLP, and five OTs thought it was only an OT's job. SLPs never thought it was only an OT's job, and OTs never thought it was only an SLP's job. This disagreement could cause issues within an interdisciplinary team where members' ideas about their scopes of practice do not align. If an SLP and an OT were in an interdisciplinary team presented with the case scenario, but both were unable to see how the other could handle the situation, turf wars could emerge.

The difference between how SLPs and OTs viewed the case scenario may be due to their professional biases. One motivation for SLPs and OTs to claim the therapeutic activity as their own may be due to billing purposes. If a therapist can validate treating a patient because it falls under their scope of practice, they can be paid for the service. They may also feel pressure to claim cases that fall under their scope for productivity reasons, rather than allow another professional who is more suited for the task to complete it. Both billing and productivity are factors that can influence how professionals allocate their work.

A sub analysis of the case scenario compared the responses from clinicians who have worked with people with Alzheimer's disease to those who have not (see Figure 18). Only responses from clinicians were studied given the limited numbers of undergraduate and graduate students. Results show that 100% of clinicians who have not worked with people with Alzheimer's disease believe that the case scenario involves the scope of practice of both SLPs

and OTs. Most clinicians who have worked with people with Alzheimer's disease think it could involve both, but a few participants believe that it could be just an OT's job or just an SLP's job. This could be due to several reasons. There were almost 22 times more clinicians who had worked with people with Alzheimer's disease than who had not (87 had, 4 had not). Larger sample sizes allow for more variability among responses.

The difference in opinions could also be because clinicians who have worked with people with Alzheimer's disease have experienced situations similar to the one described in the case study. They may have had experience doing similar actions without collaborating with other team members, which led them to think that it can only fall into their scope of practice. This notion is supported by the fact that participants who answered "OT only" for the case scenario were solely OTs, and those who answered "SLP only" were solely SLPs. Experience working with people with Alzheimer's disease may have caused participants to view SLP and OT scopes of practice as more polarized when it comes to environmental alterations and dementia care.

The best way to solve a situation like this is to have communication among team members. The SLP and OT may both want to place a sign above the sink with instructions, but their motivation to do so may differ. The OT may want to do it to use memory to develop or maintain the person's activities of daily living skills. The SLP may want to do it so the resident uses the activity to work on their memory skills. In this case, the OT is targeting the resident's actions while the SLP is targeting the resident's memory. Productive dialogue between team members can unveil why therapists disagree on the boundaries between their scopes of practice and they can solve interdisciplinary conflict.

5.5   QUESTIONS INVLOVING ALZHEIMER'S DISEASE

More undergraduate participants reported to understand how SLPs care for people with Alzheimer's disease than OTs care for people with Alzheimer's disease (see Figure 13 and Figure 14). This could be because all of the undergraduate students were majoring in Communication Science and Disorders (or equivalent). This is a major for prospective SLP students, so classes probably explain the role of SLPs more than the role of OTs. This extra exposure to information about SLPs is most likely accountable for the undergraduates' heightened understanding of how SLPs care for people with Alzheimer's disease.

It was expected that this study included participants who have experience working with people with Alzheimer's disease. Participants were contacted through ASHA's SIG 15 and AOTA's SIS Productive Aging. These are both organizations that appeal to individuals interested in issues related to aging. A large percentage of clinicians in the study had experience working with people with Alzheimer's disease, which may be because many of them found the study within SIG 15 and SIS Productive Aging.

5.6   IMPLICATIONS FOR HEALTHCARE PROFESSIONALS

Confusion commonly arises among professionals in overlapping interdisciplinary fields. It can be difficult to separate scopes of practice between clinicians that have similar duties. This may cause both professionals to do the same task or no one at all. This may also lead to overstepped boundaries and disagreements about responsibilities. Increased knowledge on this subject will allow professionals to consider their team members' opinions and to appropriately mitigate

problems before they appear. It is vital to identify where one profession's scope of practice begins and ends to provide the best healthcare possible. The gray areas between SLPs' and OTs' scopes of practice have not been investigated formally. Anecdotal evidence from professionals in these fields suggests both collaboration and conflict at times. This is particularly prominent regarding environmental alterations for people with Alzheimer's disease in the geriatric population, as it is a collaborative effort given the complex needs. Professionals in interdisciplinary teams may find themselves clashing when it comes to treatment techniques.

SLPs and OTs often find themselves conflicting because their scopes of practice have similarities, especially when caring for those with dementia. Uncovering why an SLP or an OT wants to implement therapy with an individual can explain why they view the service as part of their scope of practice. Take the situation from the case scenario, for example. An SLP may want to put the sign in the bathroom to work on the patient's memory, but an OT may use the sign to maximize the patient's ability to independently complete the activity of daily living. In this scenario, the SLP implements an activity of daily living (washing hands) to work on the patient's *memory*. The OT uses an item involved with *memory* (the sign) to work on the patient's *activities of daily living*. Both professionals implement the same strategy for different outcomes. This realization is something healthcare professionals should be aware of while working in an interdisciplinary team to ease communication and conflict resolution.

SLPs and OTs should write their objectives to be clear on what they are doing and why. This can resolve any legal disputes that may arise if it looks like SLPs and OTs are both doing the same job with the same intentions. Communication and clarity can help defend separate practices that may appear similar on paper.

The results from this study will hopefully encourage professionals from all fields to initiate conversations with their team members. Patients with any disorder offer a complex variety of needs that usually requires care from multiple professionals. Professionals should view themselves as a member of a team that will best function if all members can work in an integrated manner, which requires mutual understanding. If there is a lack of communication and each member works in isolation, they will be just as unsuccessful as an orchestra where each member is wearing ear plugs. Handel's *Hallelujah Chorus* would sound terrible if the choir paid no attention to what the trumpets were playing. A beautiful performance of the song is only achieved when every performer is in sync with one another, even when they are each playing something different. Interdisciplinary team members must realize that they will succeed when their unique and overlapping professions work harmoniously together.

5.7   IMPLICATIONS FOR EDUCATION

Results from this study highlight the importance of educating future professionals on how to collaborate with team members. Although participants feel prepared by their education to enter an interdisciplinary team, discrepancies still arise regarding scopes of practice. Students should be exposed early on to information about other professions to see how their roles fit into an interdisciplinary team. For example, students pursuing a career in occupational therapy should know what their jobs entail while learning how SLPs, physical therapists, nutritionists, social workers, and other neighboring professionals function with them. Interprofessional education exposes students to neighboring professions and their scopes of practice before entering the field and specifically requires that students learn alongside each other. Implementing more

interprofessional education at the undergraduate and graduate levels can educate students about the communication skills and interprofessional knowledge necessary for successful interdisciplinary teams.

This study should also encourage students and clinicians to improve their interpersonal communication skills. Teams will inevitably face problems and disagreements, so it is vital that team members know how to solve them when they arise. Clinicians would benefit most if this skill is taught during their education before entering the field. Participating in client simulations with interprofessional teams throughout one's education may help prepare students to address conflict in a controlled setting. Resolving conflict and communicating concerns are not easy skills to master, but they are crucial for a team's success.

Adding more interprofessional education into students' curriculum would increase the chances of clinicians entering the healthcare field prepared to collaborate. Exposing students to the interdisciplinary qualities of their field will open their minds early on to how they should interact with interdisciplinary team members. With early exposure to interprofessional topics, students are likely to develop collaborative ways of thinking throughout their education.

5.8   LIMITATIONS

One limitation of this study is the fact that some questions did not appear in the survey due to an error in skip logic. Open-ended questions about which parts of SLP and OT scopes of practice overlap, do not overlap, and are not clearly separated were accidentally excluded. Data from these questions would have provided further information on how participants view the interaction between SLP and OT scopes of practice.

This study had a small number of participants, especially undergraduate and graduate students. A greater number of participants can provide a more well-rounded representation of how the population would respond to the survey questions. Students' opinions provide insight on the current education systems. Having a larger population could have possibly provided a more accurate comparison between how students and clinicians would answer the survey.

It would be helpful to have more participants from universities across the country. Respondents were mostly located in the Midwest.

All undergraduate students were pursuing a degree in Communication Science and Disorders (or equivalent) which may have skewed their data. It would be very beneficial to include undergraduates studying a different subject, as most of them were probably planning to become SLPs.

5.9   RECOMMENDATIONS FOR FUTURE STUDY

Adding variations to the case scenario can help display how participants define SLP and OT scopes of practice. It would be beneficial to change the wording of the original case scenario to make the reader believe it is describing an SLP's scope of practice rather than an OT's, and vice versa. For example, the same case scenario is provided, but the sentence "The therapist places the sign in the resident's bathroom with the intention to *improve the resident's memory*" is added. This may lead participants to think the therapist in the case scenario is an SLP. If the sentence "The therapist places the sign in the resident's bathroom with the intention to *get the resident to help the resident work on her activities of daily living*" is added, participants may think the therapist is an OT. Viewing how participants' responses differ between these three

similar case scenarios can possibly highlight what specifically differentiates an SLP's scope of practice from an OT's scope of practice.

A wider range of participants is necessary for obtaining data that represent the opinions of the wider population. This includes seeking out a higher number of participants, participants from more locations across the United States, clinicians who have been practicing for a range of years, and those who have experience working in different settings and areas. Targeting a larger population of participants could unveil discrepancies about SLP and OT scopes of practice.

6.0   CONCLUSION

Individuals with dementia offer a complex variety of needs. Interdisciplinary team members must know how to collaborate to provide the best service for these patients. The need for successful interdisciplinary teams and healthcare professionals is increasing as Alzheimer's disease continues to affect more people. SLPs and OTs are professionals within interdisciplinary teams that commonly work with people with Alzheimer's disease. Their scopes of practice are similar, which can lead to interprofessional conflict. This study shows that future and current SLPs and OTs recognize the interaction between their scopes of practice. Their education makes them feel prepared to work within an interdisciplinary team and collaborate with similar professionals. With an increased knowledge of their scopes of practice, an understanding of other professionals' scopes of practice, and the motivation to resolve interprofessional conflict, interdisciplinary teams can provide optimal service for patients with complex needs.

: Qualtrics survey

SLP and OT Perspectives on Altering Environments for People with Alzheimer's Disease

The purpose of this survey is to study how speech-language pathologists and occupational therapists view their scopes of practice. The aim is to discover how current and future clinicians perceive the roles when working with other professionals, specifically when caring for people with Alzheimer's disease. This study will provide insight on how SLPs and OTs feel about their education and how to help others feel prepared to enter the healthcare field.

This is a reminder that all responses will be recorded anonymously. Thank you for participating in this survey.

Q1 Current status

o   Undergraduate student (1)

o   Graduate student (2)

o   Practicing clinician (3)

Q2 Does the university you attended/are attending have an SLP and an OT program?

o   Just SLP (1)

o   Just OT (2)

o   Both SLP and OT (3)

Display This Question:

If Q2 = Undergraduate student

Q3 Do you intend to become a speech-language pathologist or occupational therapist?

o   Yes (1)

o   No (2)

Skip To: End of Survey If Q3 = No

Display This Question:

If Q2 = Undergraduate student

Q4 Year in school

▼ First year (1) ... Fifth year or more (5)

Q5 Undergraduate major

▼ Communication Science and Disorders (or equivalent) (1) ... Other (10)

Display This Question:

If Q5 = Other

Q6 If other, please specify.

_____

Q7 Undergraduate minor(s)

_____

Q8 Undergraduate certificate(s)

_____

Q9 Undergraduate university

▼ Abilene Christian University (1) ... Other not listed above (268)

Display This Question:

If Q2 = Undergraduate student

Q10 Year in school

▼ First year (1) ... Fifth year or more (5)

Display This Question:

If Q2 = Undergraduate student

Q11 Graduate major

▼ Speech-Language Pathology (or equivalent) (1) ... Neither (3)

Skip To: End of Survey If Q11 = Neither

Display This Question:

If Q2 = Undergraduate student

Q12 Graduate university

▼ Abilene Christian University (1) ... Click to write Choice 3 (316)

Display This Question:

If Q2 = Practicing clinician

Q13 Profession

▼ Speech Language Pathology (1) ... Neither (3)

Skip To: End of Survey If Q13 = Neither

Display This Question:

If Q2 = Practicing clinician

Q14 Job title (occupational therapist, therapy department director, speech-language pathologist, etc.)

Display This Question:

If Q2 = Practicing clinician

Q15 Total number of years spent practicing

▼ <1 (1) ... >50 (52)

Display This Question:

If Q2 = Practicing clinician

Q16 Select all settings at which you have worked.

☐   Hospital (1)

☐   School (2)

☐   Nursing/Assisted Living Home (3)

☐   Skilled Nursing Facility (4)

☐   Rehabilitation Center (5)

☐   Other (6)

Display This Question:

If Q16 = Other

Q17 If other, where?

Q18 Select all that describe the areas in which you have worked.

☐   Urbanized Areas (UAs) of 50,000+ people (i.e. Ithaca, NY, Cleveland, OH, Pittsburgh, PA, Harrisburg, PA, etc.) (1)

☐   Urban Clusters (UCs) of between 2,500 and 50,000 people (i.e. Ashland, PA, Altoona, PA, New Castle, PA, etc.) (2)

☐   Rural (all areas not encompassed within UAs and UCs) (3)

Q19 How did you hear about this survey?

o   Distributed to me by my professor (1)

o   SIG 15 (2)

o   Other (3)

Q20 Rate the following statements by how much you agree/disagree.

Strongly disagree (1) Somewhat disagree (2)   Neither agree nor disagree (3)

Somewhat agree (4)   Strongly agree (5)

a.   SLPs and OTs have completely separate scopes of practice.

o   o   o   o   o

b.   SLPs and OTs have the same scopes of practice.

o   o   o   o   o

c.   There are parts of SLP and OT scopes of practice that are the same.

o   o   o   o   o

Display This Question:

If Q20 = There are parts of SLP and OT scopes of practice that are the same. [Somewhat agree]

And Q20 = There are parts of SLP and OT scopes of practice that are the same. [Strongly agree]

Q21 Which parts of SLP and OT scopes of practice overlap?

_____

Q22 Rate the following statements by how much you agree/disagree.

Strongly disagree (1) Somewhat disagree (2)   Neither agree nor disagree (3)

Somewhat agree (4)   Strongly agree (5)

        a.   There are parts of OTs' scopes of practice that are not in SLPs' scopes of practice.

          o   o   o   o   o

        b.   There are parts of SLPs' scopes of practice that are not in OTs' scopes of practice.

          o   o   o   o   o

Display This Question:

If Q22 = There are parts of OTs' scopes of practice that are not in SLPs' scopes of practice. [Somewhat agree]

And Q22 = There are parts of OTs' scopes of practice that are not in SLPs' scopes of practice. [Strongly agree]

Q23 Which parts of OTs' scopes of practice are not in SLPs' scopes of practice?

_____

Display This Question:

If Q22 = There are parts of SLPs' scopes of practice that are not in OTs' scopes of practice. [Somewhat agree]

And Q22 = There are parts of SLPs' scopes of practice that are not in OTs' scopes of practice. [Strongly agree]

Q24 Which parts of SLPs' scopes of practice are not in OTs' scopes of practice?

_____

Q25 Rate the following statement by how much you agree/disagree.

Strongly disagree (111)   Somewhat disagree (112)   Neither agree nor disagree (113)   Somewhat agree (114)   Strongly agree (115)

There are parts of SLP and OT scopes of practice where it is hard to tell which field it belongs in.

o   o   o   o   o

Display This Question:

If Q25 = There are parts of SLP and OT scopes of practice where it is hard to tell which field it belongs in. [Somewhat agree]

And Q25 = There are parts of SLP and OT scopes of practice where it is hard to tell which field it belongs in. [Strongly agree]

Q26 Which parts of SLP and OT scopes of practice are not clearly separated?

_____

Q27 Rate the following statements by how much you agree/disagree.

Strongly disagree (1)   Somewhat disagree (2)   Neither agree nor disagree (3) Somewhat agree (4)   Strongly agree (5)

a. My past/current education explained the scope of practice of SLPs.

    o   o   o   o   o

b. My past/current education explained the scope of practice of OTs.

    o   o   o   o   o

c. My past/current education has discussed how SLPs and OTs work together in an interdisciplinary team.

    o   o   o   o   o

d. My past/current education makes me feel prepared to work with clinicians from other fields in an interdisciplinary team.

75

o   o   o   o   o

e. The skills I've learned in preparation for working in an interdisciplinary team are
   useful.

o   o   o   o   o

Q28 Do you have experience working with people with Alzheimer's disease?

o   Yes (1)

o   No (2)

Q29 If so, what experience do you have?

_____

Q30

Respond to the statement regarding the following scenario:

A nursing home resident with Alzheimer's disease has trouble remembering how to wash
her hands after using the bathroom. To help her, a sign is placed above her bathroom sink with
simple instructions on how to wash her hands. Putting a sign in a resident's bathroom is
considered altering the patient's environment and is done by a healthcare professional

Altering patients' environments falls under the scope of practice of:

o   SLPs only (1)

o   OTs only (2)

o   Both SLPs and OTs (3)

Q31 Rate the following statements by how much you agree/disagree.

Strongly agree (1)   Somewhat agree (2)   Neither agree nor disagree (3)Somewhat disagree (4)   Strongly disagree (5)

a. I thoroughly understand how SLPs care for people with Alzheimer's disease.

o   o   o   o   o

b. I thoroughly understand how OTs care for people with Alzheimer's disease.

o   o   o   o   o

You are about to complete and submit the survey. Please go back if there's anything you wish to change. Thank you for your time.

BIBLIOGRAPHY

Alzheimer's Association. (2017a). Health Care Professionals and Alzheimer's. Retrieved from http://www.alz.org/health-care-professionals/medical-management-patient-care.asp

Alzheimer's Association. (2017b). What Is Alzheimer's? Retrieved from http://www.alz.org/alzheimers_disease_what_is_alzheimers.asp

Alzheimer's Association. (2018a). Alzheimer's Disease. Retrieved from https://www.alz.org/professionals_and_researchers_13519.asp

Alzheimer's Association. (2018b). Risk Factors. Retrieved from https://www.alz.org/alzheimers_disease_causes_risk_factors.asp?gclid=Cj0KCQiAwp_U BRD7ARIsAMie3Xa3dlsrQkapkPCBCNn7-hFz8YWSpUQI-FTZGL1dClSlCbv3BUD3d5waAl1jEALw_wcB

Alzheimer's Association. (2019). Stages of Alzheimer's. Retrieved from https://www.alz.org/alzheimers-dementia/stages

Alzheimer's Society of Manitoba. (2014). Reducing Risk of Falls for People with Dementia. In.

American Occupational Therapy Association. (2011). Definition of Occupational Therapy Practice for the AOTA Model Practice Act.

American Speech-Language-Hearing Association. (2017a). Dementia. Retrieved from https://www.asha.org/public/speech/disorders/dementia/

American Speech-Language-Hearing Association. (2017b). Speech-Language Pathologists. Retrieved from http://www.asha.org/Students/Speech-Language-Pathologists/

Behm, J., & Gray, N. (2012). Chapter 5: Interdisciplinary Rehabilitation Team. In K. L. Mauk (Ed.), *Rehabilitation nursing: a contemporary approach to practice* (pp. 51-62). Sudbury, MA: Jones & Bartlett Learning.

Buring, S. M., Bhushan, A., Broeseker, A., Conway, S., Duncan-Hewitt, W., Hansen, L., & Westberg, S. (2009). Interprofessional education: definitions, student competencies, and guidelines for implementation. *American journal of pharmaceutical education, 73*(4), 59-59.

Callahan, C. M., Boustani, M. A., Unverzagt, F. W., & et al. (2006). Effectiveness of collaborative care for older adults with alzheimer disease in primary care: A randomized controlled trial. *JAMA, 295*(18), 2148-2157. doi:10.1001/jama.295.18.2148

Cambridge Dictionary. (2017). Syndrome. Retrieved from http://dictionary.cambridge.org/us/dictionary/english/syndrome

Cherry, K. (2017, July 05, 2017). The Basics of Cognition. Retrieved from https://www.verywell.com/what-is-cognition-2794982

Hogeweyk. Interior Design. Retrieved from https://hogeweyk.dementiavillage.com/en/interieur/

Institute for Quality and Efficiency in Health Care. (2009). Alzheimer's disease: How effective are cholinesterase inhibitors? In: IQWiG (Institute for Quality and Efficiency in Health Care).

Institute for Quality and Efficiency in Health Care. (2011). Alzheimer's disease: Does memantine help? In: IQWiG (Institute for Quality and Efficiency in Health Care).

Kim, L. Y., Giannitrapani, K. F., Huynh, A. K., Ganz, D. A., Hamilton, A. B., Yano, E. M., . . . Stockdale, S. E. (2019). What makes team communication effective: a qualitative analysis of interprofessional primary care team members' perspectives. *Journal of Interprofessional Care*, 1-3. doi:10.1080/13561820.2019.1577809

Lewis, L., Ellis, K., Stewart, M., Freeman, T. R., & Kasperski, M. J. (2011). Conflict on interprofessional primary health care teams – can it be resolved? AU - Brown, Judith. *Journal of Interprofessional Care, 25*(1), 4-10. doi:10.3109/13561820.2010.497750

Markova, T., Mateo, M., & Roth, L. (2018). Implementing Teams in a Patient-Centered Medical Home Residency Practice: Lessons Learned. Retrieved from http://www.jabfm.org/content/25/2/224.full#ref-list-1

Mayo Clinic. (2017). Dementia. Retrieved from http://www.mayoclinic.org/diseases-conditions/dementia/diagnosis-treatment/drc-20352019

National Aphasia Association. (2018). Aphasia Definitions. Retrieved from https://www.aphasia.org/aphasia-definitions/

National Center for Complementary and Integrative Health. (2017, September 24, 2017). Cognitive Function, Dementia, and Alzheimer's Disease. Retrieved from https://nccih.nih.gov/health/alzheimer

National Council on Aging. (2017). Fall Prevention Facts. Retrieved from https://www.ncoa.org/news/resources-for-reporters/get-the-facts/falls-prevention-facts/

Nester, J. (2016). The importance of interprofessional practice and education in the era of accountable care. *North Carolina medical journal, 77*(2), 128-132.

Peranich, L., Reynolds, B., O'Brien, S., Bosch, J., & Cranfill, T. (2010). The Roles of Occupational Therapy, Physical Therapy, and Speech/Language Pathology in Primary Care. *The Journal for Nurse Practitioners, 6*(1), 43.

The American Occupational Therapy Association Inc. (2017). Alzheimer's Disease Tip Sheet. Retrieved from https://www.aota.org/About-Occupational-Therapy/Patients-Clients/Adults/Alzheimers.aspx

Weller, C. (2017). Inside the Dutch 'dementia village' that offers beer, bingo, and top-notch healthcare. Retrieved from http://www.businessinsider.com/inside-hogewey-dementia-village-2017-7/#hogeweyk-started-in-1993-as-your-typical-hospital-style-nursing-home-but-the-staff-soon-realized-there-was-a-better-more-humane-way-to-offer-care-1

World Health Organization. (2017). Dementia. Retrieved from http://www.who.int/mediacentre/factsheets/fs362/en/

World Health Organization. (2018). WHOQOL: Measuring Quality of Life. Retrieved from http://www.who.int/healthinfo/survey/whoqol-qualityoflife/en/