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Communication-related quality of life: Perspectives of people with aphasia and speech-language pathology students

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Abstract

Physiological and psychosocial communication components impact communication-related quality of life for people with aphasia. This study aimed to understand how these components were addressed in a university clinic speech-language pathology program. Mixed-methods with inductive coding of interviews and documentation data were used to develop a description of communication-related quality of life, including perspectives of people with aphasia and graduate student participants. Qualitative findings revealed three trends: therapy which aids the ability to communicate, connections with additional people with aphasia, and supportive environments emerged from people with aphasia data. Three trends emerged: communicating effectively, a naturalistic environment, and individualization were shown from the students' data. Quantitative findings of 164 summary report documentation indicated physiological components were communicated more frequently than psychosocial. There were complimentary findings between qualitative and quantitative data sets. Findings indicated how communication-related quality of life were perceived by participants and represented in documentation, with implications to enhance clinical practice and documentation.

Keywords: aphasia, psychosocial, quality of life, speech-language pathology.

Chapter One: Introduction

Communication is the medium by which a message is sent to a receiver. Countless communication exchanges occur each day around the world. Face-to-face communication involves verbal (voice, tone) and non-verbal (gestures, eye contact, proximity) components that make up the communication act. A breakdown in verbal communication receives immediate attention by expressing information through pre-selected words. The individual that errs in the communication act often repairs the verbal error and continues the conversation. Communication exchanges do not always have an effortless flow of communication and potentially impacts "the extent to which a person obtains satisfaction from life" (American Psychology Association [APA], n.d.-f, para 1); also known as quality of life. This is especially apparent when an individual has a diagnosed disease within the nervous system, also known as a neurogenic disorder. When it impacts language modalities, it is diagnosed as aphasia. Aphasia is defined as, "an acquired communication disorder caused by brain damage, characterized by an impairment of language modalities: speaking, listening, reading, and writing" (Chapey, 2008, p.3). People with aphasia (PWA) experience challenges with daily communication interactions that can negatively impact their quality of life. Table 1 lists previously stated terms and additional terms that are associated with aphasia quality of life.

Table 1

Terminology

Terms	Definition
Aphasia	"an acquired communication disorder caused by brain damage, characterized by an impairment of language modalities: speaking, listening, reading, and writing" (Chapey, 2008, p.3)
Biopsychosocial	"denoting a systematic integration of biological, psychological, and social approaches to the study of mental health and specific mental disorders" (APA, n.d.-a, para 1)
Communication-Related Quality of Life	"the extent to which a person's communication acts as constrained within the boundaries drawn by personal and environmental factors, and as filtered through this person's perspective, allow meaningful participation in life situations" (Eadie et al., 2006, p. 315).
Medical Model	"the concept that mental and emotional problems are analogous to biological problems—that is, they have detectable, specific, physiological causes and are amenable to cure or improvement by specific treatment" (APA, n.d.-b, para 1).
Physiology	"factors pertaining to the functions of a living organism and its parts as well as to the chemical and physical processes involved in this functioning" (APA, n.d.-d, para 1)
Psychosocial	"describing the intersection and interaction of social, cultural, and environmental influences on the mind and behavior" (APA, n.d.-e, para 1)
Quality of Life	"the extent to which a person obtains satisfaction from life" (APA, n.d.-f, para 1)

Communication-Related Quality of Life Components for People with Aphasia

Since aphasia is a neurogenic communication disorder, and it impacts a person's quality of life, it is referred to here as a disorder that impacts communication-related quality of life (CRQoL). CRQoL is defined as, "the extent to which a person's communication acts as constrained within the boundaries drawn by personal and environmental factors, and as filtered through this person's perspective, allow meaningful participation in life situations" (Eadie et al., 2006, p. 315).

When PWA experience adverse communication challenges, they can access speech-language pathology services. PWA can seek out acute, sub-acute, and out-patient services during onset of aphasia. After exhausting medical insurance coverage an option may be to enroll in low-cost or free services in a university clinic offered by graduate speech-language pathology students, under a speech-language pathologist's supervision, to improve CRQoL. Communication challenges may include physiological communication modalities of speaking, listening, reading, and writing (Chapey, 2008) and psychosocial concerns of: avoidance, confidence, renegotiation of identity, changes in relationships, isolation, loss of employment, and estrangement from leisurely activities (Bronken et al., 2012) that can impact CRQoL. The American Psychology Association (n.d.-d) defines physiological as, "factors pertaining to the functions of a living organism and its parts as well as to the chemical and physical processes involved in this functioning" (para 1) and psychosocial as, "describing the intersection and interaction of social, cultural, and environmental influences on the mind and behavior" (APA, n.d.-e, para 1). People with aphasia will experience persistent physiological and psychosocial CRQoL challenges, post-onset, and will need clinical speech-language pathology expertise to aid communication in everyday life (Kong, 2021).

Problem of Practice

Enhancing CRQoL for PWA is the aim for graduate students providing speech-language pathology services. A clinical education model guides students to provide and document treatment for PWA. Treatment components may include: subjective comments, writing objectives, data collection and analysis, and future planning that are detailed in written reports. Summary reports document these details in a way for students to explain how CRQoL was incorporated during treatment and how PWA reported CRQoL changes in response to treatment. The information found in summary reports may not include physiological or psychosocial CRQoL components based on how the PWA or student defines CRQoL. Differing CRQoL definitions between students and PWA could negatively impact CRQoL gains for PWA, in response to treatment. As Eadie et al. (2018) stated, "knowing which variable influence patient-reported communication success is essential for building empirical models upon which future interventions may be founded" (p.1060).

This leads to the following problem of practice: speech-language pathology services, provided by graduate students in a university setting under the supervision of SLPs, are not adequately incorporating communication-related quality of life into treatment for people with aphasia. Chapter Five will include discussion of the organizational improvement plan (OIP) and how it can be used to propose potential solutions to the study's problem of practice.

This problem of practice seeks to answer the following questions: 1) How is CRQoL defined by PWA?; 2) How is CRQoL defined by graduate speech-language pathology students?; 3) Do definitions of CRQoL by PWA and graduate speech-language pathology students differ?; and 4) Does difference between CRQoL definitions propose a need for scholarly research to define a problem and a way to investigate a problem? Buzz and Zambo (n.d.) characterized this as creating a problem of practice that can be used to apply gained knowledge into an OIP.

To better understand the multifactorial components posed by this problem, it is necessary to situate this problem via a systems perspective approach to analyze and understand influence of external demands (Buss & Zambo, n.d.). The following introduction will discuss the neurogenic communication disorder of aphasia to build the case for a problem of practice and examine the problem of practice in a national, situational, and personal context.

Leadership Context and Purpose of the Research

It is appropriate in mixed-methods research to analyze and gather information to better understand the nature and context of a proposed problem (Burkholder et al., 2020). Given that the problem of practice of this study to investigate how speech-language therapy services, provided by graduate-students, are addressing communication-related quality of life concerns for people with aphasia at a university clinic setting, it necessary to understand the problem in national, situational, and personal contexts.

National Context

Aphasia is a common adult neurogenic communication disorder. The National Institute on Deafness and Other Communication Disorders (2015) reports that 1 in 250 individuals in the United States, approximately 1 million people, are living with aphasia and the most recent survey by the National Aphasia Association (2016) estimates at least 2 million people are living with aphasia with an incidence rate of 180,000 new cases each year. With more individuals being diagnosed with aphasia and PWA demonstrating persistent communication challenges a year or more post onset (Kong, 2021), the need for practicing SLPs and graduate student clinicians to understand and address these challenges is substantial. The means for acquiring theory and clinical practice related to aphasia is guided by multiple organizations and academic standards.

Organizational Models. International and national organizations such as, the Word Health Organization International Classification of Functioning (WHO-ICF), and American Speech-Language-Hearing Association (ASHA) have established professional guidelines that influence speech-language pathology programs. See Table 2 for a list and description of each organization. Each organization, while independent of each other, establishes principles that mandate evidence-based and ethical practices. Over recent decades change occurred within the previously mentioned organizations that reformed current speech-language pathology instruction. Prior to the 1960s, a traditional medical model or biomedical model was standard practice (Farre & Rapley 2017). According to the American Psychology Association (n.d.-d). the medical model is defined as, "the concept that mental and emotional problems are analogous to biological problems—that is, they have detectable, specific, physiological causes and are amenable to cure or improvement by specific treatment" (para 1). This highlights the physiologic impairment and omits psychosocial concerns. The American Psychology Association (n.d.-e) defines psychosocial as, "describing the intersection and interaction of social, cultural, and environmental influences on the mind and behavior" (para 1). Between the 1960s and 1980s, development of a biopsychosocial model by George Engel incorporated physiological and psychosocial concerns (Farre & Rapley 2017). Engel described biopsychosocial as, "denoting a systematic integration of biological, psychological, and social approaches to the study of mental health and specific mental disorders" (APA n.d.-a, para 1). As with any model, critics exist, mainly in social sciences (Pilgrim, 2015). Ghaemi (2011) discussed the main disadvantage of the biopsychosocial model as the assumption that all three factors: biological, psychological, and social are equally associated with a disorder. In other words, there is not a direct line from etiology to treatment (Pilgrim, 2015), and not all mental disorders can be explained by the biopsychosocial model (Richter, 1999) for example, schizophrenic psychosis. Despite disadvantages, the main advantage of the biopsychosocial model encourages different treatment approaches without stating one approach is better than another and has such been adopted by sectors in the medical

profession and education for a more encompassing understanding of health and illness (Farre & Rapley 2017).

Table 2

International and National Classification Frameworks and Organizations

Name	Acronym	Description
American Speech-Language-Hearing Association	ASHA	"Professional, credentialing, and scientific organization for speech-language pathologists, audiologists, and speech/language/hearing scientists" (ASHA, n.d., para 1).
Council of Academic Accreditation in Audiology and Speech-Language Pathology (CAA)	CAA	"An accreditation program for eligible clinical doctoral programs in audiology and master's programs in speech-language pathology that prepare students for entry into the professions" (CAA, n.d., para 1).
International Classification of Functioning	ICF	"Classification of health and health-related conditions for children and adults… used in interprofessional collaborative practice and person-centered care" (ASHA, n.d., para 1).
Word Health Organization	WHO	"Directing and coordinating authority on international health within the United Nations system" (WHO, n.d., para 1).

Note. American Speech-Language-Hearing Association (ASHA) and World Health Organization (WHO) were used to obtain professional definitions.

In 2001, the WHO adapted the biopsychosocial model into the ICF for a common language system between professionals (World Health Organization, 2001). ASHA adopted the biopsychological model in 2007 to state it is within the SLP's scope of practice (Northcott et. al., 2017). Simmons-Mackie and Kagan (2007), contributed to the ICF-WHO framework stating it can be applied in speech-language

pathology treatment for PWA by treatment focusing to improve biopsychosocial functions of producing communication and social participation; in other words, addressing CRQoL.

Academic Standards. As an accrediting body for educational institutions offering programs in speech-language pathology, the Council of Academic Accreditation in Audiology and Speech-Language Pathology (CAA) of ASHA adapted the ICF-WHO biopsychosocial model as a guide for speech-language therapy treatment (Northcott et al., 2017) among an accredited 270 graduate programs as of July 2021 (Council on Academic Accreditation. (n.d.). The CAA of ASHA also determine competencies that can be guided by the ICF-WHO biopsychosocial model principles taught at each of the 270 university graduate programs. Professional competencies guide university graduate programs to adhere to the following, "the program must provide content and opportunities for students to learn so that each student can demonstrate the following attributes and abilities and demonstrate those attributes and abilities in the manners identified" (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2020, p. 19). The professional practice competencies are accountability, integrity, effective communication skills, clinical reasoning, evidenced-based practice, concern for individuals served, culture competence, professional duty, and collaborative practice (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2020).

Since the ICF-WHO biopsychosocial model can address CRQoL concerns, and the CAA of ASHA can be guided by this model, the previously stated competencies can also reflect it. For example, culture competence is targeted to understand the cultural and language diversity characteristics of the client and how the characteristics are related to clinical services (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2020). Both biopsychosocial and CRQoL definitions in Table 1 relate to cultural competence by communicating speech therapy services' need to understand physiological and psychosocial characteristics and how it can allow a client to participate in meaningful interactions.

The CAA of ASHA additionally conducts annual reviews of accredited universities to ensure professional competencies are being implemented and high-quality post-secondary instruction related to speech-language pathology. Every eight years, an accredited university receives a review under the following guidance:

> The CAA operates within a set of core values that are used to guide decisions to ensure excellence in graduate education. Because the CAA has been entrusted to act on behalf of the professions of audiology and speech-language pathology, the Council's actions and decisions must be credible and trustworthy. Members of the CAA, in conducting the business of accreditation of academic programs, act with: honesty and integrity, accountability, fairness and validity, clarity and consistency, recognition of the role of creativity and innovation in meeting the established accreditation standards. (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2020, p.1)

Council for Higher Education Accreditation and the Secretary of the U.S. Department of Education also recognize the CAA of ASHA as an accrediting body adding to its validity (Academic Accreditation in Audiology and Speech-Language Pathology 2020). With the purpose and policies of the CAA of ASHA clearly stated, it is fair to say their values align with biophysiological model by promoting university level instruction to develop highly qualified SLPs to better serve all individuals with communication disorders.

General Comments. Common professional competencies and accreditation procedures have been established by previously stated organizational agencies. It is also vital to state the 270 university graduate programs that are subject to these polices have also been met with increased graduate-student enrollment. Total student enrollment increased by 42.7% between 2010-2011 to 2019-2020 (American Speech-Language-Hearing Association, 2020). A robust number of academic institutions are creating more SLPs (Richardson et al., 2020) and at the same time instructing them with similar

guidelines. With the CAA of ASHA accrediting universities abiding by these guidelines and policies, it also represents what terms are found in these guidelines and policies. When reviewing, “Standards for Accreditation of Graduate Education Programs in Audiology and Speech-Language Pathology” by the CAA of ASHA, out of the 14,555 words, the phrase “quality of life” was not among them. Not including this highly recognized and individualized phrase within the CAA of ASHA standards could create a means of omitting it in other instructional or communication modalities. The next section will further explore this at a situational level.

Situational Context

This study will focus on an ASHA accredited university, located in the Midwest, speech-language therapy clinic at a CAA accredited graduate university with 40 first-year graduate students. The American Speech-Language-Hearing Association (2020) Communication Sciences and Education Report details a median graduate program admissions capacity of 32, positioning this university clinic to have a comparatively higher enrollment and enabling more PWA to receive speech-language therapy. Along with the higher enrollment, the university also has allowed creation of unique courses and programs to inform instruction for clinicians to assist adults with neurogenic communication disorders, including aphasia.

In recent years, the university created a graduate speech-language pathology program with an optional adult neurogenic communication disorder emphasis path. The goal of this emphasis area is to prepare students to specialize in adult neurogenic disorder communication assessment and treatment because the need to serve this population is great. According to Morris et al. (2016), in 2012 approximately 10% of the United States adult population reported a communication disability with only 2% receiving a diagnosis. As the United States population has continued to grow since 2012, the incidence of an aphasia diagnosis has also risen, echoing the concern raised by the National Aphasia

Association (2016) that 2 million people have the disorder in the United States. The rising frequency of aphasia cases reinforces the need for clinical intervention to be informed by the biopsychosocial model to enhance the CRQoL among PWA.

In recent years, at the aforementioned university clinic, PWA have been enrolled in speech-language therapy services provided by supervised graduate students at this university clinic This therapy could take the form of individual, group, or mixed intervention. Individual therapy refers to intervention involving the PWA and clinician. Group therapy refers to intervention involving more than one PWA and one or more clinicians. Mixed therapy refers to intervention conducted in individual and group formats. While not explicitly stating the biopsychosocial model as a guide, the grant-funded program introduced group therapy and an established individual therapy format, aimed to encourage language improvement (physiological functioning) and reduced social isolation (psychosocial component) CRQoL concerns for PWA.

Despite the university speech-language therapy clinic's aim to improve CRQoL for PWA the extent to which CRQoL has been addressed and implemented is unknown. This led to a recent preliminary analysis of group therapy by Russell (2013) for PWA in pre/post standardized testing and a post program questionnaire. At the end of the six weeks group therapy for PWA, significant physiological gains to return to pre-aphasic communication were not found on standardized testing, but a far more important psychosocial CRQoL outcome was achieved through a post program questionnaire. PWA who participated in this group therapy format reported increased confidence in their ability to communicate. With limited analyses describing how CRQoL is addressed for PWA clinically (group therapy only), what has not been specifically reviewed is an in-depth review of how speech-language therapy (individual, group, mixed) at the university clinic has addressed CRQoL for PWA. The need for an in-depth review will be further positioned in the following Personal Context section.

Personal Context

I believe that people with aphasia not only need to find a way to communicate, but a reason to communicate. It is this personal mission statement that has driven my professional and educational journey.

Guided Framework. At the time of my graduate program college instruction from 2013-2015, the concept of communication-related quality of life was beginning to be introduced. I did not specifically hear, "communication-related quality of life," but it was emerging in theory and practice. This was especially true when learning and practicing theory related to the Life Participation Approach to Aphasia (LPAA) developed by Roberta Chapey, Judith F. Duchan, Roberta J. Elman, Linda J Garcia, Aura Kagan, Jon G. Lyon, and Nina Simmons-Mackie (Chapey, 2008). "The LPAA recommends that clinicians and researchers consider the dual function of communication: transmitting and receiving messages and maintaining social links" (p. 280). In other words, judge whether the communication difficulty impacts one's ability to execute and participate in the activity. The LPAA model allowed me the first glimpse into understanding the importance of why having a reason to communicate stems from physiological (execute communication) and psychosocial (participate in the communication act) elements of CRQoL. Routinely documenting how physiological and psychosocial concerns changed allowed me to gain insight into clients' quality of life and how important it was to address this. Thus, it inspired me to impart this knowledge onto others and in my professional practice while seeking continued education in CRQoL for PWA.

Educational and Professional Journey. My desire to teach and practice speech-language pathology began as a graduate assistant with roles in tutoring undergraduate students and mentoring student-clinicians. Upon completion of my master's degree, I began professionally practicing speech-language therapy services in multiple skilled nursing facilities in Missouri, where I worked with adults

with neurogenic communication disorders. Many on my adult neurogenic communication disorder caseload were PWA.

After six years of practicing speech-language pathology in a skilled nursing environment, I decided to add to my professional duties and accepted a full-time faculty teaching position at a Midwest university. The prospect of an additional job opportunity also involved enrolling in a Doctor of Education degree program in Collaborative High-Impact Instruction, which I am currently completing. As a speech-language pathologist, full-time faculty instructor, and student, each experience has allowed me to see meaningful connection in how instruction can inform how one practices their trade.

I have noticed a connection between instruction and practice for PWA continuing to report reduced CRQoL when I practiced in a skilled nursing environment and provided clinical supervision of graduate speech-language pathology students in a university setting. When reflecting on current speech-language therapy practices and clinical supervision methods, I came to realize a disconnect between them incorporating CRQoL for PWA.

This was observed in clinical documentation by having limited CRQoL measures, treatment methods, treatment rationale, and outcomes. Hilari, Klippi, et al. (2016) also found limited documentation of CRQoL outcomes in a larger survey of 579 clinicians. Clinical documentation serves to communicate speech-language therapy services that were provided and prepare graduate speech-language pathology students to apply what they learn in the university clinic setting in their future professional practice. It is important to state that clinical documentation does not solely display how speech-language therapy has addressed CRQoL for PWA, but is the medium to narratively record treatment and reasoning for the services.

CRQoL is also different for everyone and reliant on individual perspectives and circumstances that documentation alone cannot accurately display. Perspectives of PWA, practicing student clinicians,

and professional speech-language pathologists also inform how CRQoL is implemented in speech-language pathology services. Creating a speech-language pathology clinical instructional system in universities that better understands how to document and understand CRQoL perspectives with an emphasis in identifying physiological and psychosocial communication-related concerns could lead to improved CRQoL outcomes for PWA and serves at the basis for this proposed mixed-methods research study.

Mixed-Methods Research Goal

The purpose of this mixed-methods study will be to describe how speech language therapy services, provided by graduate speech-language pathology clinicians under the supervision of SLPs, are addressing communication-related quality of life concerns for people with aphasia (PWA) in a university clinic setting. The main research question for this study was: 1) How did speech-language therapy at a university clinic setting address communication- related quality of life for persons with aphasia in Fall 2021? The subsequent research questions for this study were:

1a) How did people with aphasia who received speech-language therapy, in Fall 2021, at a university clinic describe communication-related quality of life?

1b) How did graduate students, who provided speech-language therapy services for people with aphasia in Fall 2021, describe communication-related quality of life for people with aphasia?

1c) How did graduate students, who provided speech-language therapy services for people with aphasia at a university clinic, from Spring 2015-Summer 2021, represent communication-related quality of life for their aphasic client(s) in summary report clinical documentation?

1d) How did graduate students, who provided speech-language therapy services for people with aphasia at a university clinic, in Fall 2021, represent communication-related quality of life for their aphasia client(s) in summary report clinical documentation?

1e) How did speech-language pathology summary report clinical documentation at a university clinic represent communication-related quality of life for people with aphasia from Spring 2015-Summer 2021, differ from Fall 2021 summary report clinical documentation representation of communication-related quality of life for people with aphasia?

Conclusion

Section One contextualized the previously stated research question in a national, situational, and personal context. Each context guided the area of understanding how CRQoL for PWA is addressed in a university setting to be identified as a problem of practice. Specifically, how CRQoL for PWA is addressed in documentation and perceived by PWA and graduate speech-language therapy students. The next section builds upon the systems perspective to explore and understand the literature that informed the mixed-methods research purpose and research question.

Chapter Two: Review of Supporting Scholarship

Introduction

The previous section discussed the historical components and current professional practices. Multiple contexts were also provided to explain and build perspective of how CRQoL is addressed among PWA. The following section will review existing literature to inform and provide justification for this mixed-methods research study. Furthermore, supporting literature will feature the adult neurogenic communication disorders of aphasia due to its high incidence reflected in the National Context. Supporting scholarship will also include the following areas: CRQoL variables among people with aphasia, intervention models for PWA, speech-language pathology preparation and training to address CRQoL for PWA, and multiple stakeholder perspectives of CRQoL. In addition, this section will include an epistemological stance, theoretical frames, and methodological rationale.

Quality of Life Defined

The meaning of quality of life varies from one individual to another and literature has also provided multiple definitions of quality of life. The WHO, stated in the National Context section, has defined quality of life as, “individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns” (Rangamani & Judovsky, 2020, p. S157). Quality of life has also been defined through a health-related lens. “Health-related quality of life reflects the impact of a healthy state on a person’s ability to lead a fulfilling life, and covers the individual’s satisfaction in physical, functional, psychological, and social domains” (Spaccavento et al., 2014). Table 1 provided an interpretive definition of quality of life by Eadie et al. (2006) with a communication-related focus. All quality-of-life definitions emphasize a person’s satisfaction from life,. The next section will examine CRQoL life variables using Eadie et al.’s (2006) definition for PWA in order to highlight, “the extent to which a person's communication acts as

constrained within the boundaries drawn by personal and environmental factors, and as filtered through this person's perspective, allow meaningful participation in life situations" (p. 315).

Communication-Related Quality of Life Variables for People with Aphasia

Chapey (2008) defined aphasia as a language impairment affecting physiological communication modalities: expressive language, receptive language, reading, and writing. Tanner (2017) added that PWA also display psychosocial concerns related to anxiety, depression, avoidance, self-identity, ego-restriction, and socialization during their daily life. Chapey (2008) and Tanner (2017) contributions combine to demonstrate CRQoL for PWA is influenced by physiological and psychosocial factors.

Since aphasia impacts physiological and psychosocial CRQoL, it will be necessary to further discuss what physiological and psychosocial CRQoL components exist and how they impact PWA. These next sections will build the case that CRQoL for PWA is influenced by physiological and psychosocial variables. Furthermore, current speech-language therapy intervention for PWA will be explored to understand how physiological and psychosocial CRQoL concerns are being addressed related to assessments, outcomes, and service delivery.

Pathophysiology of Aphasia and Quality of Life

Physiology refers to functions of a living organism (see Table 1) and when a person is diagnosed with aphasia it alters their ability to functionally communicate; referred to as pathophysiology (American Psychology Association, n.d.-c). For example, naming deficits are common for PWA (Baylor et al., 2011, Hashimoto, 2012; Hicklin et al., 2002; Marshall & Freed, 2006) and continue to receive a large research focus (Kiran & Johnson, 2008). "Aphasic naming errors can resemble a semantic relation to the correct word (e.g., "fork" instead of *spoon*) or a phonological relation to the correct word (e.g., "tar" for *car*) for the intended word" (Kristek, 2015, p.3). Omission errors also occur and are characterized by

word-finding blocks, unsuccessful word-searches (e.g. “I know what it is, but I can’t say it”) and silence (Dell et al., 2004).

Aphasia can also impact an individual’s ability to accurately comprehend spoken communication related to their speech or others (Chapey, 2008). Aphasic auditory comprehension errors can resemble difficulty following verbal directions or understanding the linguistic information contained in the communication act. Difficulty understanding what someone is saying also diminishes CRQoL for PWA as well as anomia; also known as naming deficits.

In addition to naming deficits and auditory comprehension deficits, PWA report physiological communication deficits related to slowed linguistic processing and accompanying physical and mental fatigue that were exacerbated by greater conversation length and topic complexity (Baylor et al., 2011). This can be interpreted as communication acts requiring overall greater effort to express or comprehend language, regardless of the severity of aphasia. The ability to produce or comprehend communication could verbally and/or visually manifest as a lessened physiological demand, but the pathophysiology of aphasia places a greater challenge for PWA to participate in communication.

Physiological communication deficits are not only common for PWA but can impact how successfully a PWA is communicating, impacting their CRQoL. A recent study by Bullier et al., (2020) examined factors that impact quality of life for PWA and found challenges with the ability to communicate intended messages were greatly associated with reduced quality of life; despite the severity of aphasia. This is substantial due to PWA may heavily consider only the continued physiological symptoms of aphasia and limited understanding of any ease in communication.

An example of ease in communication could also be defined as successfully engaging in communication, regardless of the accuracy of the intended message to a communication partner. This aligns with improved meaningful life participation to perform daily communication acts in a social,

cultural, and/or environmental domain. Activities of daily living involve anatomical and physiological functions to communicate an intended message but as Baylor et al. (2011) and Brown et al. (2012) stated, PWA have more CRQoL interference when a communication act was viewed with greater importance leading to a greater likelihood for a lack or omission of communicative participation. As stated in Section One, this was referred to as a psychosocial CRQoL concern and will be discussed in the next section.

Psychosocial Aspects of Aphasia and Quality of Life

Communication is viewed as a system of expression to convey a message from one person to another; however, in everyday life, communication has important social and emotional functions (Finegan, 2008). Recent research placed emphasis on addressing psychosocial concerns for PWA (Ross et. al., 2006) and Tanner (2017) identified generalities about the nature, type, and location of brain injury that can predispose a PWA with certain psychological reactions. Brain damage in Broca's area, associated with an expressive aphasia, can display psychological generalities of anxiety, depression, and short-lived emotional outbursts (Tanner, 2017). Brain injury in Wernicke's area, associated with a receptive aphasia, can display anxiety, depression, euphoria, and anosognosia (Tanner, 2017). A systematic review of 12 articles by Eadie et al (2018) also reported anxiety and depression to be increased risk factors across adults with communication disorders, including aphasia. When narrowed to adults with aphasia, studies by Broken et al. (2012), Burns et al. (2015) and Northcott et al. (2017) also reported high occurrences of anxiety and depression. A recent qualitative study by Baylor et al. (2011) found PWA and other adult communication disorders in adults are often concerned with what people think of them and actions others do to exclude them in conversation. This can lead to communicative life participation changes for PWA impacting their CRQoL.

The onset of aphasia causes sudden and persistent communicative changes occurring in PWA that can negatively affect their psychosocial CRQoL (Code & Herrmann, 2003). Broken et al. (2012) listed the following psychosocial concerns for PWA that impact their QoL; such as, self-image, relationships with their family/friends, social isolation/exclusion, employment, and leisurely activities. This cascades into communication changes for PWA by communication avoidance (Tanner, 2017), reduced social interactions, decreased communication attempts, and reduced conversation partners (Ross et al., 2006). PWA require support that maintains communicative socialization, self-image, and communicative relationships to improve CRQoL. This can be aided by speech-language therapy intervention and will be further discussed in the next section.

Speech-Language Therapy for People with Aphasia

Aphasia is not a disorder that can be cured but skilled speech-language therapy can help PWA communicate more effectively (Chapey, 2008). Chapey (2008) also added that intervention is improved when considering how PWA interact in their environment, maintain meaningful relationships, restore self-identify, and independence also referred to as psychosocial functioning (see Table 1) related to CRQoL. This raised the question, what does current speech-language pathology peer-reviewed literature detail as essential therapy components to address CRQoL for PWA? The additional sections will detail established therapy components found in speech-language therapy sessions for PWA regarding assessments, outcomes, and service delivery models.

Assessments

The first step in therapy is an appropriate assessment. LaPointe (1990) described the components of an aphasia assessment as the following: 1) determine presence of aphasia; 2) determine type of aphasia; 3) determine severity and prognosis; 4) provide treatment recommendations; and 5) measure progress related to treatment. When considering what aphasia assessment to select,

Papathanasiou and Coppens (2017) listed over 30 formal and informal aphasia assessments that examined physiological deficits and stated a limited number, nine, of QoL measures developed to focus on the effects the disease related to psychosocial functioning: feelings, experiences, and participation. Of the nine QoL assessments, six were completed by PWA and three by caregivers. Wallace et al. (2017) added to this by reporting multiple studies finding predominant use of impairment-based (36.1%), also known as physiological functioning, and reduced use of quality of life (1.7%) or client satisfaction (0.5%) assessments used in speech-language therapy. Numerous assessments created to evaluate the physiological effects of aphasia can reduce the likelihood a SLP will select the less common QoL measure that consequently provides information into a PWA's psychosocial functioning. Swinburn et al. (2019) also argued the use of impairment-based assessments only do not provide enough information about the consequences of aphasia and the significance it has on a PWA's life. This can limit treatment recommendations related to CRQoL, provided by the assessment, and perform a cascading effect that influences therapy outcomes and interventions.

Objectives and Outcomes

Papathanasiou and Coppens (2017) stated that CRQoL information can help develop objectives; however, Wallace et al. (2017) reported SLPs lacking clear guidance in choosing aphasia treatments and consequently selecting important aphasia CRQoL objectives and outcomes. A study of 74 SLPs by Arnold et al. (2020) examined what outcomes were found for PWA and outcomes were frequently related to physiological production or comprehension of language with psychosocial CRQoL outcomes being less frequent. A larger study of 265 SLPs and 53 managers by Wallace et al. (2017) also found speech therapy outcomes were heavily weighted to improve language production, with 222 participants reporting, "the PWA has improved language function" (p. 653) and psychosocial well-being with 169 participants stating, "The PWA has good psychosocial well-being" (p.653). These statements were given in response to a question regarding, "What are the most important outcomes from aphasia treatment?" (p. 653).

This does not state they were listed as a written outcome in their treatment but stated as important. Wallace et al. (2017) reported this as well, stating, “While these constructs are often identified as important aspects of treatment, they are rarely measured” (p. 669). This communicated that physiological CRQoL goals are being included as outcomes and objectives, but psychosocial outcomes and objectives are often omitted from treatment documentation. Sekhon et al. (2015) provided guidance for addressing both aspects of CRQoL by providing greater focus on all CRQoL for PWA through student training, professional development for current SLPs, and modifications in clinical guidelines. The next section will explore how speech-language therapy outcomes are addressed through current service delivery models.

Service Delivery Models

Individual and group intervention or a combination of service delivery models are available for speech-language therapy (Paul, 2014; Verna et al., 2009). Group therapy is an intervention model used for many different neurogenic disease rehabilitations in speech-language pathology (Diaféria, et al., 2017) and has been used more recently by speech-language pathologists to enhance physiological and psychosocial CRQoL for PWA, while individual therapy has been more targeted to address physiological impairment-based CRQoL. It is important to state that the most effective clinical approach to date treating aphasia has not been determined (Verna et al., 2009). The next sections will describe areas of speech-language intervention that have been validated. The following sections will examine an overview of individual and group intervention models for PWA to enhance CRQoL.

Individual Intervention. Historically, speech-language therapy services have been provided in an individual intervention format and aimed to improve physiological language impairments associated with aphasia (Verna et al., 2009). While traditional individual aphasia therapy targeted physiological based CRQoL, it allowed PWA to receive training to improve their expressive and receptive language

abilities. This is often performed in a decontextualized, bottom-up approach, aimed at speech-language therapy having language impairment-based intervention by addressing language specific domains, that are not limited to: semantics, phonology, auditory comprehension, and reading comprehension.

Individual speech-language therapy to aid PWA with the primary expressive language concern of word-finding consists of PWA or caregivers learning word-retrieval strategies (Olsen et al., 2012). Treatments for word-finding difficulties to improve semantics involved training using semantic cues (word associations, categories, and shared word knowledge) have been shown to be effective (Kiran & Johnson, 2008; Kiran & Thompson, 2003; Peach, & Reuter, 2010; Waumbaugh & Ferguson, 2007). For example, "It's used for digging and it has a metal end" for the word: *shovel*. Phonology has also been targeted by learning phonemic cues (exposure of initial phoneme and/or rhyme) to aid word-retrieval (Chapey, 2008; Hickin et al., 2002). For example, SLP's providing *b*- as a cue for *ball* or providing *bee* for *key*. Multiple word finding cues are available to use as strategies for PWA. Selection of one or multiple cues is client dependent.

Receptive language has also been targeted in individual intervention to aid auditory and reading comprehension. Treatment to improve auditory comprehension for PWA has been aimed at improving self-correction (Chapey, 2008); also known as recognizing and correcting verbalized speech errors. This can resemble receiving a signal (confused look from a communication partner), cease communication, and the PWA request contextual information to be repeated from their communication partner (Chapey, 2008). For example, the PWA asking, "Did you understand me?" and requesting clarification, "What did I say?" Speech-language therapy to aid PWA in reading comprehension is commonly structured to improve decoding single words or extended texts (Knollman-Porter & Julian, 2019). An example might be to strengthen letter-to-sound correspondence with key words by identifying the first letter *b*-, and mentally producing the correct sound, to say the correct word *book*.

While direct individual therapy is beneficial to teach new skills (Paul, 2014) related to physiological CRQoL, the communication act is frequently not contextualized and can allow this service delivery model to be overlooked to include psychosocial related CRQoL. The next section will explain how group therapy has commonly addressed both elements of CRQoL with a contextualized format.

Group Intervention. Group therapy for adult neurogenic diseases has been applied over recent decades as a service delivery model to address physiological and psychosocial aspects to enhance quality of life for PWA and for people with other neurogenic diseases (Diaféria, et al., 2017). It can be thought of as a top-down therapy approach to view communication in a functional context.

Group therapy has been used as a service delivery model over recent decades to address CRQoL in the context of language by providing psychosocial consideration. For example, an early study by Corbin (1951) discussed psychosocial variables of communicative confidence and support as important quality of life gains among PWA or dysarthria that engage in group therapy. Dysarthria consists of "neuropathophysiologic disturbances of control or execution…which most often include weakness, spasticity, or incoordination" (Duffy, 2013, p.4). This was referenced when a patient was supporting and assisting another in production of an utterance. Another benefit of group therapy was having patients aware of each member's strengths and impairments. The allowed the participants to support and share in the responsibility for handling the challenges of communication.

Layon et al. (2018) also added to the discussion of group therapy by describing it as a social oriented environment and reported four major themes of a community aphasia group: belonging, helping/contributing, social activity, and companionship. "The group environment represented a unique opportunity for people with aphasia to be positioned as a person with expertise" (p.150). A participant with aphasia reported that group environment was, "A safe space to be aphasic" (p.148).

Further research in aphasia also provided suggestions for efficacious speech-language therapy. In order for aphasia group therapy to be efficacious, Simons and Elman (2011) report factors important to an identity with aphasia: discourse is supportive so members are being heard, assumption of group member competence, group member solidarity exists, promote positive personal identity, and shared group identity. Elman (2016) also reported a similar best-practice checklist according to "Connecting People with Aphasia, Augmentative and Alternative Communication (AAC), Partner Training, Education and Resources (C.A.P.E)" (p. 162) described as follows: connect PWA to one another, augmentative and alternative communication (AAC) options, partner training, education resources are aphasia friendly. Elman (2016) also placed emphasis on implementing best-practice elements early in intervention to lead to improved participation and QOL for PWA and family members. This is reflected in a previously mentioned study by Elman and Bernstein-Ellis (1999) by showing improvement language outcomes in early verse delayed treatment. The social orientation and communication contextualization of group aphasia therapy appears to incorporate psychological and communication factors that can enhance QoL.

Furthermore, Hoover et al. (2015) conducted a study aimed to improve use of functional transitive verbs for PWA, but found no significant improvement from pre and post-test language measures. Change, however, was noted in QOL using a standardized assessment in the domains of self-perception and communication impact on activities of daily living (Hoover et al., 2015). Elman and Bernstein-Ellis (1999) also found no significant improvement between pre and post standardized language assessments, but noted introducing group aphasia therapy earlier did produce higher scores on these measures. Elman & Bernstein-Ellis (1999) also reported strong patient and family member feedback in communication competence. For example, Elman & Bernstein-Ellis (1999) reported PWA left their house and socialized with others for the first time in years.

Support and confidence along with other psychosocial concerns continue to be identified as factors to enhance CRQoL for PWA (Cruice et al., 2006; Elman, 2016; Layon et al., 2018) in current

research. Recent studies have also reported improved self-confidence and identity in aphasia group treatment models that can enhance QOL (Simmons & Elman, 2011; Simmons-Mackie et al., 2007; Elman, 2016; Hoover et al., 2015) along with improved ability to word-find. Tanner (2017) importantly identified learned contextualized strategies to aid CRQoL through support, encouragement, welcoming environment, and sincerity to reduce stress and maintain self-esteem for PWA.

Service Delivery Model Comments. In light of this research, considering psychosocial concerns in speech-language therapy intervention, with well-established treatment options to address impairment-based concerns for PWA, cannot be overlooked. The literature suggests communication that is contextualized can enable CRQoL to be fully delivered in speech-language therapy. Aphasia literature has been influential in addressing these concerns and presenting an efficacious model for addressing Parkinson's disease. For example, literature has noted the importance of aphasia's research approach to improved quality of life in the following quote: "role of a teacher…verse aphasia literature in which a clinician is viewed as a counselor or life coach" (Yorkston et al., 2017, p. 567). With aphasic research having efficacious assessments, outcomes, and service delivery models, it will be necessary to discuss how SLPs are acquiring these skills in pre-professional preparation.

Pre-Professional Preparation

Current speech-language therapy practices recognize quality of life as the main goal of aphasia rehabilitation with psychosocial aspects being an important element (Northcott et al., 2017). Despite the need to address psychosocial components in speech-language therapy, many SLPs lack confidence addressing the concerns (Northcott et al., 2017). This raises the main premise proposed by the main research question, "How did speech-language therapy at a university clinic setting address communication- related quality of life for persons with aphasia in Fall 2021?" In order to best understand this question, the following sections will aim to answer: What pre-professional preparation

is found in current literature? Does current literature research investigate pre-professional training of adult neurogenic instruction communication-related quality of life aspects?

Knowledge and Skills Acquisition

The CAA of ASHA requires graduate students to receive adequate pre-professional training by achieving knowledge and skills acquisition (KASA) standards in order to enter the workforce and achieve the credentials required to practice (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2020). Accredited university programs, many of whom have university clinic, are expected to teach KASA standards by graduate students demonstrating professional practice competencies. For example, competencies in the following: accountability, concern for the individual served, culture, collaboration, and evidenced-based practice. This is also combined with demonstrating knowledge of communication sciences and disorders including important physiological and psychosocial factors. Literature have been robust in representing knowledge of physiological factors impacting aphasia (etiology, communication characteristics) and growing to also give weight to psychosocial factors that can influence the overall goal for aphasia treatment, enhanced CRQoL.

Current literature reflects psychosocial competencies set by the CAA of ASHA. Most literature is devoted to 3.1.1B Professional Practice Competencies and states, “The program must provide content and opportunities for students to learn so that each student can demonstrate the following attributes and abilities and demonstrate those attributes and abilities in the manners identified” (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2020, p.19). The CAA lists specific attributes in *cultural competence* and *concern for the individuals served*. For example, *cultural competence* is aimed to understand the interaction of cultural and linguistic variables for an individual to maximize service delivery (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2020). *Concern for the individual served* compliments *cultural competence* to “show evidence

of care, compassion, and appropriate empathy during interactions with each individual served, family members, caregivers, and any others involved in care; and encourage active involvement of the individual served in his or her own care" (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2020, p.20). As psychosocial aspects require culture considerations, Dilworth, Pipes, and Weeks (1991) report that cross-cultural knowledge would enhance service delivery and students who underwent training in cross-cultural course work reported a greater understanding of cultural similarities and differences. Cross-cultural competencies continue to receive literature support. Williams et al. (2013) amassed cross-cultural knowledge to a global scale with guiding theory from ICF-WHO. This research included United States and Brazilian studies conducting synchronous and asynchronous online learning and an international student-exchange program between the speech-language pathology programs. Increased intracultural competence was noted using Intercultural Development Inventory. What is important to note is that while pre-professional preparation research literature has not explicitly stated "psychosocial skills," it has highlighted cultural and social components of psychosocial skills.

Research specific to student preparation in adult neurogenic disorders has occurred via audiology and speech-language pathology collaboration. Davis et al. (2019) discussed the interprofessional collaboration as vital for students to better treat adult neurogenic disorders referencing the call by the WHO to have interprofessional collaboration for high quality of care and better patient outcomes. Northcott et al. (2017) also highlighted the importance of SLPs working collaboratively with mental health professionals to understand how to better support interactions. However, many SLPs perceived these professionals as under-skilled to work with individuals with adult neurogenic disorders, effective collaboration did not occur (p.364).

Common threads among pre-professional literature regarding psychosocial correlates stem from accrediting agencies (CAA), national agencies (ASHA), and international agencies (WHO) that guide

academic instruction. Specific competencies that highlighted culture and social communication were addressed, but none explicitly addressed culture and social concerns by specifically naming them as a 'psychosocial' or 'quality of life' concerns. This was also not found in pre-professional practice research for adult neurogenic disorders. By not naming 'psychosocial' and 'quality of life,' a proposed gap in theory and practice terminology and/or instruction needing individuals involved in aphasic speech therapy to better understand the knowledge and skills related to CRQoL. Understanding what CRQoL means to the following individuals: PWA, SLPs, and SLP students can lead to filling the gap between theory and practice for aphasia speech-language therapy and will be discussed in the next section.

Perspectives

Understanding how speech-language therapy intervention impacts CRQoL requires perspectives of multiple stakeholders. These include PWA, PWA and their family members, and SLPs. A qualitative meta-analysis by Brown et al. (2012) reported that commonalities and differences exist between PWA, PWA family members, and SLPs that include treatment plans, therapy goals, and how therapy is concluded to aid PWA to live successfully with aphasia. Brown et al. (2012) also emphasized the need to reflect on how speech-language pathology services align with multiple stakeholder perspectives and how they can be examined for greater clinical implications.

People with Aphasia Perspectives

PWA continue to report a lack of CRQoL despite speech-language pathology intervention (Bullier et al., 2020; Rangamani & Judovsky, 2020). PWA are reported to have decreased quality of life when compared to the general population (Burns et al., 2015; Jeong et al., 2012; Lee et al., 2015). This was echoed in a large quantitative study by Lam and Wodchis (2010) that reviewed 66,193 participants, who resided in hospital-based long term care facilities, that found neurological diseases, notably aphasia, that displayed lower quality of life compared to 60 other diagnoses.

Hilari, Cruice, et al. (2016) contributed to Lam and Wodchis (2010) findings of PWA reporting reduced CRQoL, by citing a systematic review of 14 studies and meta-analysis that identified important quality of life factors for people with aphasia as physiological communicative ability and psychosocial themes of social networks and support. Hilari, Cruice, et al. (2016) also added that the previously stated findings, "have important clinical implications…interventions need to focus not just on aphasia and communication, but also on promoting emotional well-being, facilitating activities, and strengthening social networks and social participation" (p.115) also defined by Eadie et al. (2006) as CRQoL. With numerous studies identifying and describing PWA perspectives of decreased CRQoL as physiologically and psychosocially based, the perspectives of SLPs also warrant review to identify how therapy services are being provided.

Speech-Language Pathologist Perspectives

Despite the ambition of speech and language therapy services to improve physiological and psychosocial CRQoL for PWA, Northcott et al. (2017) reported that SLPs aim to address psychosocial well-being and physiological concerns in treatment but lacked confidence in addressing the psychosocial needs of people with aphasia. According to Rangamani and Judovsky (2020) the need to incorporate physiological and psychosocial CRQoL have become important concepts in speech-language pathology aphasia intervention and Hilari, Klippi, et al. (2016) stated that further research is needed understand how CRQoL is implemented in aphasia interventions.

Since evidenced-based research stated the need to incorporate CRQoL for PWA in speech-language therapy, but it is not adequately implemented, a need to further examine how the SLPs were clinically trained to address CRQoL for PWA via the perspective of speech-language pathology students.

Perspectives of Speech-Language Pathology Students

Prior to conducting speech-language therapy services, speech-language pathologists required to complete 375 hours of graduate level clinical instruction under the supervision of a certified SLP (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2020) to gain the adequate knowledge and skills to provide services for PWA. Many university programs start with an in-house clinical setting. This allows an opportunity for graduate speech-language pathology students to incorporate CRQoL into therapy sessions for PWA. Purves et al. (2013) reported that university clinics are shifting a therapy focus to incorporate quality of life for PWA; however, student and novice clinicians can assume a sense of control during sessions impacting a PWA ability to engage in social client-centered care model of practice. Paul (2014) described client-centered therapy as naturalistic by following the client's lead and creating therapy goals related to familiar experiences and activities. Ferguson and Elliot (2001) contend that clinicians with more experience display less asymmetric power relationships and incorporate social-client centered care models to improve CRQoL. As stated in Speech-Language Pathologist Perspective Section, this is not represented by experienced SLPs by not incorporating comprehensive CRQoL in treatment (Northcott et al., 2017), suggesting that more recent literature questions the extent graduate student speech-language pathology students at university clinics are adequately addressing CRQoL for PWA. This could have an impact how speech-language therapy for PWA is applied in future professional practice settings by the graduate students.

General Comments

The previous literature review explained current theory and practice related to an intersection and interaction of QOL definitions, speech-language therapy, pre-professional preparation, and multiple perspectives that influence CRQoL for PWA. CRQoL elements related to physiological and psychosocial

concerns for PWA were found in each of the previously stated literature review sections but were found with varied frequencies and implementation.

Robust literature offered evidence-based research that suggested speech-language therapy intervention can have a positive impact on CRQoL for PWA but SLPs lack clear guidance in creating objectives that accurately target CRQoL (Northcott et al., 2017; Verna et al., 2009). This was found in the lack of pre-professional instruction research that focused on psychosocial and quality of life variables for PWA, that lead to a gap in understanding the impact this instruction has on preparing student speech-language pathologists to serve this population. The following section will discuss an epistemological stance to better understand this problem.

Epistemological Interpretive Framework

The previous literature review communicated how people with PWA encounter multifactorial influences that impact CRQoL. However, the literature review suggested a gap between speech-language pathology theory for what is needed for PWA to enhance CRQoL and what is currently being practiced in speech-language therapy. When there is a proposed disconnect between theory and practice, a mixed-methods approach can facilitate bridging the gap between theory and practice (Burkholder et al., 2020).

In this mixed-methods study, student clinicians under the supervision of SLPs are applying standards set forth by accrediting agencies for ethical and evidence-based practice instruction. The concern is that speech-language pathology graduate students, under the supervision of a SLP, could be providing therapy that does not adequately address physiological and psychosocial and communication-related quality of life aspects for PWA. Mixed-methods research through the perspectives of social constructivism and pragmatism theoretical frames can identify important variables and find potential solutions to this concern that will be discussed in the OIP of Chapter Five. The goal of this mixed-

methods study was to use these theoretical frames to inform university-level speech-language pathology instruction for potential improvement of educational and practical outcomes.

Theoretical Frames

According to Creswell and Poth (2018), social constructivism researchers have a goal to understand the world in which they live, and pragmatism researchers aim to find real-world solutions. The history laid out in the previously stated national and situational contexts allows a social constructivism framework to understand the problem of practice: speech-language pathology services, provided by graduate students in a university setting under the supervision of SLPs, are not adequately incorporating communication-related quality of life into treatment for people with aphasia through concerns raised through the literature review. Personal context and current literature created a pragmatic lens for a critical review of what is observed by the researcher and what is practical through peer-review literature to influence CRQoL for PWA.

Social Constructivism

As the epistemological interpretive framework discussed a proposed disconnect between theory and practice, Creswell and Poth (2018) suggested a social constructivism approach is appropriate to incorporate when developing a theory or pattern of meaning based on how speech-language therapy at a university clinic setting addressed communication-related quality of life for persons with aphasia in Fall 2021. Social constructivism is defined as, “in this interpretive framework, qualitative researchers seek understanding of the world in which they live and work” with, “the goal of the research, then, is to rely as much as possible on the participants’ views of the situation” (Creswell & Poth, 2018, p.327). The previous Situational Context and Personal Context Sections described the professional role of the researcher as a supervising SLP and the need for views of PWA and student clinicians to better understand how CRQoL is addressed at a university clinic for PWA.

Keaton and Bodie (2011) contend that in social constructivism, “objects exist only after they enter a communicative space” and “in other words, communication changes how objects are perceived and the range of potential meanings they can embody” (p. 192). Communication challenges are persistent for PWA and in-doing so, their individual perception of CRQoL is changed, and student speech-language therapy clinicians’ view of the PWA’s CRQoL can also lead to different interpretations. Conducting mixed-methods research that examine multiple stakeholder perspectives (PWA and student clinicians), through a social constructivism frame, can lead to better understanding of the potential meanings CRQoL can embody. By permitting a social constructivism frame to guide this mixed-methods study through multiple individual perspectives, it allows introduction of a pragmatic stance to further position this research study.

Pragmatism

Adult neurogenic disorders, specifically aphasia, research has employed a pragmatic approach to answer research question(s). Simmons-Mackie and Lynch (2013) performed a review of current qualitative research and 67% (52 out of 72) of studies used a pragmatic theoretical stance; also known as pragmatism. Pragmatism is defined as an interpretative lens that “focuses on the outcomes of the research: the actions, situations, and consequences of inquiry rather than antecedent conditions. There is a concern with applications, ‘what works,’ and solutions to problems” (Creswell & Poth, 2018, p. 326). Simmons-Mackie and Lynch (2013) praise the growth in pragmatic approaches that have allowed researchers to choose relevant methods without the constraints of traditional approaches. This can allow deeper understanding of research questions and as such allow aphasic research to identity and explore dynamics of CRQoL concerns discussed in the literature review. Given the dynamic and individualized nature of CRQoL, recent psychology research by Guyon et al. (2018) also praised a pragmatic epistemological stance as way to better understand mental attributes as they are dependent on the social context, this includes psychosocial factors associated with CRQoL. As with any approach,

Simmons-Mackie and Lynch (2013) discuss the limitations of pragmatic approach which is the lack of traditional methods that can encourage superficial understanding affecting the studies validity. Creswell & Poth (2018) also acknowledge the lack of focus on traditional methods but more importantly state that the pragmatic approach focused on, “the problem being studied and the questions asked about this problem” (p.27). Having greater freedom to choose methods can focus the practical nature of a study surrounding a problem of practice (Creswell & Poth, 2018).

General Comments

After discussing the importance of understanding the perceptions of individuals in a social constructivism approach and the freedom to select methodology based off a pragmatic approach, both implore the importance of using multiple perspectives to understand the research problem. The next methodology section will discuss multiple forms of data collection methods of interviews, researcher experiences, member-checking, and reliability measures as credible to establish rigor in a mixed-methods research study.

Methodology

In accordance with pragmatic and social constructivism theoretical frames, it is appropriate for the research to include both quantitative and qualitative components in mixed-methods data collection (Creswell & Poth, 2018). Creswell (2014) details a convergent/parallel mixed methods approach that incorporates quantitative and qualitative components at approximately the same time and allows for interpretation of the overall approach. A convergent/parallel mixed methods approach served as the methodology design for this research study.

Burkholder et al. (2020) emphasized that quality mixed-methods research requires quantitative and qualitative methods to establish credibility and lists experience with the research, using multiple data sources, member-checking and implementing intrarater and interrater reliability as dependable

techniques that were used in the study. Quantitative resources were included using frequency counts and descriptive statistics. Qualitative components included an open-ended, semi-structured interview guide, observations, artifacts, and member checking to add credibility. The upcoming Methodology and Analysis Procedures section will provide in-depth details about the participants, methods, and procedures used in this study.

Chapter Three: Methodology and Analysis Procedures

Introduction

The previous section included a literature review, traditional stance, and theoretical frames needed for this study. This chapter will be a discussion of research design, study setting and participants, instruments and data collection procedures, data analysis procedures, and threats to reliability and validity.

Study Design

This study used a convergent/parallel mixed-methods research design using quantitative and qualitative analysis. The study occurred during the Fall 2021 semester and took place at a small liberal-arts university in the midwestern United States. Ethical approval for this study was granted by the university's Institutional Review Board (IRB) prior to implementation on 09-21-2021. Purposive sampling was implemented for this mixed-methods study using a single instrumental case qualitative approach that included two groups of participants and archival documentation data. Creswell and Poth (2018) provided guidance when selecting an instrumental case study approach, stating that case study is aimed to understand a specific issue (how communication-related quality of life is addressed for PWA) rather than the case itself (university setting). Creswell and Poth (2018) and Burkholder et al. (2020) stated purposeful sampling is appropriate with a case study approach to focus in-depth on a phenomenon by clearly defining and bounding the case. This focuses attention to what the case is and what it is not. The next two sections will define case data sources.

Participants

Potential recruitment for two participant groups was established using university speech-language pathology clinic enrollment data given permission from a university gatekeeper. Fall 2021

enrollment identified 32 PWA and 22 graduate student clinicians. Inclusion criteria required PWA have English as their primary language, monolingual in English, mild to moderate aphasia severity as indicated by a standardized aphasia assessment, and currently receiving in-person speech-language therapy at a university clinic in Fall 2021. PWA exclusion criteria was a diagnosis of dementia, researcher as the clinical supervisor for the PWA in Fall 2021, or currently receiving teletherapy speech-language intervention at a university clinic in Fall 2021. Graduate speech-language pathology students were required to be currently treating a PWA in Fall 2021 and excluded when having the researcher as a clinical supervisor in Fall 2021. After inclusion/exclusion criteria was applied and the participants met qualifications set in the informed consent forms (see Appendices C and D), 12 PWA and 9 graduate-speech-language pathology students were eligible to participate in the study. Two participant groups were recruited to this study: a) people with aphasia (*n*=10) and b) graduate student clinicians (*n*=2) receiving or conducting speech-language therapy at a university clinic in Fall 2021 consented to participate in the study. This resulted in response rates of 83% (10/12) of PWA and 33% (2/9) of graduate students of eligible participants. Selected participants also received pseudonyms to aid anonymity.

The PWA participants were seven males and three females. Service delivery models were as follows: group therapy (*n*=8) and individual therapy (*n*=2). Graduate student participants were two females and both first-year graduate students. Previous experience treating people with aphasia was also similar by not providing direct clinical treatment prior to Fall 2021 semester. Participant McNa indicated that as an undergraduate, she was an assistant to a graduate student, and stated, “It was more of observing” (Participant interview, December 02) and Participant BlLa had no previous experience. During Fall 2021, McNa had one client with aphasia in individual therapy and BlLa had three clients: one was individual via Zoom and two clients were in-person in a group setting. Since BlLa conducted therapy in-person, she was included as a participant.

Recruitment. PWA participants were recruited to this study using recruitment letters and informed consent forms that were physically distributed confidentially in the university clinic room. This setting is confidential with only certain speech-language pathology faculty/staff/students' permission to be in the university clinic setting or to access audio-visual cameras in the clinic room. Any additional questions pertaining to the informed consent form or interview scheduling by the PWA were discussed in a separate clinic room or university office to ensure confidentiality. Participants agreeing to participate in the study turned in the signed consent form to the researcher or to university personnel to be placed the researcher's mailbox. The mailbox is in a secure mail-room location that is monitored by staff daily and locked during non-office hours.

Graduate student participants also received similar recruitment with an email communication option and confidentiality considerations. Among graduate student participants, snowballing did not take place to aid anonymity and this study was not directed towards any course or clinic requirement to reduce coercion. Snowballing refers to, "asking the participant for a referral to a next participant" (Burkholder et al., 2020, p. 89). All consent forms and documents were housed in a locked file cabinet and/or a password protected computer.

Instruments and Data Collection Procedures

This study had three main components. The first was conducting an approximate 15-minute interview that took place face-to-face with PWA or with graduate speech-language pathology students face-to-face or virtually (see Appendices A and B). The second component was providing an opportunity for member-checking the interview transcripts to establish rigor for both participant groups. The third component was using archival summary report data from Spring 2015 to Fall 2021 found at the same small liberal arts university clinic.

Participant Interviews

PWA interviews were scheduled in October and early November 2021, graduate student interviews in early December. Once a confirmation of a scheduled interview date was obtained, the interview took place in a familiar and confidential location; a university clinic room or office. The interview was also audio-visually recorded using a HIPPA compliant Zoom account. Graduate student participants were provided the same interview environment protocol as PWA participants but were offered the option to conduct the interview via an online Zoom platform. Creswell and Poth (2018) state allowing the participant to choose the interview environment can reduce the perception of power the interviewer has over the interviewee and a familiar and natural interview environment can reduce the occurrence of adverse emotions or behaviors. Burkholder et al. (2020) also reported the benefit of a face-to-face interview to help establish rapport, observe interviewee body language, and allowed the researcher greater control over the environment. It is also vital to state that a face-to-face, in-person interview with the researcher and familiar environment were required due to the language challenges associated with participants with aphasia. Creswell and Poth (2018) placed great emphasis in creating an environment to have participants feel as comfortable as possible, especially when the interviewee is less articulate; as is the case with aphasia. Creswell and Poth (2018) also added that without a comforting environment, it could present less adequate data if the experience of the researcher as an SLP and the familiar environment were not considered for participants with aphasia as well as graduate students.

The semi-structured interview protocol was adapted from Burkholder et al. (2020) to ensure interview consistency (see Appendices A and B). The protocol contained logistic details, such as: date, location, start and end times, name of the interviewee, name of the interviewer, and type of audio recording device. The audio-recording device was housed on a password protected laptop and from the recording feature on the Zoom platform.

The interview began with an introductory statement of the study purpose, informed consent, and interview procedures and ended with a closing statement that thanked the participant for their time, and permission to contact for a member-checking session. Four interview questions for PWA participants were created from this mixed-methods research question(s). They included: (1) Have you received prior speech-language therapy?; (2) How do you define communication-related quality of life?; (3) Do you feel that the speech-language therapy you are receiving at this university clinic contributes to that?; (4) Is there anything I have missed that you would like to share? Five interview questions were created for graduate student participants. They included: (1) Are you a first- or second-year speech-language pathology graduate student?; (2) Have you previously treated a person with aphasia? (3) How do you define communication-related quality of life? (4) How do you incorporate communication-related quality of life in speech-language therapy for people with aphasia?; (5) Is there anything I have missed that you would like to share? Potential probing statements were also implemented to aid clarification and expansion of statements. For example, “tell me more” or “in what ways?” Care was taken during PWA interviews by the interviewer to repeat statements for clarification due to perceived expressive or receptive language challenges.

Member Checking

Participants were sent a follow up email approximately one month after the initial interview in October or early December 2021 to schedule a member-checking session and reviewed the interview word-by-word transcript for member-checking. Member-checking was conducted face-to-face for PWA and graduate students were offered either face-to-face or Zoom platforms. Four PWA and two graduate students were selected for member-checking and each session lasted approximately five minutes. Member-checking was conducted in an unstructured format to understand the participant’s interpretations and feelings related to emergent trends derived from the data. The following unstructured statements and questions were asked of the participant, “1. After our interview, I wrote

down your responses to check for accuracy and needed clarification. May I ask you for clarification? 2. Clarify this statement for me, the question was [Researcher read the question associated with the statement] and you responded [the participant response]. Tell me more about this. 3. Did I represent your other responses well? [Researcher read questions and responses aloud]" The questions and statements were aimed to seek participant feedback and according to Creswell and Poth (2018) to provide credibility of the findings and interpretations.

Archival Documentation Data

Permission to access archival data was granted to this researcher based on contractual access and verbal consent from the university gatekeeper. Archival documentation data of physical and electronic summary reports were collected chronologically for future quantitative and qualitative analysis from Spring 2015-Fall 2021. The data were collected and physically stored in a locked storage room inside a locked file cabinet at the university or housed on password-protected university computers.

Initially, client files that housed summary reports were physically scanned for an aphasia diagnosis, then underwent inclusion/exclusion criteria considerations. Inclusion/exclusion criteria for summary reports were the same as stated in the Participants Section with the exclusion criteria of researcher as a supervisor for a PWA applied to each semester from 2015-Fall 2021. The university's speech-language pathology clinic offered over 184 interventions for PWA from Spring 2015-Fall 2021. After applying inclusion/exclusion criteria, 164 PWA summary reports were eligible for further data analysis.

A supporting reason this university clinic was selected was its plethora of clients with aphasia. From Spring 2015 to Fall 2021, PWA were able to attend individual and/or group therapy models at this clinic leading to a larger pool of potential summary reports to be used as data sources for this study and

a need for purposive sampling. The multiple sources of archival syllabi data also offer an opportunity to establish rigor in mixed-methods research.

Data Analysis

Quantitative and qualitative data were analyzed in a convergent/parallel mixed methods approach. A convergent/parallel mixed methods approach incorporated quantitative and qualitative components at approximately the same time for interpretation (Creswell, 2014). Burkholder et al. (2020) discussed the benefits of using a mixed methods approach to create a more accurate representation of the main research question: 1) How did speech-language therapy at a university clinic setting address communication- related quality of life for persons with aphasia in Fall 2021? It also allowed greater representation of the subsequent research questions for this study, which were: 1a) How did people with aphasia who received speech-language therapy, in Fall 2021, at a university clinic describe communication-related quality of life?; 1b) How did graduate students, who provided speech-language therapy services for people with aphasia in Fall 2021, describe communication-related quality of life for people with aphasia?; 1c) How did graduate students, who provided speech-language therapy services for people with aphasia at a university clinic, from Spring 2015-Summer 2021, represent communication-related quality of life for their aphasic client(s) in summary report clinical documentation?; 1d) How did graduate students, who provided speech-language therapy services for people with aphasia at a university clinic, in Fall 2021, represent communication-related quality of life for their aphasia client(s) in summary report clinical documentation?; 1e) How did speech-language pathology summary report clinical documentation at a university clinic represent communication-related quality of life for people with aphasia from Spring 2015-Summer 2021, differ from Fall 2021 summary report clinical documentation representation of communication-related quality of life for people with aphasia? The next two segments will describe the nature of quantitative and qualitative data analyses employed in this study.

Quantitative Analysis

Data from summary reports were exported to Microsoft Excel for analysis and entered into Data Analysis ToolPak for Microsoft Excel 365, Version 2201. Descriptive statistics were used to detail demographics, exclusion/inclusion criteria, and current CRQoL outcomes and comments. These were represented as frequency counts, percentages, or ratios for nominal data analysis.

The PWA summary reports from Spring 2015 to Fall 2021 were compared to examine changes in CRQoL content. The summary report template included objectives, treatment methods, comments, and recommendation sections (see Appendix E). Objective and comment sections were selected for data analysis using categorical aggregation: (a) physiological and (b) psychosocial CRQoL categories due to housing the goals of treatment (objective section) and viewpoints of stakeholders' responses to treatment (comment section). A physiological category contains language associated *only with* the function of producing or understanding communication *without* any lexicon reflecting environmental factors (communication partners, setting) socialization, or positive/negative feelings (happiness, confidence, anxiety). E.g., “The client will name objects when given a verbal cue.” A psychosocial domain contains language with the topic of communication *with* lexicon reflecting environmental factors (communication partners, setting), socialization, or positive/negative feelings (happiness, confidence, frustration, anxiety). E.g., “The client will report increased confidence in their communication to an eight on a Likert scale from one-ten.” Both categories include participatory communication acts but target different aspects of communication-related quality of life.

Comment sections were further classified as physiological or psychosocial domains when beginning with a “report” statement by the client or caregiver (spouse, family member, friend) that was related to their CRQoL. This will include synonyms of the word, “report.” For example, “state,” “said,” “communicated,” “wished,” or “expressed.” Then the statement also contained at least one of more of

the following descriptive lexicon categories: quantitative lexicon: “more,” “less,” “continue,” “increase,” “decreased,” or “improved”; magnitudinous lexicon: “difficulty,” “challenges,” “ease”; and/or emotions: “enjoyed,” “happy,” “confident,” or “frustrated.” E.g., “The client’s wife reported he is saying more words.” This would be physiological because it *only* describes the function of communication. E.g., “The client’s wife reported he is communicating more with family and friends, when we go out.” This would be psychosocial due to communication *with* lexicon reflecting socialization with family and in an outside therapy setting. Statements reported by the client or caregiver were also included in physiological or psychosocial categories upon demonstrating a change in their communicative function. For example, “She stated interest in joining an aphasia therapy group.”

The data was organized according to the semester and year therapy was conducted from Spring 2015 to Fall 2021. Within each semester and year, frequency counts of categorical aggregation categories were collected in objective and comment summary report sections. This data was then subjected to descriptive statistics and Chi Square testing to determine if the sampling distribution confirms the null hypothesis. Confirming the null hypothesis would indicate results show no changes in how physiological and psychosocial CRQoL was represented in summary reports from Spring 2015 to Fall 2021. The results were also used in conjunction with the qualitative data to better understand how CRQoL was addressed for PWA at a university clinic.

Qualitative Analysis

Qualitative data analyses were used to expand the quantitative analysis. Open-ended semi-structured interviews, observations, member-checking, and artifacts (archival summary reports) occurred in this study pertaining to Fall 2021 data. Word-by-word transcription of interviews, by the researcher, were subjected to inductive coding and analysis through detailed categorical-aggregation for

themes based on social constructivism and pragmatism frameworks. A case study instrumental approach was also implemented to discover emerging trends.

A related study by Purves et al. (2013) examined QOL for PWA and how to enrich education of graduate speech-language pathology students through a mentoring program. This study identified themes that drew upon the following: "Luborsky's (1994) definition as manifest generalized statements by informants about beliefs, attitudes, values, or sentiments" (Purves et al., 2013 p.374 as cited in Luborsky, 1994) that were frequently repeated and appeared as ideas/statements across data sets (Purves et al., 2013). The qualitative data were analyzed using this guiding definition that identified meaningful units as codes, arranged into patterns, aggregated into categories, and summated into trends. Once a category was created, quotes from interviews, terminology found in summary report artifacts, and mathematical representations were collected to inform trends. Trend-related components were found, and trends emerged from the data. Components were repeatedly reviewed to reach saturation. Summations were then established from the trends. Chapter Four further explains coding procedures. The qualitative data were used to support quantitative data results.

Threats to Reliability and Validity

Precautions were taken to enhance the study's reliability and validity. Reliability refers to the ability to replicate results and validity refers to the extent a method accurately measured what it is intended to measure (Schiavetti et al., 2011). Member-checking was used to review interview transcripts and triangulation was implemented to increase credibility of the qualitative and quantitative data. Threats to reliability and validity included biases and will be discussed in the next section.

Biases

It is vital to state that some results could be subject to selection, social interaction, and confirmation bias. Selection bias was a concern to the study due the omission of randomization and use

of purposeful sampling. The selection of limited PWA and graduate students is case specific and not subject to a more extensive population. Social interaction bias influenced the study by the researcher's previous collaborative relationship with participants and the potential for participants to compare responses among each other. The participants could also feel obligated to participate in the study due to a perceived therapy obligation. Confirmation bias also can impact the study due to this researcher's past research in this field that could overlook new evidence. To maximize the study's credibility, it is important to state that interview protocols were created for consistency to reduce bias when conducting with a known or unknown participant. Professionals with terminal degrees in education/special education and communication sciences and disorder departments were also contacted for collaboration in developing methods and analyzing data to remove bias.

Conclusion

Research design, study setting, participants, instruments, data collection procedures, data analysis, and reliability and concerns were discussed in Chapter Three. Sufficient detail in these categories were provided for procedural guidance and for trustworthiness. Section Four discusses the results and interpretations gathered from data analysis with further description of procedures and findings for the study's research questions.

Chapter Four: Results and Findings

Introduction

The previous section provided a description of the study design, participants, data collection procedures, data analysis procedures, and threats to validity and reliability. Methodological processes described in Chapter Three will be expanded in this chapter to report quantitative and qualitative results and findings. Chapter Four will discuss data analysis results related to the study's research questions (RQ):

1. How did speech-language therapy at a university clinic setting address communication-related quality of life for persons with aphasia in Fall 2021?

1a. How did people with aphasia who received speech-language therapy, in Fall 2021, at a university clinic describe communication-related quality of life?

1b. How did graduate students, who provided speech-language therapy services for people with aphasia in Fall 2021, describe communication-related quality of life for people with aphasia?

1c. How did graduate students, who provided speech-language therapy services for people with aphasia at a university clinic, from Spring 2015-Summer 2021, represent communication-related quality of life for their aphasic client(s) in summary report clinical documentation?

1d. How did graduate students, who provided speech-language therapy services for people with aphasia at a university clinic, in Fall 2021, represent communication-related quality of life for their aphasia client(s) in summary report clinical documentation?

1e. How did speech-language pathology summary report clinical documentation at a university clinic represent communication-related quality of life for people with aphasia from Spring 2015-Summer

2021, differ from Fall 2021 summary report clinical documentation representation of communication-related quality of life for people with aphasia?

The following sections will introduce data analysis, reliability of quantitative and qualitative measures, and findings of quantitative and qualitative analysis. A discussion of additional factors and conclusions will follow the quantitative and qualitative findings.

Analysis Introduction

Data results from archival summary report data, *n*=164, are presented in the Quantitative Sections. Results include frequency counts and comparison analysis of Spring 2015-Summer 2021 data and Fall 2021 data. Qualitative data results underwent inductive coding analysis of PWA (*n*=10) and graduate-student interviews (*n*=2), member-checking, and archival summary report artifacts. These data sources were triangulated to provide corroborating evidence for the credibility of quantitative and qualitative findings (Creswell & Poth, 2018). Mixed-methods analysis used quantitative descriptive statistics and qualitative transcription analysis to aid in triangulation. Prior to reporting the results for quantitative and qualitative data, reliability measures will be discussed.

Quantitative and qualitative measures will be discussed to analyze the study's research questions and better understand how physiological and psychosocial CRQoL components are represented in each measure. Quantitative data will include objective and comment summary report sections, while qualitative data use semi-structured interviews with supporting summary report artifacts to understand how CRQoL was addressed for PWA during Fall 2021. As stated in Chapter Three, physiological and psychosocial CRQoL components will defined as follows in quantitative and qualitative analysis:

1. A physiological category contains language associated *only with* the function of producing or understanding communication *without* any lexicon reflecting environmental factors

(communication partners, setting) socialization, or positive/negative feelings (happiness, confidence, anxiety). E.g., “The client will name objects when given a verbal cue.”

2. A psychosocial category contains language with the topic of communication *with* lexicon reflecting environmental factors (communication partners, setting), socialization, or positive/negative feelings (happiness, confidence, frustration, anxiety). E.g., “The client will report increased confidence in their communication to an eight on a Likert scale from one-ten.”

Both categories include participatory communication acts but target different aspects of communication-related quality of life.

Reliability of Quantitative Measures

Archival summary report data were collected from Spring 2015 to Fall 2021 that produced 164 samples. The samples were collected from physical copies or digital archival data sources given the previously stated exclusion/inclusion criteria in Chapter Three. The physical and digital archival data sources underwent three additional frequency counts to establish 100% intrarater reliability of 164 confirmed samples.

Summary reports were then subjected to further intrarater and interrater reliability checks over 20% of the sample pool to review frequency counts of three sections: (a) objective; (b) comment; (c) service delivery. According to Paul (2014) reliability checks are recommended on 20% of the data collected. A random number generator using the study range of 1 to 164 was used to select 33 summary reports, 20% of the data, to reduce selection bias. One week after preliminary data were collected intrarater reliability was above 90% for each section: (a) objective was 97.43% (76/78); (b) comment was 93.75% (15/16); (c) service delivery was 93.93% (31/33). One objective and one comment were not initially identified, and one objective and two service delivery models were not classified appropriately. Once discrepancies were identified, they were corrected for future quantitative analysis.

A practicing speech-language pathologist conducted the interrater reliability with the following face demographics: practicing clinician of six years, two years' experience as a university clinic supervisor. The rater received quantitative analysis training by the researcher that was consistent with Chapter Three Quantitative Analysis methodology. Interrater reliability was found to be: (a) objective 100% (78/78); (b) comment 88.89% (16/18); and (c) service delivery 100% (33/33). Interrater reliability for comments were relatively lower due to the researcher not initially identifying two additional comments for classification. Once the comments were identified, both raters reached 100% (18/18) agreement.

Additionally, the physiological and psychosocial CRQoL classifications were guided by established and recognized definitions in Table 1 and Chapter Three Methodology. This again allowed selection bias to be reduced for efficacious interpretation of data. These classifications will be discussed further in the Quantitative Data Analysis Procedures and Findings Section.

Quantitative Data Analysis Procedures and Findings

Descriptive statistics were the most appropriate data analysis procedure due to small sample size, *n*=164 summary reports, (Buss & Zambo, n.d.) and nominal levels of measure (Schiavetti, et al., 2011). This study examined the data exported from Microsoft Excel to develop an understanding of demographics and CRQoL representation from Spring 2015 to Fall 2021 among the following research questions:

> 1c. How did graduate students, who provided speech-language therapy services for people with aphasia at a university clinic, from Spring 2015-Summer 2021, represent communication-related quality of life for their aphasic client(s) in summary report clinical documentation?

1d. How did graduate students, who provided speech-language therapy services for people with aphasia at a university clinic, in Fall 2021, represent communication-related quality of life for their aphasia client(s) in summary report clinical documentation?

1e. How did speech-language pathology summary report clinical documentation at a university clinic represent communication-related quality of life for people with aphasia from Spring 2015-Summer 2021, differ from Fall 2021 summary report clinical documentation representation of communication-related quality of life for people with aphasia?

The selection of a sample of 164 summary reports aimed to answer the study's research questions and understand their CRQoL documentation representation by classifying objective and comment sections as physiological or psychosocial CRQoL categories. Subsequent sections, after detailing demographics, will provide a numerical representation of how physiological and psychosocial were categorized, ultimately communicating how CRQoL was represented in clinical documentation. Demographic data of gender and service delivery model will be discussed in the next section. It is important to state that gender and service delivery model demographics aimed to represent the participants and how they received speech-language therapy services without any interaction with CRQoL physiological and psychosocial components.

Demographics

Data yielded 164 eligible summary reports from Spring 2015-Fall 2021 to understand gender and service delivery model distributions (see Table 3). The data found 118 male summary reports and 46 female summary reports. Viewed as percentages, males accounted for 71.95% and females 28.05% of summary reports. Service delivery models were distributed as follows: 1) Individual 46.95% (77/164); 2) Group 36.59% (60/164); 3) Mixed 16.46% (27/164).

Table 3

Demographics

Gender	Service Delivery
Male: 71.95% (118/164)	Individual: 46.95% (77/164)
Female: 28.05% (46/164)	Group: 36.59% (60/164)
	Mixed: 16.46% (27/164)

Note. The results are shown as frequency counts and percentages.

Summary Report Data from Spring 2015 to Fall 2021

Raw data were collected from 164 summary reports to represent physiological objectives, psychosocial objectives, physiological comments, and psychosocial comments distribution from Spring 2015 to Fall 2021, totaling 21 semesters. Table 4 provides a descending year representation of the data distribution. Frequency counts for each category are as follows: (a) 372 physiological objectives; (b) 23 psychosocial comments; (c) 41 physiological comments; and (d) 35 psychosocial comments. Physiological objectives and comments displayed a larger frequency count compared to psychosocial objectives and comments.

Table 4

Distribution of Spring 2015-Fall 2021 Summary Report Data

Summary Report Semester	Objective Physiological	Objective Psychosocial	Comment Physiological	Comment Psychosocial
Fall 2021	28	3	6	3
Summer 2021	8	0	1	0
Spring 2021	18	3	6	1
Fall 2020	22	0	5	4
Summer 2020	0	0	0	0
Spring 2020	8	1	1	2
Fall 2019	17	0	1	2
Summer 2019	5	0	3	0
Spring 2019	14	1	1	2
Fall 2018	18	0	1	2
Summer 2018	11	0	0	0
Spring 2018	20	0	1	1
Fall 2017	17	2	1	0
Summer 2017	15	1	2	2
Spring 2017	26	4	2	2
Fall 2016	38	2	3	3
Summer 2016	17	3	1	3
Spring 2016	29	1	2	3
Fall 2015	20	0	3	3
Summer 2015	22	0	1	2
Spring 2015	19	2	0	0
Total	372	23	41	35

Note. N = 164 summary reports.

Summary Report Data: Spring 2015-Summer 2021

Descriptive statistics were conducted to detail how CRQoL was represented in documentation from Spring 2015-Summer 2021 (RQ1c). Microsoft Excel formulas calculated the following means (M), standard deviations (SD), and percentages. Overall, Table 5 details physiological objectives and comments were found to have greater means, standard deviations, and percentages. Larger means and standard deviations were found in physiological objectives due to a larger range of zero to 38 with other sections achieving a maximum range of zero to six (see Table 4).

Table 5

Means, Standard Deviations, and Percentages for Spring 2015-Summer 2021

Category	*M*	*SD*	Percentage
Physiological Objective	17.2	8.53	94.51% (344/364)
Psychosocial Objective	1.0	1.26	5.49% (20/364)
Physiological Comment	1.75	1.59	52.23% (35/67)
Psychosocial Comment	1.60	1.29	47.77% (32/67)

Note. M = mean; *SD* = standard deviation.

Chi-square tests were also employed to determine an association between physiological and psychosocial objectives and between physiological and psychosocial comments between Spring 2015 to Summer 2021 semester (RQ1c). Physiological and psychosocial objectives had an association of χ^2 (1, *N*= 364) = 0.077, p=.78 with the significance value of p<.05. This indicates a larger chi-square value to occur in 10% to 25% by chance, and no statistical association between physiological and psychosocial objectives. Physiological and psychosocial comments had an association of χ^2 (1, *N*= 67) = 0.908, p=.34 with the significance value of p<.05. This indicates there is a larger chi-square value to occur in 50% to 75% by chance, and no statistical association between physiological and psychosocial comments. Both chi-square analyses confirming the null hypothesis; there is no association between physiological and

psychosocial objectives or comments. Confirming the null hypothesis is verified by p-values being greater than the $p<.05$. In other words, there were no significant changes in physiological and psychosocial summary report objectives or comments from Spring 2015 to Summer 2021 semester.

Summary Report Data: Fall 2021

Descriptive statistics were used to interpret how speech-language therapy services for people with aphasia at a university clinic, in Fall 2021, represented communication-related quality of life for their aphasia client(s) in summary report clinical documentation (RQ1d). Table 6 displays frequency counts for physiological and psychosocial distribution in objective and comment categories. Physiological objectives occurred in 90.32% (28/31) of the sample and 9.68% (3/31) for psychosocial objectives. Physiological comments occurred in 66.67% (6/9) of the sample and 33.33% (3/9) for psychosocial comments. The next section will compare Fall 2021 data to determine association with Spring 2015 to Summer 2021 data.

Table 6

Description of Fall 2021 Summary Report Data

Fall 2021	Objectives	Comments
Physiological	28	6
Psychosocial	3	3
Total	31	9

Comparison of Spring 2015-Summer 2021 Data and Fall 2021

Descriptive statistics were conducted to compare the two data sets (RQ1e). The Fall 2021 raw data frequency counts of physiological or psychosocial objective and comment categories were found to have equal or less values (see Table 4) compared to Spring 2015 to Summer 2021 ranges. This created

similar descriptive statistics of means, standard deviations, and percentages including Fall 2021 data (Spring 2015 – Fall 2021) and excluding Fall 2021 data (Spring 2015 – Summer 2021). In other words, since Fall 2021 frequency counts reside within the ranges of Spring 2015 to Summer 2021 data, it supports Fall 2021 data had similar physiological and psychosocial CRQoL representation in objective and comment sections. Overall, Table 7 details physiological objectives and comments were found to have greater means, standard deviations, and percentages. Larger means and standard deviations were found in physiological objectives due to a larger range of zero to 38 with other sections achieving a maximum range of zero to six (see Table 4).

Table 7

Means, Standard Deviations: Spring 2015-Summer 2021 Compared to Spring 2015-Fall 2021

Category	SP15-SU21 *M*	SP15-SU21 *SD*	SP15-FA21 *M*	SP15-FA21 *SD*
Physiological Objective	17.2	8.53	17.71	8.64
Psychosocial Objective	1.0	1.26	1.09	1.30
Physiological Comment	1.75	1.59	1.95	1.80
Psychosocial Comment	1.60	1.29	1.67	1.28

Note. M = mean; *SD* = standard deviation; FA = fall; SP = spring; SU = summer.

Percentage measures of Fall 2021 raw data varied with data ranges excluding and including Fall 2021 semester from Spring 2015 to Summer 2021 data. Summarizing Fall 2021 percentages to be greater in psychosocial objectives and physiological comments and lesser in physiological objectives and psychosocial comments. Greater Fall 2021 percentages in psychosocial objectives and physiological comments were attributed *n*-values representing maximal range values, *n*= 6, of Spring 2015-Fall 2021 data (see Table 8). Percentage distribution of Fall 2021 physiological and psychosocial objectives and

comments varied slightly when viewed in isolation but when combined with Spring 2015 to Summer 2021 did not produce larger differences to skew the data.

Table 8

Percentage Distribution Comparison for SP15-SU21, SP15-FA21, and FA21

Category	SP15-SU21	SP15-FA21	FA21
Physiological Objective	94.51%	94.18%	90.32%
Psychosocial Objective	5.49%	5.82%	9.68%
Physiological Comment	52.23%	53.95%	66.67%
Psychosocial Comment	47.77%	46.05%	33.33%

Note. FA = fall; SP = spring; SU = summer.

Chi-square tests were further employed to determine an association between physiological and psychosocial objectives and between physiological and psychosocial comments between Spring 2015 to Summer 2021 semester and Spring 2015 semester to Fall 2021 (RQ1e). As previously stated, physiological and psychosocial objectives had an association of χ^2 (1, *N*= 364) = 0.077, p=.78 with the significance value of p<.05, *from* Spring 2015 to Summer 2021 semester. After increasing the semester range to include Fall 2021 to Spring 2015, chi-square value between physiological and psychosocial objectives increased to χ^2 (1, *N*= 395) = 0.108, p=.74 with the significance value of p<.05. This indicates there is a 25% to 50% chance of a larger chi-square value to occur and no statistical association between physiological and psychosocial objectives. The association of physiological and psychosocial comments remained similar. As previously noted, Spring 2015 to Summer 2021 association of χ^2 (1, *N*= 67) = 0.903, p=.34 with the significance value of p<.05 and increasing the range to include Fall 2021 was χ^2 1, *N*= 76) = 0.911, p=.34 with the significance value of p<.05, indicating the same expected chance of range is a 50% to 75% for a larger chi-square value to occur and no statistical association between physiological

and psychosocial comments. Confirming the null hypothesis is verified by p-values being greater than the $p<.05$.

In summation data from Spring 2015 to Summer 2021 excluding and including Fall 2021 data found no statistical association between physiological and psychosocial CRQoL variables with similar chi-square values. This indicates that both data sets represented physiological and psychosocial CRQoL components similarly over 21 semesters. Additionally, chi-square statistical analysis compliments non-descriptive statistics by demonstrating similar distribution of CRQoL variables. The next sections will introduce the reliability of qualitative measures, next detail the qualitative analysis used to understand the studies research questions, and then uniquely combine quantitative and qualitative measures in a mixed-methods analysis.

Reliability of Qualitative Measures

Interview protocols for semi-structured interviews were created for consistent application for PWA and graduate students. The study included multiple interviews but holds value for future implementation based on the questions and probes perceived validity and were approved by IRB. Member-checking added to the reliability and validity of the interview protocol by the interviewees voicing favorable responses to the interview questions and stated the word-by-word transcription was accurate. Artifacts were included in the form of summary report documentation that connected to PWA and/or graduate student participants and CRQoL components. Artifacts will be further discussed in mixed-methods analysis as a qualitative and quantitative measures. Burkholder, et al. (2020) stated multiple data sources add accuracy and credibility to the study. The next sections will detail the findings of qualitative analysis.

Qualitative Data Analysis Procedures and Findings

As noted previously, qualitative analysis occurred using word-by-word interview transcriptions from two groups: PWA and graduate students; along with member-checking and summary report artifacts from Fall 2021 for triangulation and credibility. Summary report artifacts supplemented interview responses from both groups to better understand how CRQoL was defined and represented in documentation as primarily physiological or psychosocial in mixed-methods analysis, while interview transcripts and member checking will be subjected to inductive coding for emergent trends to describe CRQoL as physiological or psychosocial, according to Chapter Three classifications. Creswell & Poth (2018) report qualitative data analysis using interviews, member-checking, and artifacts develops an in-depth understanding for case study research. This section will introduce qualitative analysis findings of PWA and graduate student interview transcripts, with favorable member-checking, for the following research questions:

> 1a. How did people with aphasia who received speech-language therapy, in Fall 2021, at a university clinic describe communication-related quality of life?
>
> 1b. How did graduate students, who provided speech-language therapy services for people with aphasia in Fall 2021, describe communication-related quality of life for people with aphasia?

Qualitative analysis began by reviewing 12 semi-structured interview transcripts within subject groups: ten PWA and two graduate students to develop codes. As stated in Chapter Three, inductive coding was guided by "Luborsky's (1994) definition as manifest generalized statements by informants about beliefs, attitudes, values, or sentiments" (Purves et al., 2013 p.374 as cited in Luborsky, 1994) that were frequently repeated and appeared as ideas/statements across data sets (Purves et al., 2013). The data groups were analyzed within-subject groups: PWA or graduate students; then results were viewed convergently for similarities or differences to emerge from the two groups based on participants

representation of CRQoL and will be discussed in Chapter Five. Further reflection and analysis of the previously mentioned trends were applied for patterns to emerge and be interpreted.

Inductive coding identified 121 total codes for PWA and 21 for graduate students. Codes were further narrowed and grouped into categories with PWA having eight categories and graduate students having five categories. Categories were then grouped into three trends for PWA and three for graduate students. Table 9 and 10 provide a breakdown of the trends, trend-related components, and summations of each trend. The subsequent sections will discuss PWA interview trends followed by graduate student trends.

People with Aphasia Communication Related Quality of Life Description

Inductive coding identified 121 total codes that examined how PWA, who received speech-language therapy services in Fall 2021, described CRQoL (RQ1a). Codes were further narrowed to 62 patterns and grouped into eight categories: (1) continuous improvement; (2) communication difficulties persist; (3) support; (4) environment; (5) QoL is difficult to describe; (6) speech-language therapy is helpful; (7) connections with additional PWA are beneficial; and (8) continuous speech-language therapy is advantageous. The following three trends emerged from PWA categories: (1) therapy aids ability to communicate; (2) connections with additional PWA; and (3) supportive environments. Table 9 provides a breakdown of the trends, trend-related components, and summations of each trend to answer the research question 1a: How did people with aphasia who received speech-language therapy, in Fall 2021, at a university clinic describe communication-related quality of life?

Table 9

People with Aphasia Trends

Trends and Trend-related Components	Summations
Therapy Aids the Ability to Communicate 1.Difficulty with word-finding persists throughout life and attending speech-language therapy sessions helps to enjoy communication. 2.Therapy increases accuracy and frequency of communication. 3.Without therapy, communication with other people would be limited.	Therapy allows PWA to improve their ability to communicate an intended message successfully, encouraging a positive outlook on their communication-related quality of life.
Connections with Additional PWA 1.Support groups and group therapy bring PWA together. 2.Talking with additional PWA allows empathetic communication to emerge among PWA.	Establishing connections with additional PWA allows them to communicate related experiences and difficulties for deepened community.
Supportive Environments 1.Need positive support from family, additional PWA, and therapists to reduce communication challenges. 2.Physical environments need to have reduced noise and patient conversation partners to reduce aversion to communicate.	Speech-language therapy addresses communication-related quality of life by understanding and applying environmental modifications to promote communication exchanges.

Trend 1: Therapy Aids the Ability to Communicate

Summation 1- Therapy allows PWA to improve their ability to communicate an intended message successfully, encouraging a positive outlook on their communication-related quality of life.

The following trend components were found to support this summation: (a) difficulty with word-finding persists throughout life and attending speech-language therapy sessions helps to enjoy communication.; (b) therapy increases accuracy and frequency of communication; and (c) without therapy, communication with other people would be limited.

Participants were introduced to describe CRQoL from question two: “How do you define communication-related quality of life?” Physically being able to communicate was resoundingly expressed with an emphasis to improve communication. For example, Participant SmPh expressed, “Quality is good. I want to be able to speak” (Participant interview, October 20) and Participant VeTo said, “I’ve always wanted it better… use the right words” (Participant interview, October 11). Participant MiRa added, “Even though I speak okay, still obviously, it’s hard” (Participant interview, October 13) with KiTe stating, “that’s a thorny subject…my aphasia comes and goes” (Participant interview, October 11). Participant NiDi also related to the persistent challenges to CRQoL by saying, “Rough…frustration…hard to involve in conversation” but added that, “one-on-one therapy, ugh, nice, specific problems like, um, reading skills…counting” (Participant interview, November 3) in response to question three: “Do you feel that the speech-language therapy you are receiving at this university clinic contributes to that?” BoLo responded similarly to question three saying, “I didn’t know how to speak before, and now I do” (Participant interview, October 13). When presented with question two, Participant RaDe communicated similar agreement to communicate successfully, but also need to be a successful communicator by stating, “I enjoy communication, I think, I keep progressing; slowly” (Participant interview, October 13). It is vital to state that these comments were facilitated by unanimous responses of, “Yes” when asked if the therapy they received at the university clinic contributed to the CRQoL. Connections and support are also described as important to address CRQoL for PWA and will be explained in Summations Two and Three.

Trend 2: Connections with Additional People with Aphasia

Summation 2- Establishing connections with additional PWA allows them to communicate related experiences and difficulties for deepened community. The following trend components were found to support this summation: (a) support groups and group therapy bring PWA together and (b) talking with additional PWA allows empathetic communication to emerge among PWA.

The importance of establishing connections with additional PWA emerged from question two: "How do you define communication-related quality of life?", question three: "Do you feel that the speech-language therapy you are receiving at this university clinic contributes to that?", and question four: "Is there anything I have missed that you would like to share?" Participant FaSu, NiDi, and SaLe frequently expressed the benefit of communicating with additional PWA. SaLe stated, "Quality of life is very good. I get to go the coffee shop [SIC] and talk to my friends [PWA]" when probed with the statement, "Tell me more" SaLe responded, "The talking it the best one because I can relate with what is happening" (Participant interview, October 25). FaSu also voiced positive statements towards going out for coffee with PWA. NiDi commented the following in response to question three, "Yes, positive, especially [name of group therapy at local university] group. "I like the same problem, chance to communicate, um, a normal conversation, understand" (Participant interview, November 3). The next section will add to therapy aiding the ability to communicate and connections with PWA trends to discuss supportive environments.

Trend 3: Supportive Environments

Summation 3- Speech-language therapy addresses communication-related quality of life by understanding and applying environmental modifications to promote communication exchanges. The following trend components were found to support this summation: (a) need positive support from family, additional PWA, and therapists to reduce communication challenges (b) physical environments need to have reduced noise and patient conversation partners to reduce aversion to communicate.

Having strong supportive environments was indicated as favorable to improve CRQoL. Participant MiRa voiced the need of supportive communication in a therapy environment, "The problem is that I can't see my progress… Right, but it's like, hey, you know it's like really good." This response was derived from the Participant's discussion about, "helping the class [PWA in group]" (Participant

interview, October 13). Family was also named as a component of a supportive environment. Participant KaTo indicated, “Quality of life…is very patient boys [sons]…daughters, and ugh [aphasic block]” clarification statement needed due to aphasia and indicated the aphasic block as, “family” (Participant interview, October 21) when asked question two, “How do you define communication-related quality of life?” FaSu additionally stated family support in response to question two, “I could not speak, so, um, my sister and her husband, they moved in with me” (Participant interview, October 20). Question two also prompted auditory environment supports by NiDi, “Talking fast, noisy surroundings, ugh [Participant] left out” (Participant interview, November 3).

When the interview codes were collected and refined into three trends through inductive coding, it allowed perceptions of how CRQoL components for PWA emerge. The three emergent trends were: (1) therapy aids ability to communicate; (2) connections with additional PWA; and (3) supportive environments. Trend 1: Therapy Aids the Ability to Communicate can be classified as a physiological CRQoL component. Trend 2: Connections with Additional PWA and Trend 3: Supportive Environments can be classified as psychosocial CRQoL components. The subsequent section discusses CRQoL perceptions from the viewpoint of graduate-students providing therapy to PWA.

Graduate Student Communication Related Quality of Life Description

Inductive coding identified 21 total codes that examined how graduate students, who provided speech-language therapy services for PWA in Fall 2021, described CRQoL (RQ1b). Codes were further narrowed and grouped into five categories: (1) communicating wants/needs; (2) speaking with other people; (3) including functional activities and goals; (4) selecting meaning goals; and (5) conducting therapy in different environments. The following three trends emerged from the categories: (1) communicate effectively; (2) naturalistic environment; and (3) individualized. Table 10 provides a breakdown of the trends, trend-related components, and summations of each trend to answer the

research question 1b: How did graduate students, who provided speech-language therapy services for people with aphasia in Fall 2021, describe communication-related quality of life for people with aphasia?

Table 10

Graduate Student Trends

Trends and Trend-related Components	Summations
Communicate Effectively 1.Being able to get your communication needs across to a conversation partner is important for quality of life. 2.Sharing thoughts and feelings with other people is important. 3.Feeling more comfortable communicating with other people.	Communicating effectively establishes enhanced communicative quality of life by successfully communicating an intended message but feeling comfortable sharing that communication with other individuals.
Naturalistic Environment 1.Therapy includes functional activities PWA will be able to perform independently. 2.Addressing quality of life is more effective if also done outside the clinical setting; simulating real life.	Speech-language therapy addresses communication-related quality of life by including real-life scenarios outside the therapy setting: restaurants, concerts, social events.
Individualized 1.Selecting goals PWA want to address is important. 2.Incorporate dialogue in therapy that is related to the PWA.	Conducting individualized therapy sessions for PWA benefits their communication-related quality of life.

Trend 1: Communicate Effectively

Summation 1- Communicating effectively establishes enhanced communicative quality of life by successfully communicating an intended message but feeling comfortable to share that communication with other individuals. The following trend components were found to support this summation: (a) being able to get communication needs across to a conversation partner is important for

quality of life; (b) sharing thoughts and feelings with other people is important; and (c) feeling more comfortable communicating with other people.

During the opened-ended, semi-structured interview, the participants discussed communicating effectively as important to enhance quality of life. In response to the interview question, "How do you define communication-related quality of life?", Participant McNa said, "Being able to communicate your needs is important, and it is important for your quality of life" (Participant interview, December 02). Participant McNa added, "Being able to share your thoughts and how you're feeling and have discussions with other people is also important for their quality of life" (Participant interview, December 02) and was echoed by participant BlLa by stating, "Being able to communicate effectively with any type of conversation partner…and just feeling comfortable speaking to other people" (Participant interview, December 06). Naturalistic environments and individualization are also described as important to address CRQoL for PWA and will be explained in Summations Two and Three.

Trend 2: Naturalistic Environment

Summation 2- Speech-language therapy addresses communication-related quality of life by including real-life scenarios outside the therapy setting: restaurants, concerts, social events. The following trend components were found to support this summation: (a) therapy includes functional activities PWA will be able to perform independently and (b) addressing quality of life is more effective if also done outside the clinical setting; simulating real life.

Throughout the interview, environment was discussed when referenced to defining CRQoL and how CQoL was incorporated during therapy sessions. When asked, "How do you incorporate communication-related quality of life in speech-language therapy for people with aphasia?", BlLa said, "Making activities functional to where they [PWA] can actually go out and do it without me" (Participant interview, December 06) and McNa provided specification to the environment by stating, "Having casual

conversations, that way he [PWA] can practice, like, what he [PWA] is going to say in real life, whenever he talks to people" (Participant interview, December 02). Following this question, McNa was asked, "Is there anything I have missed that you would like to share?", and McNa expounded on her earlier response to name Trend Two, "I liked going outside the therapy room [with the PWA]…I felt like it was helpful too, cause it's more of a naturalistic environment" (Participant interview, December 02). The next section will build upon communicating effectively and naturalistic environment trends to introduce individualized therapy sessions.

Trend 3: Individualized

Summation 3- Conducting individualized therapy sessions for PWA benefits their communication-related quality of life. The following trend components were found to support this summation: (a) selecting goals PWA want to address is important and (b) incorporate dialogue in therapy that is related to the PWA.

Conducting individualized therapy sessions for PWA was an important instructional focus for graduate students. Following the interview question, "How do you incorporate communication-related quality of life in speech-language therapy for people with aphasia?", BlLa said, "Work on what they [PWA] want to work on…if they don't want to work on something, don't make it a goal" (Participant interview, December 06) and McNa expressed an individualized treatment example, "I noticed he [PWA] had a lot of trouble with syntax… he would list a lot of things rather than forming a sentence. I think that helps him in the real world" (Participant interview, December 02). This response explains that McNa individualized therapy by having the PWA produce grammatically correct sentences verses only listing items to help the PWA successfully communicate their intended message.

When the interview codes were collected and refined into three emergent trends through inductive coding, it allowed perceptions of how CRQoL components for PWA were incorporated and

viewed by graduate-students in therapy. Three emergent trends were: (1) communicating effectively; (2) naturalistic environment; and (3) individualized trends emerged as important to incorporate into aphasia therapy to enhance CRQoL for PWA. Trend 1: Communicating Effectively can be classified as a psychosocial CRQoL component. Trend 2: Naturalistic Environment and Trend 3: Individualized can also be classified as psychosocial CRQoL components. Interviews and member-checking from PWA and graduate students allowed for inductive coding analysis to yield three emergent trends for PWA and three trends for graduate students. The next section will use Fall 2021 summary report artifacts to better understand emergent qualitative trends by analyzing participant interview responses and drawing similarities and differences between their representation of CRQoL as mainly physiological or psychosocial categories. Qualitative data results along with quantitative results added to this reflection and will be discussed in the next section.

Mixed Methods Analysis Procedures and Findings

Quantitative and qualitative analysis examined the main research question: 1. How did speech-language therapy at a university clinic setting address communication-related quality of life for persons with aphasia in Fall 2021? Quantitative analysis applied descriptive statistics to summary report artifacts and qualitative analysis using interview responses from Fall 2021. Further analysis was applied to unique cases of corresponding PWA participants receiving therapy from graduate student participants by the following: (a) summary report physiological or psychosocial objectives; (b) summary report physiological or psychosocial comments; (c) interview responses by PWA; and (d) interview responses by graduate students. This allowed greater insight into how CRQoL was addressed for PWA with multiple and complimentary data sources. This was represented by a 1:1:1 correspondence of a PWA participant receiving therapy by a graduate student participant that generated a summary report that occurred during Fall 2021 therapy.

Fall 2021 Therapy Summation

Quantitative frequency counts of summary report artifacts and qualitative interview responses were analyzed convergently represent how Fall 2021 therapy represented CRQoL as physiological or psychosocial (RQ1). Objectives and comment frequency counts were obtained from summary report documentation. CRQoL definitions were transcribed from semi-structured interviews from PWA and graduate students (see Table 11).

Table 11

Fall 2021 Description of Quantitative and Qualitative Data

Case	Physiological Objective	Psychosocial Objective	Physiological Comment	Psychosocial Comment	PWA Definition of CRQoL	Graduate Student Definition of CRQoL
PWA: BoLo	2	0	2	0	"It's okay, when I first stroked…vocal, nothing…and then it's you got, you got more and more and more…I'd be a B minus" (Participant interview, October 13).	"Being able to communicate effectively with any conversation partner…just feeling comfortable speaking to other people" (Participant interview, December, 06).
PWA: RaDe	5	0	0	0	"I enjoy communicating …I think I keep progressing; slowly" (Participant interview, October 13).	Being able to get across your communicati on needs, being able to communicate your needs is important and it is important for your quality of life….being able to share your thoughts and how you're feeling and have discussions with other people is also important for their quality of life" (Participant interview, December 02).

Note. Numerical data from summary reports and transcriptions from semi-structured interviews.

Quantitative frequency counts yielded seven physiological objectives and two physiological comments found in summary reports; psychosocial objectives and comments were not found. When applying the same quantitative CRQoL criteria to definitions by PWA and graduate students, the following classifications emerged: PWA voiced physiological definitions and graduate students voiced psychosocial definitions. This can be narrowly viewed as 2/12 PWA participants were eligible for mixed-methods analysis and finding Fall 2021 therapy addressing CRQoL as physiological objectives and comments in documentation, and PWA viewing their CRQoL as more physiological; while graduate students viewed CRQoL in a leaning psychosocial manner when conducting therapy in Fall 2021.

Additional Factors Regarding Results

Quantitative and quantitative data analysis aimed to address the study's research questions (RQ1-1e). Quantitative data collected from Spring 2015 to Fall 2021 yielded no data for Summer 2020. This does not mean therapy was not done during Summer 2020, only it was not located in physical or electronic files allocated to this study. Secondly, different probing statements were needed to aid clarification of responses by PWA. The variability was needed to ensure accurate reporting due to word-finding difficulty associated with aphasia. Third, interviews for PWA and graduate student groups did not occur at the same time and could lead to social interaction bias. It was necessary to have different interview occurrences because PWA needed completed treatment plans that established goals for therapy and build rapport with their student clinician. Graduate student interviews were completed after summary reports were approved by the supervising SLP, as to not influence data derived from summary reports. Lastly, this study took place during the COVID-19 pandemic possibly impacting recruitment, eligibility, and participant agreement to participate in the study.

Conclusion

Chapter Four provided information about quantitative and qualitative data reliability, procedures, and results. Each analysis allowed greater interpretation of how CRQoL was described and perceived by PWA and graduate students and represented in clinical documentation. The quantitative data results suggested CRQoL was frequently represented in a physiological manner from Spring 2015 through Fall 2021 documentation. Qualitative data summations allowed PWA and graduate students to provide interpretations related to CRQoL. PWA communicated three emergent trends: therapy aids the ability to communicate was classified as physiological CRQoL component, connections with additional PWA, and supportive environments were classified as psychosocial CRQoL components. Graduate students communicated three emergent trends with psychosocial classifications: communicating effectively, naturalistic environment, and individualized as important to improve CRQoL. Mixed-methods analysis also provided a unique view of CRQoL represented in clinical documentation during Fall 2021. CRQoL was communicated in a physiological manner by PWA and graduate students approaching CRQoL in therapy in a psychosocial manner. Mixed-methods analysis yielded summary report artifacts to have CRQoL as physiological objectives and comments. Chapter Five will further explain the significance of these results.

Chapter Five: Discussion

Introduction

Data analysis used quantitative and qualitative measures to report results related how CRQoL was represented from Spring 2015 through Fall 2021. Chapter Five will provide a study overview, interpretations of the results in the complementarity of quantitative and qualitative data, relation to extant literature, connection to theoretical frames, study limitations, and potential implications for practice. An Organization Improvement Plan and conclusion will also be discussed in Section Five for personal reflection opportunities.

Study Overview

The perspectives of ten PWA and two graduate students were explored to understand their unique CRQoL descriptions during Fall 2021 speech-language therapy clinic. Summary reports, *n*=12, were analyzed to understand how CRQoL was represented for PWA during Fall 2021. Summary reports from Spring 2015 to Summer 2021, *n*=152, were also examined for potential differences in clinical documentation representation of CRQoL for PWA. Fall 2021 data was uniquely compared to previous semester data sources to determine if Fall 2021 was representative and similar to previous semesters.

Each participant participated in a semi-structured interview that lasted five to ten minutes. During this interview, participants were asked to provide their definition of CRQoL and how CRQoL was implemented during speech therapy in Fall 2021. Member checking followed, indicating their responses were represented well and appropriate for inductive coding to understand emergent trends from PWA and graduate student groups and their relation to physiological and psychosocial CRQoL categories. Summary reports from Spring 2015 to Fall 2021 were also reviewed and grouped objectives and comment sections into physiological or psychosocially CRQoL categories. Emergent trends and

descriptive statistics ultimately provided findings into how speech-language therapy at a university clinic addressed CRQoL for PWA in Fall 2021.

Study Findings

The research study aimed to understand how CRQoL was addressed for PWA in Fall 2021 and produced results that require discussion. The next paragraphs will list the research question, discuss the findings, then provide an interpretation of the results.

1. How did speech-language therapy at a university clinic setting address communication-related quality of life for persons with aphasia in Fall 2021? Data from summary reports and semi-structured interview groups: PWA and graduate students, helped shape an understanding of how CRQoL was addressed for PWA. As stated in Chapter Four, quantitative and qualitative data used categorical organization to report how CRQoL was represented and/or addressed as physiological or psychosocial. In Fall 2021, CRQoL was addressed in a physiological manner for PWA when analyzing summary report documentation: summary report objectives at 90.32% and comments at 66.67%. As Chapter Two and Three stated, objectives are the goals of therapy and comments allow PWA to report how those goals addressed their CRQoL.

Aside from summary reports, semi-structured interviews from PWA and graduate students semi-structured interviews allowed their perceptions to be analyzed to better understand how CRQoL was addressed for PWA in Fall 2021. Both groups had three trends. PWA had one trend that was classified as a physiological CRQoL component while two trends were classified as psychosocial components of CRQoL. Graduate students had three trends that were classified as psychosocial components. Research Question 1a and 1b sections will further describe these classifications. Quantitative data found substantial physiological CRQoL representation in summary reports but CRQoL perceptions of PWA and graduate students did not mirror greater emphasis of physiological CRQoL but

greater importance to psychosocial CRQoL. This highlights that stakeholders, PWA and graduate students, involved in the same therapy environment are perceiving CRQoL differently and could negatively impact therapy outcomes.

Summary reports were written by graduate students, under supervision of a licensed SLP, and rely on their decision to create objectives and report comments for PWA. The decision to create more objectives and report comments related to a PWA as physiological CRQoL can overshadow speech-language therapy to equitably address psychosocial components. This in-turn can have PWA focus more on the physiological demands of communicating rather recognizing gains in their psychosocial gains of confidence and socialization. Bullier et al. (2020) also voiced this concern as new factors that impact CRQoL for PWA. By modifying objectives for PWA to include physiological and psychosocial CRQoL factors, it can allow PWA to be aware and recognize both aspects of CRQoL that could lead to better QoL for PWA. A PWA can have continued physiological difficulty verbally producing a word but could have psychosocial gains in their confidence to communicate in varied environments and conversation partners, regardless of the accuracy of their verbal production. For example, a non-aphasic individual asking, “Would you like cake or pie?” and the PWA having the confidence to answer the question in a restaurant setting saying, “K”, and the non-aphasic individual understanding that “K” communicated the message for cake.

1a. How did people with aphasia who received speech-language therapy, in Fall 2021, at a university clinic describe communication-related quality of life? The semi-structured interviews obtained the views of ten PWA and how they described CRQoL. PWA were asked, “How do you define communication-related quality of life?” and “Do you feel that the speech-language therapy you are receiving at this university clinic contributes to that?” The majority of PWA described CRQoL in a physiological and psychosocial manner. For example, Participant SmPh expressed, “Quality is good. I want to be able to speak” (Participant interview, October 20) and Participant VeTo said, “I’ve always

wanted it better... use the right words" (Participant interview, October 11) demonstrating the physical ability to communicate. Participant NiDi also related to the persistent challenges to psychosocial CRQoL by saying, "Rough…frustration…hard to involve in conversation" as it related to socializing with additional conversation partners. The three trends of: 1) therapy aids the ability to communicate was represented as a physiological CRQoL component; 2) connections with additional PWA; and 3) supportive environments reflected these responses as psychosocial CRQoL components.

1b. How did graduate students, who provided speech-language therapy services for people with aphasia in Fall 2021, describe communication-related quality of life for people with aphasia? Two graduate students participated in semi-structured interviews to obtain their views on how they described CRQoL. Graduate students were asked, "How do you define communication-related quality of life?" and "How do you incorporate communication-related quality of life in speech-language therapy for people with aphasia?" Both graduate students described CRQoL in a physiological and psychosocial way. For example, Participant McNa said, "Being able to communicate your needs is important, and it is important for your quality of life" (Participant interview, December 02) reflecting the physical ability to communicate. Participant McNa added, "Being able to share your thoughts and how you're feeling and have discussions with other people is also important for their quality of life" (Participant interview, December 02) and was echoed by participant BlLa by stating, "Being able to communicate effectively with any type of conversation partner…and just feeling comfortable speaking to other people" (Participant interview, December 06) reflecting psychosocial CRQoL. The three trends of: 1) communicate effectively; 2) naturalistic environment; and 3) individualized reflected these responses as psychosocial CRQoL components.

1c. How did graduate students, who provided speech-language therapy services for people with aphasia at a university clinic, from Spring 2015-Summer 2021, represent communication-related quality of life for their aphasic client(s) in summary report clinical documentation? This study analyzed 152

summary reports (12 Fall 2021 summary reports excluded from 164 study total) from Spring 2015-Summer 2021 on their representation of CRQoL. Many results represented CRQoL in a physiological manner compared to psychosocial with 94.51% of objectives and 52.23% of comments being physiological. When summary reports were analyzed from Spring 2015 to Summer 2021, no statistical association was found between CRQoL physiological and psychosocial representation in objective and comment sections. This communicates that there were no changes in physiological and psychosocial summary report objectives or comments from Spring 2015 to Summer 2021 semesters: confirming the null hypothesis. Confirming the null hypothesis is verified by p-values being greater than the $p<.05$ and no statistic78al association between physiological and psychosocial CRQoL objectives or comments.

1d. How did graduate students, who provided speech-language therapy services for people with aphasia at a university clinic, in Fall 2021, represent communication-related quality of life for their aphasia client(s) in summary report clinical documentation? This study analyzed 12 summary reports during Fall 2021 on their representation of CRQoL. Results largely represented CRQoL in a physiological manner compared to psychosocial with 90.32% of objectives and 66.67% of comments being physiological.

1e. How did speech-language pathology summary report clinical documentation at a university clinic represent communication-related quality of life for people with aphasia from Spring 2015-Summer 2021, differ from Fall 2021 summary report clinical documentation representation of communication-related quality of life for people with aphasia? This study analyzed a total of 164 summary reports from Spring 2015-Fall 2021 on their representation of quality of life. Results are consistent with Research Question 1c and 1d results, representing CRQoL as physiological verses psychosocial. Statistical analysis combining and excluding Fall 2021 data found no statistical association was found between CRQoL physiological and psychosocial representation in objective and comment sections. This communicates that there were no changes in physiological and psychosocial summary report objectives or comments

from Spring 2015 to Fall 2021 semesters: confirming the null hypothesis. Confirming the null hypothesis is verified by p-values being greater than the $p<.05$ and no statistical association between physiological and psychosocial CRQoL objectives or comments. Results similarly found no substantial change in chi-square values of Spring 2015 to Summer 2021 and Summer 2015 to Fall 2021 evidencing similar distribution of summary report objectives and comments as largely physiological CRQoL components.

Findings from this study demonstrate summary report documentation and multiple speech-language therapy stakeholders: PWA and graduate students, represented CRQoL in physiological and psychosocial classifications. Further discussion will be provided to discuss complementarity of quantitative and qualitative findings from mixed methods results.

Complementarity of Quantitative and Qualitative Findings

When analyzed together, quantitative and qualitative findings are complimentary. Data from Fall 2021 represented a better understanding of numerical data and participant descriptions of CRQoL (RQ1). As previously state in RQ1e discussion, Fall 2021 data represents CRQoL similarly to previous semesters. Table 11 details Fall 2021 summary reports numerically represented CRQoL objectives and comments physiologically with varied classification of CRQoL definitions between PWA and graduate students. PWA CRQoL definitions and summary report CRQoL documentation similarly report CRQoL in a largely physiological manner. The graduate students, who created the summary reports, provided a CRQoL definition that was classified as psychosocial. This does not mean graduate students only provided a definition with psychosocial lexicon and omitted physiological terminology but incorporated psychosocial and physiological components; consistent with Chapter Three CRQoL classification parameters.

Relation to Extant Literature

This study uniquely described speech-language therapy provided at university clinic from Spring 2015 to Fall 2021 and how it represented and addressed CRQoL for PWA through quantitative and qualitative analysis. The prior section described complementarity of how CRQoL was represented in documentation and described by PWA and graduate students. Previous research share connections with the results of this study.

This study highlighted the perspectives of PWA and graduate students. Findings from this study revealed how a university speech-language therapy clinic can support CRQoL for PWA. The perspectives of the two groups were different but also similar in ways that draw attention to several features of CRQoL; further, they inform our understanding of the way CRQoL is defined by the two groups and then addressed in therapy. A similar study by Purves et al. (2013), also investigated perspectives of PWA and students; in which, PWA served as mentors for speech-language pathology students, finding perspectives of both groups varied. Purves et al (2013) thematic analysis of 14 PWA interviews align with this study by finding similar CRQoL trends from ten PWA, differing only by Purves et al. (2013) having an aphasia advocacy theme. Similar to this study, Purves et al. (2013) also had student responses that varied from PWA, despite residing in the same therapy environment and experiencing the same communication. Additional representations of PWA and student perspectives were scant in the literature, but have more robust representation when PWA perspectives were viewed with family and healthcare provider perspectives.

Studies conducted by Brown et al. (2015), Burns et al. (2013), and Cruice et al. (2006) also investigated perspectives of PWA and other stakeholders, including: family members, speech-language pathologists, and physicians. Across the studies thematic analysis yielded similar results to this study by PWA expressing support from meaningful life partners and successful communication experience as

important for CRQoL. When viewing quality of life care from stakeholder perspectives Burns et al. (2013) found physicians and Brown et al. (2015) listed SLPs roles as essential providers to ensure effective communication for PWA, classified as psychosocial CRQoL and sharing a similar trend by graduate students in this study.

Quantitative findings from this study related to how CRQoL was represented and addressed in documentation (summary reports), was not found in the literature review. As previously connection to extant literature expressed, qualitative interviews have provided data to support perspective of PWA and stakeholders in relation to receiving speech-language therapy. Summary report documentation in this study echo findings in a related to study by Northcott et al. (2017), stating that addressing psychosocial CRQoL along with physiological CRQoL is important but SLPs do not feel comfortable addressing psychosocial components in practice. Wallace et al. (2017) proposed that SLPs know that addressing psychosocial CRQoL is important for PWA but are rarely measured. With treatment having an emphasis to show measurable change, SLPs could possibly omit psychosocial components by lacking confidence in writing objectives to demonstrate measurable psychosocial CRQoL change. By documentation, and in this study summary report documentation by graduate students under the supervision of SLPs, communicating target objectives and PWA comments in response to therapy as overwhelming physiologically it suggests current speech-therapy practice is more comfortable documenting physiological components for PWA. A study by Hilari, Klippi, et al. (2016) also expressed this concern when surveying 579 SLPs. This study found 94.18% of objectives from Spring 2015 to Fall 2021 addressed physiological CRQoL and this was echoed Hilari, Klippi, et al. (2016) finding 97% of SLPs voiced communicative ability to communicate basic wants and needs as the top CRQoL domain with psychosocial domains with a lower ranking. When speaking to implementing outcome measures that included psychosocial CRQoL, results from Hilari, Klippi, et al. (2016) found substantially lower percentages, 19%, aligned with this study's psychosocial CRQoL objectives of 5.8%. With study findings

establishing connections with extent literature, additional connections to social-constructivism and theoretical frames will be named in the next section.

Connection to Theoretical Frames

In order to reduce bias, social-constructivism and pragmatism theoretical frames guided this study. Social-constructivism guides research to an "understanding of the world in which they live and work" with, "the goal of the research, then, is to rely as much as possible on the participants' views of the situation" (Creswell & Poth, 2018, p.327). This study relied on the participants' views of how CRQoL was addressed in a university clinic during Fall 2021 by using word-by-word transcriptions from semi-structured interviews and summary documentation. PWA provided their definition of CRQoL and how it was implemented during interviews and documented comments in the summary reports. Similar CRQoL data were also gathered from graduate students. PWA and graduate student participants' viewpoints of CRQoL allowed for patterns to emerge and be further regulated to focus on outcomes of the study; also known as pragmatism (Creswell & Poth, 2018).

Pragmatism allowed methodological freedom that is specific to the problem of practice to reduce attribution bias by collecting data from multiple data sources. PWA and graduate student perspectives, member-checking, and summary report artifacts served multiple data sources. The quantitative and qualitative findings from the previously stated data sources enhanced the study's credibility. Burkholder et al. (2020) state that multiple data sources add to the study's credibility and trustworthiness.

Combining social-constructivism and pragmatism epistemological theoretical frameworks uniquely aided this study. Gaining multiple perspectives allowed the participants to socially construct their CRQoL viewpoints and understand how CRQoL was addressed at a university clinic. Recent studies by Keaton and Bodie (2011) researched social-constructivism and Guyon et al (2018) pragmatism

epistemological theoretical framework both stating their benefit to understand communication exchanges and underlying mental attributes; in this study, CRQoL for PWA. As Keaton and Bodie (2011, p. 192) stated, “objects exist only after they enter a communicative space” and “in other words, communication changes how objects are perceived and the range of potential meanings they can embody.” PWA have persistent CRQoL challenges and seek out speech-language therapy from graduate students. Understanding how both parties address physical and psychosocial CRQoL can lead to better communicate therapy space and improve QoL outcomes for PWA.

Extant literature showed connections with results of this study and theoretical frames aided interpretations. The next section will review results and potential influence from study limitations.

Study Limitations

The results of this study are encouraging; however, there are limitations. The most significant limitation are sample sizes, which include *n*=164 summary report data sources, *n*=10 PWA interview participants, and *n*=2 graduate student interview participants from only one speech-language pathology program. Additionally, this study only analyzed one speech-language pathology university clinic and having a multi-site study could potentially alter findings. This limited the quantitative analysis to be nominal levels of measurement and non-parametric for both data sources, reducing quantitative analysis impact on this study. Because there were limited participants that met the study’s exclusion/inclusion criteria only descriptive statistical data and chi-square tests were used in quantitative measures, but also allowed greater understanding of the research question in qualitative analysis. The shortcoming of sample size was minimized given complementarity of quantitative and qualitative data, triangulation, and adhering to an instrumental case-study approach.

Qualitative analysis aimed to gain credibility and trustworthiness through triangulation (interview, member-checking, peer-debriefing). Each triangulation method was based off researcher

generated interview protocol, creating a threat to credibility (see Appendices A and B). To maximize credibility and rigor of the interview protocol, collaboration with other senior researchers was employed. Burkholder et al. (2020) stated that experience with the research process as a valuable technique to reduce bias and rigor. The collaboration was thus conducted to create a trustworthy interview protocol and perform the interview with increased confidence.

Potential Implications for Practice

The results of this study lend itself to better understand PWA and graduate student perspectives of CRQoL and its representation in clinical documentation. A better interpretation can benefit PWA, graduate students, and clinical instructors to enhance clinical practice and documentation. The next step in research is understanding how writing CRQoL goals would be reimbursed by third-party payers in clinical practice. The next Organizational Improvement Plan section will expand upon potential implications and propose potential solutions.

Organizational Improvement Plan

Researching a problem of practice (POP) creates a vision and growth mindset to encourage positive change for individuals, families, organizations, and communities (Buzz & Zambo, n.d.). This study's POP is as follows: speech-language pathology services, provided by graduate students in a university setting under the supervision of SLPs, are not adequately incorporating communication-related quality of life into treatment for people with aphasia. Improvements for a problem of practice often occurs at the organization level, and in this study a university clinic, requiring an organizational improvement plan (OIP).

When a problem of practice is identified and an OIP is initiated to propose a positive change, a change theory framework for application is required. Kaufman et al. (2020) state Kotter's (2014) eight accelerators for leading change is a well-recognized model for organizational change. The eight

accelerators for leading change are as followed: "(1) Create a sense of urgency, (2) Build a guiding coalition, (3) Form a strategic vision and initiatives, (4) Enlist a volunteer army, (5) Enable action by removing barriers, (6) Generate short-term wins, (7) Sustain acceleration, and (8) Institute change" (Kaufman et al., 2020, p.58). Each accelerator is aimed to encourage a change in people's behavior for shifts in people's actions (Russell et al., 2011).

The purpose of this OIP will be to communicate a problem of practice and using Kotter's (2014) eight accelerators for leading change in the problem of practice to help shape a plan of action for future practice implications. This OIP will discuss the problem related to change readiness, identification of potential solutions, and potential limitations.

Change Readiness

Currently, university speech-language therapy clinics provide PWA the opportunity to receive services to improve their CRQoL. Graduate students provide speech-language therapy services and in-turn are supervised by a speech-language pathologist. Since the university clinics are uniquely positioned to not only provide therapy for PWA but educate graduate students, supervisors provide clinical education to incorporate evidenced-based practice. Due to continued research providing evidenced-based practice options, change readiness by a university clinic organization is readily apt to incorporate change. For example, a major requirement for graduate students is to formulate a clinical question and research strategies using a P.I.C.O. approach, which stands for: population, intervention, comparison, outcome for each client. Clinical education from supervising SLPs aids students to select studies using a P.I.C.O approach to address the main objective for PWA, enhanced CRQoL. What CRQoL considerations are researched and ultimately applied in therapy is open to change. Based off results from this study, change can take place by having clinical questions start with a renewed understanding of CRQoL for PWA as a physiological and psychosocial experience. With the change readiness part of

university clinic organization, potential solutions will be introduced and discussed for positive change to occur.

Potential Solutions

The previous section provided an explanation of change readiness for framing change centered around the OIP problem of practice. A vision to create change can be implemented using Kotter's (2014) eight accelerators for leading change model (Kaufman et al., 2020). Change will be introduced by creating a sense of urgency followed by listing potential solutions and tools to measure change.

Potential Solutions: Create a Sense of Urgency. Creating a sense of urgency around a big opportunity can be initiated using existing research to guide the need for change for university clinic education in the speech-language pathology department. University clinical instruction aims to understand the influence physiological and psychosocial concerns have on CRQoL for PWA, but speech-language pathologists due not feel comfortable addressing psychosocial concerns according to survey data conducted by Northcott et al. (2017) on practicing speech-language pathologists. Because current evidenced-based research communicated the need to address physiological and psychosocial concerns for enhanced CRQoL for PWA and speech-language pathologists have an ethical obligation to conduct efficacious-evidenced based practice, then creating a sense of urgency can be promoted from an efficacious instructional model supported by research. Speech-language pathologists want their clients to have enhanced CRQoL and by providing improved clinical education and guidance for graduate students that address CRQoL concerns it could reach that goal. The following potential solutions will be discussed in the following section: documentation and training

Potential Solutions: Documentation and Training. When a sense of urgency has been created Kaufman et al. (2020) discussed that Kotter's (2014) model can be transitioned into strategic initiatives. From guiding research and ethical responsibility for speech-language pathologist university instructors to

create a sense of urgency to provide efficacious-evidenced-based treatment, it can be built upon by creating changes in documentation and training.

Chapter Four study findings support documentation change in objectives and comments. Objectives detail the name of the client, what the client is aiming to do, the condition in which it is done, and how to measure it (Paul, 2014). This template can be used to not only express physiological CRQoL objectives, but also psychosocially by including terms that reference PWA's perspective of social, cultural, and environmental influences. For example, "SmPh will enhance communicative confidence by successfully communicating a target word to his wife with 80% accuracy." This objective lists goals to physically communicate a target word and psychosocially state that the communication is taking place in functional cultural and social environment. Many times, objectives were written without these considerations and in-turn produced CRQoL to be defined and perceived by PWA as mainly physiological. Changing how goals are written can help name and fully represent CRQoL and align with current evidenced-based practice. For example, Chapter One referenced the Life Participation Approach to Aphasia as breakthrough research that continues to guide the field of speech-language pathology (Chapey, 2008). The impact of LPAA was daily living encompassing communication acts for life participation and social interaction. Research continues to validate this need and stands to reason objectives need to represent it as well.

Documentation serves as a way to accurately represent and then address CRQoL for PWA, but it also supports the need for training. As Table 4 visualized, physiological CRQoL was communicated more frequently than psychosocial in objective and comment summary report sections. In-service trainings could be done at the university clinic or through continuing education courses that stress the importance of addressing physiological and psychosocial CRQoL for PWA. Hand-outs can also be provided during the training detailing examples of how to document psychosocial objectives and comments. Having multiple clients with aphasia receiving services at university services, a strategic

initiative to perform this training in understanding CRQoL and how to apply it clinically is warranted to enhance therapy outcomes.

In-service trainings performed at the local university level can next be presented at state and national organizations. According to Kauffman et al. (2020), this is referred to as accelerating and sustaining change. For example, a presentation can be presented at the state level at the Missouri Speech Language and Hearing Association convention and at the national level at the ASHA convention. Initially performing in-service training at a local university can aid in refinement and then be presented to a wider state and national convention audience to incorporate physiological and psychosocial CRQoL outcomes for PWA.

Another potential solution is to maintain the status quo regarding clinical documentation, instruction, and collaboration. This solution could enable actions that reduce barriers of time and resources. Clinical documents are already submitted and reviewed that create time commitments for clinical supervisors. Current feedback from faculty leadership that train clinic supervisors could suggest changes that could include physiological, psychosocial, and quality of life components in therapy sessions for PWA. However, there are limited clinic supervisors who are recognized with an expertise in aphasia to provide the collaborative opportunity to other clinic colleagues and those who are experts in aphasia may not be aware of the potential benefit of sharing this information with their clinic colleagues.

Potential solutions range from documentation modifications, training, and remaining with the status quo. Building upon Kotter's (2014) model accelerators of creating a sense of urgency and forming strategic initiatives it will be necessary to measure and communicate change. Additional Kotter's (2014) model accelerators will be discussed in the next sub-section related to measure and communicating change.

Tools for Measuring and Communicating Change

Measuring and communicating change can be integrated into a speech-language pathology university clinic. Proposed tools for measuring and communicating change can include: program evaluations, follow-up interviews and/or surveys with recently graduated alumni, and ongoing collaboration. These proposed measurements to communicate change can generate and celebrate short-term wins and sustain acceleration. Clinical supervisors can discuss and share documentation templates or evidenced-based practice resources that have aided or hindered understanding and application of physiological, psychosocial, and quality of life concerns for PWA. Program evaluations and follow-up interviews and/or surveys with recently graduated alumni can then use documentation templates and resources to determine what is generating short-term wins to sustain acceleration. Kaufman et al. (2020) discussed that Kotter (n.d.) successes produce credibility. If documentation modifications are generating favorable data analysis in objective and/or subjective measures in speech-language pathologists' confidence to address psychosocial and quality of life concerns, along with physiological elements, then it could institute change at the speech-language program level. For example, establishing the new behavior of modifying documentation to communicate psychosocial, physiological, and quality of life concerns for PWA speech-language therapy sessions can integrate change into syllabi policies that are sustained overtime.

Limitations of the OIP

The proposed solutions for this OIP aim to implement positive change within a speech-language pathology university clinic; however, limitations exist. These limitations include how to measure the change and time commitments to implement the change.

Kotter's (2014) change model provided guidance to institute organizational change. The previous section described how a program evaluation can be useful tool to measure change. It can also

be limited due to scant known validity and reliability of this research design to analyze clinical documentation in a speech-language pathology program. Burkholder et al. (2020) communicates there are *Program Evaluation Standards* that aid to reduce bias and an accurate appraisal when using a program evaluation research design. Furthermore, the performance of how to measure can be costly when hiring external evaluators and increased time commitment demands when using internal evaluators. Increased time commitments also exist when requiring trainings and seeking feedback from students and/or alumni.

Conclusion

Kaufman et al. (2020) and Russell et al. (2011) stated that Kotter's (2014) model is successful by changing the behavior of people that can lead to organizational change by targeting people's feelings. A recent study by Hilari, Klippi, et al. (2016) reported 211/579 SLPs also indicated organizations as the main barrier to including more CRQoL goals in their practice. Speech-language pathology university clinics have an inherent responsibility to provide efficacious and effective instruction for students' readiness to address physiological, psychosocial, and quality of life concerns for PWA. As future speech-language pathologists, improving a client's CRQoL is related to their feelings and behavior. Seeing measurable change in confidence to address these concerns by modifying clinical supervision and possible documentation changes, can tap into the caring diligent nature of therapists to provide high-quality clinical services for better patient outcomes.

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Appendix A

PERSON WITH APHASIA INTERVIEW PROTOCOL

Date of interview:
Location of interview:
Start time: End time:
Name of interviewee:
Name of interviewer:
Recording mechanism:

Person with Aphasia Interview Guide

Opening script: Thank you for participating in this interview. As you know, this interview will contribute to a research study intended to learn how speech-language therapy services for people with aphasia, provided at a university clinic, are influencing their communication-related quality of life. You have signed an informed consent form, but as a reminder, you may decline to answer any question you do not wish to answer or withdraw from the interview at any time. This interview will take approximately 15-20 minutes. With your permission, I will be making an audio recording of the interview and may take notes. Do you have any questions before we begin?

1. Have you received prior speech-language therapy?

2. How do you define communication-related quality of life?

3. Do you feel that the speech-language therapy you are receiving at this university clinic contributes to that?

4. Is there anything I have missed that you would like to share?

Potential probes:

- If the answer to question one is, “yes”, follow up with, “Group, individual, or both”
- If the answer to question three is, “yes”, or “no” follow up with, “in what ways.”
- Please tell me more about…
- What kind…?

Closing script: Thank you for your time today. I appreciate your contributing to this study. May I contact you if I need any clarifications?

Interview protocol guide adapted from: Burkholder, G. J., Cox, K. A., Crawford, L. M., & Hitchcock, J. H. (Eds.). (2020). *Research design and methods: An applied guide for the scholar-practitioner*. SAGE Publications, Incorporated.

Appendix B

GRADUATE STUDENT INTERVIEW PROTOCOL

Date of interview:
Location of interview:
Start time: End time:
Name of interviewee:
Name of interviewer:
Recording mechanism:

Graduate Student Interview Guide

Opening script: Thank you for participating in this interview. As you know, this interview will contribute to a research study intended to learn how speech-language therapy services for people with aphasia, provided at a university clinic, are influencing their communication-related quality of life. You have signed an informed consent form, but as a reminder, you may decline to answer any question you do not wish to answer or withdraw from the interview at any time. This interview will take approximately 15-20 minutes. With your permission, I will be making an audio recording of the interview and may take notes. Do you have any questions before we begin?

1. Are you a first- or second-year speech-language pathology graduate student?
2. Have you previously treated a person with aphasia?
3. How do you define communication-related quality of life?
4. How do you incorporate communication-related quality of life in speech-language therapy for people with aphasia?
5. Is there anything I have missed that you would like to share?

Potential probes:

- If the answer to question two is, “yes”, following with, “how many?” and “what setting?”
- Please tell me more about…
- What kind…?

Closing script: Thank you for your time today. I appreciate your contributing to this study. May I contact you if I need any clarifications?

Interview protocol guide adapted from: Burkholder, G. J., Cox, K. A., Crawford, L. M., & Hitchcock, J. H. (Eds.). (2020). *Research design and methods: An applied guide for the scholar-practitioner*. SAGE Publications, Incorporated.

Appendix C

PWA Informed Consent Form

You are invited to participate in a study of "Speech-Language Pathology Preparation to Address Communicative Quality of Life for People with Aphasia." I hope to learn how speech-language therapy services provided by graduate speech-language pathology clinicians are addressing communication-related quality of life concerns for people with aphasia at a university clinic setting. You were selected as a possible participant in this study because you are a person with aphasia currently receiving speech-language therapy services.

If you decide to participate, you will first participate in a face-to-face interview that will take approximately 15-20 minutes. Secondly, you may be asked to participate in an additional face-to-face debriefing session to discuss details of the study. All data collected will be anonymous and stored on a password-protected computer or locked cabinet in a locked office at Fontbonne University.

There are certain potential benefits and risks associated with your participation in this research. The benefits are contributing to emerging research and understanding multiple components of communication-related quality of life for people with aphasia. Another benefit for you and the educational community is more insight into current speech-language therapy services. The risks may include being inconvenienced of time and feeling uncomfortable with questions.

Any information obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission. In any written reports or publications, you will not be identified or identifiable.

Your decision whether to participate will not affect your future relationship with Fontbonne University or university faculty in any way. If you decide to participate, you are free to discontinue participation at any time without affecting such relationship(s).

If you have any questions, please ask me. If you have any additional questions later, please contact Ethan Kristek at ekristek@fontbonne.edu or Gale Rice at grice@fontbonne.edu and we will be happy to answer them. Questions relating to IRB approval of this study should be directed to Dr. Joanne Fish, IRB Chair at jfish@fontbonne.edu.

You will be offered a copy of this form to keep.

++

You are making a decision whether to participate. Your signature indicates that you have read the information provided above, have had your questions answered, and you have decided to participate. You may withdraw at any time without prejudice after signing this form should you choose to discontinue participation in this study.

_____ _____

Assent/Consent Signature Date

_____ _____

Medical Power of Attorney Signature Date

_____ _____

Signature of Principal Investigator Date

Appendix D

Graduate-Student Informed Consent Form

You are invited to participate in a study of "Speech-Language Pathology Preparation to Address Communicative Quality of Life for People with Aphasia." I hope to learn how speech-language therapy services provided by graduate speech-language pathology clinicians are addressing communication-related quality of life concerns for people with aphasia at a university clinic setting. You were selected as a possible participant in this study because you are a graduate speech-language pathology student who is current providing speech-language therapy for a person with aphasia.

If you decide to participate, you will first participate in a face-to-face or virtual interview that will take approximately 15-20 minutes. Secondly, you may be asked to participate in an additional face-to-face debriefing session to discuss details of the study. All data collected will be anonymous and stored on a password-protected computer or locked cabinet in a locked office at Fontbonne University.

There are certain potential benefits and risks associated with your participation in this research. The benefits are contributing to emerging research and understanding multiple components of communication-related quality of life for people with aphasia. Another benefit for you and the educational community is more insight into current speech-language therapy services. The risks may include being inconvenienced of time and feeling uncomfortable with questions.

Any information obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission. In any written reports or publications, you will not be identified or identifiable.

Your decision whether to participate will not affect your future relationship with Fontbonne University or university faculty in any way. If you decide to participate, you are free to discontinue participation at any time without affecting such relationship(s).

If you have any questions, please ask me. If you have any additional questions later, please contact Ethan Kristek at ekristek@fontbonne.edu or Gale Rice at grice@fontbonne.edu and we will be happy to answer them. Questions relating to IRB approval of this study should be directed to Dr. Joanne Fish, IRB Chair at jfish@fontbonne.edu.

You will be offered a copy of this form to keep.

++

You are making a decision whether to participate. Your signature indicates that you have read the information provided above, have had your questions answered, and you have decided to participate. You may withdraw at any time without prejudice after signing this form should you choose to discontinue participation in this study.

_____ _____

Signature Date

_____ _____

Signature of Principal Investigator Date

Appendix E

Summary Report Template

Client:	Clinician:
DOB:	Supervisor:
Diagnosis:	Dates of Service:
Functional Outcome Goal:	Date of Report:
	Number/Length of Sessions:

Service Provided:			
Short-Term Objectives:	Target Level:	Present Level:	Goal Status:
In this section, list goals as on treatment plan. Add any new goals if needed.	*State target level indicated on treatment plan.*	*State current level of performance – be specific – is it with cues, what level, etc.*	*State if this goal should be continued, modified or discontinued. If discontinued, state why. If not addressed, state that.*
Treatment Methods:			
Comments: *Give explanations, expand on information listed above. If any tests were given that ARE NOT listed and explained in treatment plan, give results here. Results should include test name, purpose, scores, and interpretation of scores.*			
Recommendations:			

Signatures:	
Clinician	Supervisor

Note. Directions in red and italics font detail word-by-word instructions by the university included in the sections analyzed in this study.